UNIVERSITY OF THE WESTERN CAPE

FACULTY OF NATURAL SCIENCES

Factors associated with teenage pregnancies and childbearing among girls currently attending high school in South Africa.

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A thesis submitted in fulfilment of the requirements for the degree of Master of Philosophy (MPhil) in Population Studies, in the Department of Statistics & Population Studies, University of the Western Cape.

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December 2017

DECLARATION

I declare that *Factors associated with teenage pregnancies and childbearing among girls currently attending high school in South Africa* is my own work, that it has not been submitted for any degree or examination in any other institution, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

TshawekaziSinakoMgudlwa **December 2017**

Signed: _____

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ACKNOWLEDGEMENTS

I would like to acknowledge God who has enabled me to carry out this dissertation with perseverance and patience and for the provision of all the resources I needed to complete this thesis. He strengthened me even in my most difficult times.

My heartfelt gratitude to my supervisor Professor Sathiyasusuman Appunni for guiding, supporting, and encouraging me tirelessly until the end of my masters' journey. I recognize your efforts in stating and ensuring that I get funding when I needed funding. Thank you Sir.

I extend my deepest gratitude to Mluleki Tsawe for all your inputs and vigorous support throughout the writing of this dissertation and your constant support. Thank you for suggesting relevant information for my study, it added value in this work. Francis Chiparawasha I thank you for taking your precious time to edit my work. Your constructive criticism has pushed me to extend the kind of efforts I exerted to make this work as best as it can be.

Prof J. Holbrook, you've been a good support system to me, I thank you for every effort and input.

To Statistics South Africa, I appreciate you for allowing me to use your datasets for my study. I also recognise and acknowledge NRF and the UWC Postgrad Division for all the financial support throughout the completion of this study

I cannot forget to thank my department: Statistics and Population Studies for their enormous support through the provision of studying material and resources.
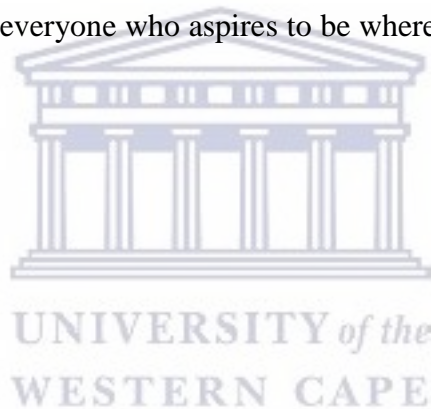
Thank you everyone who have prayed for me and have any effort in contribution to this dissertation. I truly appreciate all your efforts.

DEDICATION

I dedicate this dissertation to my heavenly Father, God Almighty, my strong pillar, and the source of my inspiration, wisdom and understanding, Jehovah Ebenezer who have been with me throughout the write up of this dissertation. May this bring glory unto you O' Lord!

A special dedication goes to my mother, Nonceba Mgudlwa who has shown me endless support since I started with this dissertation. She has always been there for me and did that entire she could do to ensure that I get the education that I deserve. I also dedicate this work to my sisters Sinesipho, Sanelisiwe, Siziphiwe and my brother Africa (my inspiration), thank you all for your encouragement and support. Not forgetting my niece Lilitha who would call me and find out how I am progressing.

Finally, dedicate this work to everyone who aspires to be where I am, it is possible and Yes! I have made it.

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ABBREVATIONS/ ACRONYMS

AIDS:	-	Acquired Immune Deficiency Syndrome
CSM:	-	Continuing Sample Members
DHS:	-	Demographic Health Survey
GHS:	-	General Household Survey
HIV:	-	Human Immunodeficiency Virus
HSRC:	-	Human Sciences Research Council
O.R.	-	Odds Ratio
PPASA	-	Planned Parenthood Association of South Africa
StatsSA:	-	Statistics South Africa
STI:	-	Sexual Transmitted Diseases
UN:	-	United Nations
UNDP:	-	United Nations Development Programme
UNESCO:	-	United Nations Educational Scientific Cultural Organization
UNFPA:	-	United Nations Population Fund
UNICEF:	-	United Nations International Children's Emergency Fund
UNPD:	-	United Nations Population Division
WHO:	-	World Health Organisation

ABSTRACT

Teenage pregnancy and childbearing in South Africa are very common and persistent issues. Despite the different types of birth control methods that the government of South Africa has provided to the public, teenage pregnancy and childbearing at schools seems to be still a great challenge. This persistent problem implies that the children get sexually active at young ages. The purpose of this study is to investigate and analyse the factors associated with pregnancy and childbearing among teenage girls currently attending high school in South Africa.

Secondary data drawn from the General Household Surveys (2011-2014) and 10% sample data from the 2011 South African census were used. Bivariate, and Multivariate analyses were carried in order to meet the aims of the study. The study analysed the prevalence, trends, and determinants of self-reported pregnancy as well as the extent of childbearing among teenage girls currently attending high school using data from the General Household Surveys (GHS) for the years beginning in 2011 to 2014 as well as Population Census 2011. The study is based on the assumption that there were no significant changes in the prevalence of self-reported pregnancies and in childbearing among teenage girls currently attending high school in the different periods under study.

As the current study used *self-reported pregnancy* and *childbearing* as the response variables, the results revealed that among the girls that were repeating the current grade the majority (7.4%) reported to have been pregnant in 2014, while the least cases were reported in 2011. Teenagers at age group18-19 had the highest number of self-reported pregnancy cases in 2014, whereas the younger teenagers aged 14 years had none of the self-reported pregnancy cases in the years 2011, 2012 and 2014. However, the results obtained from the Census 2011 data based on childbearing are almost indifferent, the youngest age group 14-15 years were about 7%, mid teenagers 16-17 approximately 31% of the teenagers reported to have two or more children, and 61.5% of the teenagers who reported to have a minimum of two children were from the older group of teenagers 18-19 years.

Keywords:

Teenage girls; adolescent pregnancy; childbearing; self-reported pregnancy; high school; sexual activity; fertility behaviour; socio-economic; demographic and household.

Chapter 1: Introduction

1.1   Background of study

Teenage pregnancy and childbearing has been a perpetual social problem in most developing countries around the world and previous studies reveal that teenage pregnancy is still high globally (Sedgh *et al*., 2015). South Africa is among the countries that are experiencing this social issue. Despite the decreasing trend from 1990 to 2011, the issue of teenage pregnancy in international perspective is still high predominantly in Mexico and Sub-Saharan Africa (Sedgh *et al*., 2015). Most of the young girls fall pregnant without the intention to fall pregnant particularly those who are still at the high school level and unmarried (Jewkes *et al*., 2001).Young women thus face a number of challenges such that they often find themselves in situations where they have to make tough decisions. After falling pregnant, these girls need to decide whether to keep the baby and bear the burden[1], to abort the child or give the baby away for adoption. Concurrently, they need to make a decision whether to continue or drop out of school so that they can work to support the child (Chigona & Chetty, 2007). Before even making the decision whether to keep or give the bay away for adoption, they are faced with the challenge of deciding whether to keep the pregnancy or follow abortion procedure which is often a risk to their own health.

This social behaviour is associated with quite a number of factors such as: peer pressure; sexual assault; sexual exploitation& rape; cultural beliefs; inadequate information about safe sex; socioeconomic status; availability & access of health services; attitude of nurses toward adolescent health risk, child support grant; rejection by family and early marriage (Isa & Gani, 2012; Madu&Peltzer, 2000; Moore, Jones & Meador, 2010; Shah, Prajapati&Sheneeshkumar2012; Thobejane, 2015; World Health Organization, 2012). The purpose of this study is to investigate and analyse the factors associated with pregnancy and childbearing among teenage girls currently attending high school in South Africa. The study analyses the trends of teenage pregnancy for the teenagers currently attending high school.

The Sub-Saharan Africa region is associated with a high rate of teenage pregnancy in comparison to other regions around world (United Nations Population Fund, 2013). A number of studies concerning teenage fertility rate and pregnancy had been conducted and they reveal conflicting results**.** This study brings forth the notion of teenage pregnancy and childbearing

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[1]This burden is often multidimensional such as financial demands and parenting demands or burdening their parents with the need to take care of the baby.

in the South African context for the high school girls aged 14-19 years. Attention will be given to factors associated with these pregnancies and suggest some strategies or initiatives to reduce the prevalence of teenage pregnancy and how to improve the strategies that are currently in place. There are a number of factors that are associated with teenage pregnancy. These factors have different impacts on the lives of the young girls and are applicable at different times and are associated with different conditions. The scope of this study includes the use of a quantitative approach to analyse these factors among young girls across different demographic characteristics such as race in South Africa.

The numbers of schooling young girls who fall pregnant vary from one country to another. The births among adolescents account for about 16 million, that is, 11% of all births worldwide; 78% of these births are unintended and approximately 16% of pregnancies end in abortion (Chandra-Moul *et al*, 2013). This accounts for 23% of overall burden of disease (postpartum diseases) due to pregnancy. Nonetheless, the majority of countries with complete pregnancy estimates have experienced a decline in the pregnancy rate from 1990 to 2011(Chandra-Moul *et al*, 2013).

South Africa is a very diverse country in terms of culture and race, and liberal when it comes to human rights. There are rights for children (Bill of Rights for children as per Section 28 of the Constitution in South Africa, Act 108 of (1996). These liberal children's rights occasionally affords children excessive liberty thereby exposing them to different kinds of social risks such as crime, drugs and teenage pregnancy. Willan (2013) states that there has been a decrease in the rate of young women who fell pregnant over the last decade in South Africa. In contrast, Sapin (2009) highlights that after the introduction of child support grant in South Africa, teenage pregnancies peaked. This observation suggests that there could be an empirical relationship between some government social interventions and the rate of teenage pregnancies.

Furthermore, there are strategic policies that the government and other organisations have put in place (Termination of Pregnancy Act 1996; Policy for the Management of teenage Pregnancy in the School, etc.) to fight this social issue. Regardless of these polices, the prevalence rate is unacceptably high in South Africa (Ghuman *et al*., 2009). This consequently raises a concern about the driving forces of high childbearing rate and the possible reasons that caused it to remain high. Since 1994, there has been a substantial

improvement in ensuring gender parity in basic education. Essentially, the progress is more than just achieving gender parity but girls are dominant in terms of school enrolments as compared to their counterparts due to some interventions done by the department of basic education (Panday *et al*., 2009). Thus, the teenage pregnancy demoralizes the effort that the Department of Education is making to guarantee that the girl-child stays in school. In contrast, this study reports that the teenage fertility rate has been reduced. In spite of the reduction in teenage fertility rate, the high proportion of unintended pregnancies for teenagers in South Africa remains a significant threat (Panday *et al*., 2009).

Notwithstanding the government intervention (child support) as mentioned by Sapin (2009), teenage pregnancy may arise from other factors. Some of these factors are usually popular or rather have more impact than the others. These include *household, school* and *community based* factors. Some of these factors include;   lack of communication between children and their parents (household factor); lack of parental guidance and lack of role models in the community(community based factor); peer pressure and ignorance of contraceptives(school based factor); poverty and lack of information about sex education and cultural beliefs (community and school based factor) (Thobejane, 2015).

A similar study also highlights some of the factors stated earlier; O'Rourke (2011) states that despite the gender inequality, the returns on schooling are higher for girls than for boys. Unfortunately, in societies, there are cultural taboos that exist to hinder the girls from attending school and discovering their potentials. Not only is there the problem of negative taboos associated with schooling but teenage girls also have to cope with the physical changes in their bodies when reaching the age of puberty. O'Rourke (2011) stress that at this stage of their lives, most of them still need some guidance concerning the issue of physical changes in their bodies. Sometimes there's no one to give them clear guidance, instead they receive inaccurate and inappropriate information from their peers. Also the communities regard the issue of sex discussions with the young girls as inappropriate and therefore even delays or deprive the teenager of the antenatal care (Phafoli *et al*., 2007).

1.3 Problem Statement

The epidemic of teenage pregnancies and childbearing among high-school teens remains high as it has been a persistent socioeconomic challenge in South Africa. Teenage pregnancy discourages the education performance and schooling of the young girls. Several studies have been conducted in the area of childbearing and teenage pregnancy in South Africa to investigate the driving forces behind the growth of this social issue. Based on the evidence from the literature and the social disorganisation theory it was highlighted that the issue of teenage pregnancy and childbearing driving forces is not only narrowed to the individual (personal level) factors but also influenced by the environment in which the youth live in (at home and community factors). The different studies include (Isa &Gani, 2012; Madu & Peltzer, 2000; Shah, Prajapati & Sheneeshkumar, 2012; Thobejane, 2015; World Health Organization, 2012) and have focused on different aspects of this issue. Moreover, the previous studies have only addressed some factors and not greatly examined the factors at *household level and community level* in relation to teenage pregnancy and childbearing. These studies also reveal that this challenge has not been significantly reduced. There's, therefore, more room for further studies in this area as there may be more aspects that contribute to this issue which have not been given much attention.

Therefore investigating teenage pregnancies and childbearing perpetrators with social disorganisation in the context of girls currently attending secondary school is a gap which has not been well-explored in South Africa.

1.4 Research questions

This study seeks to answer the following research questions:

- o Q1: Has there been a change in the prevalence of self-reported pregnancies among teenage girls currently attending high school since 2011?

- o Q2: What is the prevalence of self-reported pregnancies among teenage girls repeating current grade?

- o Q3: Does the size of the household have an impact on the self-reported pregnancies?

- o Q4: What is the prevalence of childbearing among teenage girls currently attending high school for the period under study?

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- o Q5: What are the determinants of self-reported pregnancies and childbearing among teenage girls currently attending high school in South Africa?

- o Q6: Are teenagers from socially disadvantaged backgrounds more vulnerable to teenage pregnancy and childbearing?

1.5   Hypotheses

- o H1: There is no single direction in the prevalence of self-reported pregnancies among teenage girls currently attending high school; it entirely depends on the nature of each explanatory variable from 2011 to 2014.

- o H2: Teenage pregnancy is more prevalent among class-repeaters than the non-repeaters.

- o H3: Teenage girls living in larger households in size are more likely to experience teenage pregnancy than those living in smaller size households.

- o H4: Teenagers from communities with high unemployment rate are more prone to self-reported pregnancies.

1.6   Purpose of the study

This study seeks to discover and inspect more teenage pregnancy and childbearing contributing factors in South African high schools and the magnitude of the impact of these factors from 2011 till 2014, using the General Household Surveys conducted in those years, Community Survey (2011, 2013 and 2016) and Census 2011. The factors are classified into demographic, socioeconomic and community characteristics. In addition, statistical relationship between the demographic and fertility elements will be assessed. The outcomes will create more awareness both in the social and academic communities about this serious challenge. Despite government effort through the Department of Health and the Department of Education to address this issue by introducing different types of birth control methods and universal sex education, the prevalence is still unacceptably high among the school going girls. This calls for more research in this area to further investigate the issue to understand and discover more dimensions that are associated with teenage pregnancy among high school girls. Understanding the factors contributing to this problem provides a first step in finding

lasting solutions to address the challenge of teenage pregnancy in South Africa. Hence, this study will cover some factors which other studies have not really considered in order to better understand this phenomenon; and hopefully, policy-makers can be able to find better strategies to tackle this problem based on the results of this study.

1.7   Objectives of the study

This study is intended to achieve the following objectives:

- The specific objective of this study is to establish that teenage pregnancy and childbearing is not only influenced by individual characteristics but the environmental characteristics as well.

- To profile self-reported pregnancies as well as childbearing among teenage girls currently attending high school in South Africa in order create better understanding of this issue.

- To determine the demographic and socioeconomic factors associated with self-reported pregnancies as well as childbearing among teenage girls currently attending high school in South Africa.

1.8   Significance of the study

The current study contributes towards the enhancement of existing knowledge about teenage pregnancy and childbearing among girls currently attending secondary education through the application of social disorganization theory, because most teenagers give birth at high school. This will assist the government, public and the policy makers in making informed decisions on reviewing and improving the current government policy against teenage pregnancy. Furthermore, this study will cover some factors which other studies have not considered in order to better understand this phenomenon.

1.9   Definitions of key terms

Teenage pregnancy

The term teenage pregnancy is normally used interchangeably with adolescent pregnancy. Some writers differentiate between these two terms based on age. They refer to adolescent as the children between the ages of 12-19 years while teenagers are children of ages 13-19 years (WHO, 2004). Thus, adolescent pregnancy includes cases of children who are 13 years old

and not necessarily a teenager yet. For the purpose of this study, these two words are used interchangeably. Teenage pregnancy is a case where young girls fall pregnant while they are still of school-going age and before they reach adulthood. It includes girls of the age group of 13 to 19 years of age (UNICEF, 2008).

Childbearing

The term childbearing covers the time from a woman conceives until the point of giving birth to a child. The childbearing ages are normally between 15 - 49 or 15- 44 years of age. The definition differs across countries. According to the Population Reference Bureau (PRB, 2013), it is the reproductive lifespan of a woman. However, the ages 15-49 are assumed for statistical purposes. In actual sense, the age at which people start to give birth is even less than 15 years and in some cases more than 49 years, which is menopause stage. For instance, teenagers could fall pregnant as early as the age of thirteen years. Hence this study includes those teenagers who are thirteen and fourteen years of age. Children fall pregnant at an early age because they engage in sexual intercourse at an early age, which is younger than 13 years (Louie, 2009).

Adolescent Girl Pregnancy (AGP)

This is defined as the percentage of women aged 20 to 24 with a live birth before the ages of 15 to 18 respectively. It is used to determine the magnitude of the adolescent pregnancies, especially among adolescent girls under the age 18.

Adolescent Birth Rate (ABR)

The estimated value of adolescents aged 15-19, currently pregnant or have had a live birth as well as the number of live births observed among them is commonly expressed as the number of live births per 1000 adolescents (15 to 19). This is used to illustrate disparities linked to basic background characteristics (place of residence, education and wealth quintile).
For instance, UNFPA (2013) reported ABR rate to be higher among the adolescents that live in rural areas, who are less educated and come from a poor background. However, it is lower among their peers who live in urban areas, with higher levels of education and who are coming from wealthier background (households).

Adolescent Fertility Rate (AFR)

It is the number of live births per 1000 women aged 15-19, which measures the fertility among the teenagers. This measure is important to determine the childbearing and the number of children ever born by adolescents (Report from Basic Education, 2009).

1.10   Thesis outline

This thesis is divided into 6 chapters. Chapter 1 provides the introduction, background of the study, problem statement, research questions, hypotheses, purpose and objectives of the study, as well as the significance of the study. Chapter 2 provides the literature review related to this study, and also looks into the definition of key terms. Chapter 3 provides data and methods, the variables selected for analysis and the analysis techniques that will be used. Chapter 4 provides the results of the analysis. Chapter 5 provides the discussion of the results in relation to the broader context in relation to the study. Chapter 6 provides the conclusions, recommendations, and policy implications based on the findings of the thesis.

Chapter 2: Literature Review

2.1   Introduction

This chapter aims to explore the challenge of teenage pregnancy by analysing different factors that contribute to the rise of teenage pregnancy. The chapter also aims to analyse the problem at a broader context, that is, around the world. Adolescent pregnancy and childbearing are not only a challenge in South Africa; many other countries in the world are also affected by these social issues. However, Sub-Saharan Africa is amongst the regions with high prevalence rate of pregnancy between the ages 14-19 years old (UNFPA, 2013). In fact, Africa is on top of the list of regions with women who give birth before the age of 20 years. In addition, this chapter also reviews the different theories applied by researchers pertaining the issue of teenage pregnancy for the ages (14-19) at high school level. The scope of these theories are based on the South African and global context. This section includes the causes, driving forces, impacts on the mother of the child and the child, factors associated with teenage pregnancy and childbearing and the long-term effects or consequences of this social issue.

2.2   Teenage pregnancies in the broader context

Teenage pregnancy occurs at different rates and is influenced by different factors. Every year, there is a group of young girls (adolescents) who fall pregnant around the world. According to UNFPA (2015), about 20 000 girls under 18 years of age give birth daily in the developing world. This reaches an estimated amount of 7.3 million births per year globally. This becomes a burden to the teens at times as it prevents them from actually pursuing their dreams (WHO, 2012). They feel obliged to leave school earlier than expected and sacrifice their dreams for

the sake of their babies. However, it is not always the case for the fathers of the babies. The numbers of adolescents who actually fall pregnant each year are high. According to Chandra-Moul *et* al., (2013) about 16 million (11%) girls aged 15-19 and 1 million girls who are younger than 15 years give birth every year globally. Approximately 95% of the births transpire in developing world. The distribution in China, Latin America and the Caribbean is 2% to 18%. Teen births globally contribute a rate of 23% of the pregnancy disease burden (WHO, 2012). It is apparent that one of the leading causes of teenage pregnancy is societal beliefs on early marriage.

2.2.1 Early marriage

Firstly, there is nothing wrong with getting married at the appropriate age but once young children get into marriage, it begins to be a challenge to them, their family and the society. Early marriage is one of the critical matters that encourage pregnancy in young females and cause them to have children at an early stage. According to UNICEF (2008), 49% of the young girls in the developing world get married before the age of 18 years. In marriage, the young girls feel obliged and feel the pressure or are even encouraged to fall pregnant since having children is normally part of the marriage goals, they also feel it is good to have a baby while they are still young (Population Reference Bureau, 2013). As a married woman, the society might also scorn them for failing to bear a child, no matter at what age. Therefore, the married teens are forced by their condition or situation to have a baby at an early stage. These young partners usually think they are doing what is good for their families while they are totally unaware of the implications of teenage pregnancy.

According to WHO (2012), the recent estimates show that globally, more than 60 million women age 20-24 years were married before the age 18 years. In the developing world, approximately 90% of births by teens are found among the married couples. The proportion is close to 100% in Western Asia/ Northern Africa, Central Asia and South Central and South Eastern Asia, while the proportion is 70%-80% in South America and Sub-Saharan Africa (WHO, 2012). The magnitude of the yearly marriages varies across countries and regions, a data from Syria Country Profile reveals that approximately 37 000 girls get married daily (Care International UK, 2015). However, the highest rates are found in West Africa, followed by Southern Asia, Northern Africa, the Middle East and Latin America (UNFPA, 2013). The practise of early marriage in the developing world is associated with a number of social-economic issues such as poverty, tradition and religion, insecurity of parents (Maholtra,

2010). Child marriage demoralizes the rights and potentials of the young girls (UNFPA, 2013). Societal expectation on these young girls is high, such that they are expected to fall pregnant and act as mothers regardless of their age (WHO, 2012; Mpanza & Nzima, 2010).

2.2.2 Societal related marital issues

Some societies believe that once a child starts the menstruation cycle they are ready to be made wives, they fear that they are at a high risk of falling pregnant before marriage, thus give them away for marriage (Joseph, 2014). They do this practice to avoid and protect the teenager from having many sexual partners and pregnancy before marriage and also protect the image of the family since pregnancy out of wedlock is perceived as a disgrace to the family (UNICEF, 2001). This observation is supported by Ngubani who is the founder of Rural Women's Movement reports that "Most marriages take place in the rural areas, for they believes that once children reach their puberty they are ready to be wives". Regardless of the fact that it contributes towards the increment of teenage pregnancy, society believe it is a good tool to keep their children safe from sexual transmitted diseases (STDs) and other life threatening diseases like HIV and unmarried teenage pregnancy. According to the UNICEF (2005) report, about 7% of the young girls are already in marriage in South Africa before their 18th birthday. The major challenge which impacts the adolescent marriage in a negative manner is normally the age difference between the teens and their husbands, the adolescent get into adulthood in totally unequal conditions. While age is the great challenge, most of the girls who are married don't attend school and therefore experience high levels of fertility over their childbearing ages (UNFPA, 2013).

A study that was conducted by Koksi *et al*., (2017) on early marriage in Sub-Saharan Africa reveals that among the regions some countries in West Africa have the highest rate of child marriages. Burkina Faso, Guinea, Mali and Niger have above two thirds of the young girls who got into marriage before the age of 18 years. Only in two (Ghana and Togo) of the West African countries experienced a major decline of below 25 %. In overall there is no major decrease on the trends of teenage pregnancies in most of the 31 countries studied. In addressing this issue, there was a set minimum age for marriage in some Sub-Saharan countries where Guinea and Niger were among four countries with remarkably low ages 15-17 years. This explains the highest rate in West Africa.

South Asia is the second region with high rate of child marriage. Butt and Naveed (2015), state that in 2010 the rate of girls who got married before 18 years (46%) almost reached 50%. Most of the countries in the region have got similar social environmental and issues such as poverty, illiteracy, and religious fundamentalism which are considered compatible for child marriages. Bangladesh is among these countries from South Asia and has the maximum rate of child marriage prevalence (66%), Afghanistan is the second highest (57%), Nepal (51%) and India 46%. The prevalence is high in the rural Bangladesh with 70% of girls married early. In contrast, the lowest rate of child marriage in the region is found in Maldives with approximately 4%, followed by Sri-lanka 12% and Bhutan 14%.

2.3   Causes of pregnancies among young girls

South Africa is among the countries that have a high prevalence of adolescent pregnancy in the world. The Total Fertility Rate in South Africa based on the 2001 Population Census is 2.8 (Moultrie and Dorrington, 2004) which is one of the lowest in Africa. It is rated as the fourth lowest in Sub-Saharan Africa, also, South Africa, among other sub-Saharan countries holds the 4th position of low Total Fertility Rate. Moultrie and Dorrington (2004) also observed that as the fertility at older ages decline, there has been an increment on the proportion of adolescents' fertility in comparison to total fertility. There are quite a number of factors that are associated with the increasing rate of teenage pregnancy in South Africa which are stated and particularised below.

2.3.1 Tradition and religion

South Africa is a religious country and strongly believes in the norms and values the different cultures, the principles from the religions are mostly good to grow children .The challenge arises when these religious or traditional beliefs influence negative outcomes on the community. For instance, most of the time, parents introduce their children to adulthood by compelling them to perform certain traditional rituals. In some places, households, counties or even tribes in South Africa, once a boy child reaches the age of 16 years, they are declared old and therefore they should perform certain rituals for the completion of the transition from childhood to manhood (WHO, 2012). The main and famous ritual that they perform is *circumcision*, which introduces them to manhood according to their parents and elders. The most common age of the circumcision ritual in South Africa is between 15-25 years, (WHO, 2012). Although being circumcised come with some health benefits, this ritual also creates

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some negative problems in societies. After they are declared man[2], some boys (now classifies as man) feel the need to have multi-sexual partners and at least father a child in order to prove their manhood (Prohashka and Gailey, 2010). This belief is a shortcoming to the communities; these young men somehow contribute towards the rise of young girls who fall pregnant with fatherless babies. The ritual mostly takes place in the rural areas where the majority of the population is black people and uneducated.

Similar to the circumcision ritual for boys, once girls reach the age of 16 years, they also get to be initiated to adulthood through performing some rituals such as **"intonjane[3]"**. Upon the completion of this ritual, these girls are also assumed to have graduated from girlhood to womanhood and ready to form their own households. Their parents know they can actually get rich by virtue of having a female child that has grown to be a young woman. Some parents become desperate for money so much that they give their young girls away for marriage to older men (Baird *et* al., 2010). This process sometimes happens without the consultation/ confirmation of the victims (the girls). This, in simple terms, is human trafficking. The practice of giving away young girls for marriage violates their right to childhood. This is called "*Ukuthwala*"(abduction into forced marriages). According to the Eastern Cape Social Development and Special Programmes (2012), this behaviour is performed mostly by Black South Africans. Due to this reason, African population teenagers are more expected to have unwanted pregnancies compared to the teenagers of other population groups because of this exposure to sex at a younger age.

Furthermore, when they get to their so called "husbands", sometimes they force them into sex (coercive sex) (Lichter and McCloskey, 2004). In simple terms, these young girls are treated as commodities that can be traded any time, even the older men enjoy having virgin wives. This desire by older men to have younger girls as wives thus compounds the problem of adolescent pregnancies. This used to happen a lot in the 20th century in Sub-Saharan Africa, particularly in South Africa (UNICEF, 2015). In essence, these young ladies experience a lot of trauma due to the abovementioned practice, which also leads to pregnancy at a young age.

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[2] Once boys have gone through the circumcision rituals in South Africa, they are declared to have graduated from being boys to being men.
[3] A custom/ strict ritual performed by a Xhosa girl when she reaches puberty, living in a secluded house.

Besides the teen pregnancy caused by early marriages, some of the girls fall pregnancy by mistake as they try to experience what they have heard from their peers. Thus, peer-pressure is also another contributing factor to the problem of teenage pregnancy. A study that was conducted in Eastern Cape (Port Elizabeth) and reported by eNews Channel Africa (2015), shows that Eastern Cape is one of the provinces with a high rate of teen pregnancy in South Africa. The Eastern Cape Education Department reports that there were 20,000 teen pregnancies in the province in 2013. In one of the schools in Port Elizabeth, a teacher gave students a project where they had to take 2.5kg of flour, hold it in their arms and even go home with it, so that they experience how it feels to have the responsibility of caring for a baby. There is ongoing assessment of this programme to see if it is viable to implement in the life orientation curriculum (eNCA, 2015). Thus, Eastern Cape is currently the second province with high teenage pregnancy in South Africa, following Gauteng which tops the list. According to geographic statistics, the Eastern Cape Province has one of the largest proportions of people still living in the *rural areas* (Westaway, 2012)*.* This high ratio of rural population is problematic in that most adolescents that live in the rural areas are likely to have less sexual education.

In terms of religious beliefs, Shahabuddin *et al*., (2016) reveals that religious beliefs contributed to the timing of childbirth in Bangladesh. The major challenge raised by the author is that, once married, women forfeit the right to make decisions about their own reproductive health to their husbands. Unfortunately, some of these husbands forbid their wives from using any contraceptives or birth control pills because they want their babies to be born during 'Ramadan', which is known as the most holy month in the Muslim community (Shahabuddin *et* al., 2016). The author adds that teenagers who were members of the families that were strictly observing the religious rules were most likely not to take family planning methods particularly those who are married. They were therefore in high risk of falling pregnant during that period. In contrast, a study by Strayhorn and Strayhorn (2009) reveal that there's a strong and positive correlation between religion and teenage pregnancy. The writers argued that, the reasons could be that the religious teens are discouraged to use the contraceptives because they uphold the principle of abstinence, which does not always have a positive outcome. Non-religious teens have also been reported to have more abortion cases reported as compared to their counterparts. The correlation might not be what one would anticipate. Religious teenagers are encouraged not to abort the baby once they find out about

their pregnancy status. This raises the rate of pregnant teenagers among the religious societies compared to the non- religious.

2.3.2 Culture and peer pressure

Culture plays a vital role on the belief system of a child. Children always want to abide by the laws, principles and moral values of their own culture. In the past, girls had pressure of proving to the community that they are not infertile through giving birth at a young age (Jewkes *et al*., 2001). This had made young girls believe that it is good to give birth earlier than late, even though they are still at school. Most African communities put much value on fertility such that the women who do not give birth are considered barren (Jewkes & Christofides, 2008). The young women also value childbirth to secure their relationships with their partners. Although in the post-apartheid era studies had been conducted to create awareness on the importance of parent-child sex talk some communities still believe it is immoral to discuss sex with the young adults and children (Bastien *et al*., 2011). Hence, the families that live in such communities put their children at a risk of not being aware of the impacts of sexual encounters at a young age, its challenges and the consequences.

Furthermore, other communities do not approve the usage of contraceptive by married women; they take it as dishonour (UNICEF, 2001). For instance, Mchunu *et al*., (2012) reports that 55.5% of the girls in the study fell pregnant because they did not know the consequences and in some instances as worse as failing to understand what exactly causes one to be pregnant. Their parents therefore remain ignorant and in denial of the fact that what they are hiding from their children will be revealed in one way or another. The unfortunate consequence of these girls failing to get the sex education at home is that they might end up getting the information perhaps at school from their peers. The information they receive from their friends might not be accurate and may be misleading. Most black communities (previously disadvantaged) until today still believe that a parent cannot have a talk or discussion about sex with their children because they believe it is a taboo within their communities (Mugambi & Magesa 1990: 78).

Some parents also worry that the talk might even encourage the girls to go and engage in sex since they feel empowered by the new knowledge. Chemuru and Shrinivas (2015) confirm this observation in their study by stating that some of the respondents from the teenagers reported that the only reproductive information they have from their parents was that they must stay away from boys once they start menstruation. These parents fail to discuss with their children what exactly happens in detail, because they totally believe it is inappropriate.

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In this case, these parents who believe discussing sex education with their children might be worsening the problem of teen pregnancy by not being transparent enough to their children about sex.

2.3.3 Absence of parents in child's life (mother-daughter relationship)

Growing up without parents is not easy for anyone; it has serious implications that cannot be erased even when a child is old. The absence of parents gets more challenging when a child becomes a teenager where they have a couple of physical changes in their bodies and their lives respectively. At this stage, they want to find out and know themselves more on the physical changes that begin to take place when a child grows from later childhood to adolescence (Dobbs, 2011).Usually, the source of this knowledge is the child's parents and unfortunately teenage girls who grow up without their parents often also are deprived of that essential mother-daughter relationship. Mpanza and Nzima (2010) show that teenagers who report a sense of connection to their parent(s), family and school are more likely than their peers to delay having sexual intercourse.

At this transition stage, adolescents begin to seek more information in order to understand the physical changes they start experiencing and such information might not be accurate. In a situation where the children are orphans and do not have any of their parents to guide and guard over them, they misuse the information they get from the outside. Some children who live without their parents may also be discouraged from attending school and end-up dropping out because they are lacking motivation, some even dropout because they are forced by the need to be bread winners for their siblings. According to the findings by Case &Adington (2006), once a child lose their mother they are more likely to perform poorly at school. Mothers play a bigger role in growing and grooming a child, particularly when it comes to reproductive health matters of the child; therefore orphans who live without this supervision may be at a risk of early fertility.

Partners in Sexual Health (2013), add that living as an orphan may put the lives of the children in danger as they become more vulnerable to many social issues. For instance, most of them begin to live with their relatives that may cause them to have some insecurity within the household which may lead in them compromising their health for economic security, which is, tolerating abusive boyfriends, dating older men, and having multiple partners. These conditions normally diminish the young women's ability to negotiate when and how to have

sex. According to Thurman *et al*., (2006), teenagers who are orphans have an early sexual debut as compared to their counter-parts (non-orphans).

2.3.4 Relationship with older men: transactional sexual relationships

Teenage pregnancy may also arise from the relationships where there is a huge age difference between the partners. Previous research indicates that other young ladies get involved in relationships with older men (Bozzoli, 2016).These young girls date older men with different purposes or reasons. Some of them grew up without their fathers being part of their families or lives. It is for this reason that they feel they need someone who is going to love them and also satisfy the need of father figures in their lives (Madu and Peltzer, 2000). This is more related to family disruption, whereby a child does not receive enough care and love at home and decide to seek for it elsewhere (UNDP, 2013). Other school girls date older men because their friends and most people in their school also date older men and because of other luxuries (expensive clothes, cell phones and other luxuries they wouldn't get from their own parents). Whereas other teenagers date people who are older than them for the fulfilment of their economic or financial needs. At times, it is not only for the benefit of the teenage student but for the benefit of the entire family as a bread winner. In such circumstances, these teens' parents often condone these relationships for the sake of the family to receive financial income even though it might be to the detriment of their child's future or health. Another serious issue that stimulates adolescent pregnancy is the tendency of the teenagers dating older men just for money. They have sexual intercourse with them in return for money. This is similar to prostitution**.**

Women poverty is highlighted as one of the major factor that influences the young women to date elderly men. A report produced by Partners in Sexual Health (2013) explains this behaviour as the trade-off between health and economic security. This means that these teenagers sacrifice their health to satisfy their financial needs. A relationship of a teenager and an old man is by no means an equal relationship, the man often have more power in terms of decision making concerning the sexual activity. Kiss *et al*., (2012), states that this behaviour is even more prevalent among people who are in an intimate relationship (marriage, courtship and relationship). The young lady would even be scared of saying no at times because of the fear to forfeit the benefits that comes with the relationship. This may thus, result in an abusive relationship. Some young women take this as their job, they decide to have many sexual

partners who will provide them with money and other benefits at the end who are currently called **"blessers"**. Likewise, women described poverty as one thing that required them to engage in extramarital sex to gain food and money, where capacity for negotiation, including condom use, was limited (Kiss *et al*., 2012).

2.3.5 Lack and inappropriate use of contraceptives

Although the knowledge about contraceptives is widely spreading and increasing in South Africa, there are still those teenagers who do not use them at all, and some use them paradoxically. The previous literature indicates that the usage of contraceptives has increased because of more information or education about this birth control method (Macleod & Tracey 2010). The use of condoms also increased, more teenagers are now using condoms. Kearney and Levine (2015) also supports this general trend. Although the use of other contraceptives is helping to protect these adolescents from falling pregnant, they still remain exposed to many Sexually Transmitted Diseases (STDs). In contrast, a low use of condoms was reported in the rural Eastern Cape and Mpumalanga and among the individuals with low education levels on the South African Demographic Health Survey conducted in 2003 (SADHS, 2006). This issue requires more and stricter attention.

2.3.6 Sexual abuse (coerced sex) and rape

It is unfortunate that some teenage girls /students experience the trauma of sexual abuse and rape which results to teenage pregnancy, because they are simply seen as sex objects rather than being valued and respected by men in their communities (Baloyi, 2009).This behaviour is quite common in South African communities. Some children get raped from within their own household, some at school and others in the community in which they live. The perpetrators sometimes go unreported because of the stigma this issue carries and that it is a taboo in certain areas (Madu and Peltzer, 2000). This mostly originates from the violence that arises at homes against children and women. In some schools, there is a problem of increased violence and lack of discipline for both students and teachers (Jewkes, 2001). The study by Jewkes *et al*., (2002) reports on findings from the South African Demographic Health Survey (DHS) of 1998 which reveals that the main offenders of rape within the school are teachers. The teenage girls are therefore not safe even at school. They are at a risk of experiencing abuse by their male students and teachers.

Violence and abuse mainly arise from partners who are already in a relationship. A report from Human Rights Watch (2014) in Tanzania, reports on a number of cases whereby teenagers between ages 10-15 had been forced into marriage where they are abused and raped by their husbands. Likewise, coercive sex is practised more by partners. According to a report produced by South African provincial education department in 2007, about 60% to 70% of the teenage scholars were pregnant in the Gauteng province for one school (Panday *et al*., 2009). However, the survey that was conducted in the previous year (2006) reveals that 30% of the high school girls testified that their first sexual encounter was forced and threatened. A study by Pettifor *et al*., (2009) explains further that 7% of the 15-19 year old girls reported their first sexual experience as coerced. It is usually rare that people who force these teens into sex use protection (*condom*).Unfortunately, some teenagers fall pregnant the first time they engage in sexual activity, when this behaviour is repeated it escalates the rate of pregnant teenagers.

2.3.7 Availability and accessibility healthcare facilities

Most of the family planning programmes/methods in South Africa are made available and generally designed for women in the reproductive age (15-49). In fact, it caters only for women who had already given birth (mostly older and married women); evidence is taken from the studies by (Donati *et al*., 2000 and Cooke 2007). The availability of healthcare services then varies in different places. For instance, mostly in the rural areas health centres are few in number and far in terms of distance. The teenagers have to walk to receive the health care services such as contraceptives. For instance, a study that was done in the Eastern Cape by Social Development and Special Programmes (2012) explains that in the year 2008, 52.8% of the children in the Eastern Cape had to walk a distance that took them 30 minutes to get to a close by clinic. It becomes more challenging for the high school scholars who stay in the rural areas; when they have to walk a distance to school and they have to walk some distance to the healthcare services to receive the service (Chemuru and Shrinivas, 2015). Thus, the adolescents become discouraged to go and get the contraceptives, they then end up not using them at all.

Public health workers also play a substantial role in the sexual conduct of the teenagers (Eaton *et al*., 2003). The teenagers often suffer from receiving fair and genuine treatment in the public health care services. This is mainly because the health care workers begin to be personal and mistreat the teenagers claiming that they are young and therefore should not be

using contraceptives (MacPhail & Campbell, 2001). Some threaten to tell the children's parents. A report from WHO (2003), states that if the workers at the health care services are skilled professionals, who are non-judgemental, and respect the confidentiality of adolescents there is a high probability that teenagers will come to use the services (Agampodi *et al*., 2008). In other countries (Uganda and Zambia), there are laws and regulations that forbid the teens of younger than 18 years to use some of the reproductive services without their parents' consent (WHO, 2012). For these reasons, teenagers are not confident enough to consult the health care facilities and access contraceptives thus fall on the teenage pregnancy trap.

2.3.8 Geographic area (rural versus urban)

The incidence of adolescent pregnancy and childbearing may also arise based on the type of location one stays in. Put differently, the adolescents may be in a high risk of falling in the trap of childbearing because of the nature of their geographic area of residence. For instance, there are places whereby the rate of childbearing is quite high relative to other places in the same province, depending on the geographic area. The literature reveals that the rate of adolescent childbearing is quite high in the rural areas due to a number of reasons (Isa &Gani, 2012). Palamuleni and Adebowale (2014) also point out that staying in the rural areas is a risk factor for unintended pregnancy prevalence in Malawi. A study by Williamson *et al*., (2009) advises that due to the shortage of resources in the developing world, it is difficult to access the advice concerning the reproductive health and contraceptive use. Adolescents find it difficult and challenging to try to obtain assistance about sexual reproductive health or even talk about it to older people. Isa and Gani (2012) also raise the issue of affordability in the rural area. The situation is quite appalling in the rural or remote areas; the facilities in the rural area are normally limited to offer the support to the adolescents. A report from Health System Trust (1996) indicates that the clinics in the Eastern Cape are empty and don't have drugs on their shelves. Some have to travel with money; those who do not afford the transportation costs might lack resources to do so.

Furthermore, not only affordability is an issue in the rural areas, there is normally few health workers providing help. The available health facilities are normally understaffed. Normally, there is a shortage of the health care staff to provide help to the patients. Gaede and Versteeg (2011) state that the right to health in the rural South Africa is significantly restricted by the shortage of the health professionals. Their counterparts who stay in the urban areas are not exempt from this challenge, where the number of patients seeking maternal help outweigh the

number of health care staff or professionals. Lastly, the healthcare staffs are not well trained to accommodate the needs of the adolescents; they regard the teenagers as their mothers and pose judgemental questions instead of providing the needed health services. This behaviour by health professionals signals a lack of professionalism in their work and service they provide to patients. When professionalism is lacking, it becomes a huge challenge, the attitude of the health workers makes the teens reluctant to approach clinics for contraceptives especially those who are single in marital status.

Children who live in rural areas are more vulnerable to falling pregnant than those who live in urban areas. A study that was conducted by Ibis Reproductive Health in relation to teenage pregnancy prevalence and place of residence discovered that 14% of teenagers from rural areas became mothers compared to 11% of urban. However, due to the better education offered in urban areas, the children who grow up there are more likely to have accurate sexual and reproductive information at young ages as opposed to their counterparts. This argument adds to the above fact that young women who stay in the rural areas have limited access to reproductive health information and health resources. Therefore, by the virtue that one is a girl and is from rural areas, they are subject to high risk of falling pregnant at a young age.

Furthermore, the issue of unmet need still persist, in different dimensions; difficulties in accessing or using Family planning services. Bankole and Malarcher, 2010; Biddlecom *et al*., (2007) point out some predominant obstacles to contraception use; social stigma, shame, fear and cost are the substantial barriers adolescent utilization of sexual and reproductive health care services.

2.3.9 Government interventions (child support grants)

Teenage pregnancy is a "devil" to every nation; it is one of the most popular topics of debate in most countries; including South Africa. Luker& Kristin, (2006) state that there are also some authors who believe that the government is indirectly encouraging teen pregnancy through the provision of child support grants to the young mothers. Put differently, young girls fall pregnant so that they may benefit from the state's social delivery, so that they can use the grant as poverty relief. This is a moral hazard effect. On this view, there is no consensus in literature as some scholars believe this is the case while other disagrees. This opinion of young girls that they deliberately fall pregnant is supported by the finding of PPASA (2003) survey where some of the findings reveal that only 12.1% of the pregnant teenagers who had intentionally conceived to receive the Child Support Grant (CSG).

Besides the CSGs, there are also claims that South Africa's free abortion law also contributes to the rise in teenage pregnancy in the nation (Frank, 2005). The knowledge that should they fall pregnant, these teenagers can opt to abort the pregnancy and they have full autonomy to make this decision provided the pregnancy is within the stipulated gestation period makes them more reckless when they should be carefully protecting themselves (Termination of Pregnancy Act, 1996). In contrast, Rebekah & Lindsay (2007) are of the view that the state itself has the responsibility to look after the vulnerable populations within the country, by providing the free services or social security and supports the provision of child support grant and the laws of abortion to the young mothers. In other words, they are of the view that teenagers are among the vulnerable groups in our communities, thus, it is the state's obligation to ensure that these groups are properly protected. Though this is an important argument, it is also important to note that policies designed with good intentions can often also create perverse outcomes.

2.4   Pregnancies among high school girls

Students engage in sex for different reasons however, the Department of Health and Basic Education Department need to play their role in ensuring that the proper and accurate sexual reproductive health education is provided for the high school teenagers; the students also need to be responsible and wise in their sexual life, more especially after they have received the information about sex. Some young girls have partners who are years older than them (Jewkes *et al*., 2001). It becomes even more unsafe for the young girls when their school teachers turn against them and begin to be in relationship with the students and sometimes are the main perpetrators of rape. Many cases go unreported because school girls fear shame and exposing their teachers which might in turn affect their education prospects. By virtue that a learner is in a relationship with a teacher, they are already exposed and vulnerable to unhealthy relationships and sexual abuse.

2.4.1 Challenges of a pregnant high school teenager

2.4.1.1 Discrimination

Some teenage girls hide their pregnancy because of the stigma they usually face once they fall pregnant; it is perceived as a disgrace to their families and therefore brings shame upon the

family. By falling pregnant, they are also at a risk of dismissal from school, as some teachers believe that pregnant girls make others sleepy and not able to concentrate in class.

2.4.1.2 Birth related challenges

The complications do not end after the pregnancy; there are also post pregnancy challenges. According to Grant and Hallman (2006), in South Africa once a teenager that is at school falls pregnant, some normally stop attending school. While for other teens it might not be the case; it depends entirely on the teenage mother's capacity to cope with being a mother logistically and financial status to support the baby and being a student at the same time (Kaufman *et al*., 2001). Therefore, most teens rely on their mothers, it is not usual with the fathers.

According to the South African Act of 1996, it is illegal to reject pregnant girls at school, or to not allow them to complete their education because of being pregnant, that is, depriving them of their human right which is education (UNESCO, 2003).This has been a challenge in South Africa as a traditional nation that upholds some community norms and values. For instance, Ilika and Anthony (2004)highlights that most of the pregnant unmarried teenage school girls are normally not permitted to carry-on attending classes, about 10 000 girls in Kenya leave school due to pregnancy. Even before they are suspended, they turn to leave because of stigma and shame.

2.5   Consequences/ Implications of teenage pregnancy

One of the greatest challenges for high school pregnant teenagers is the deprivation of education to the impoverished young girls due being pregnancy. This is still practised in most high schools. Those young girls will never get an opportunity to discover their full potential. If they were going to be economists, they will never become that, because they are deprived of the opportunity to pursue their dream (Morrell *et al*., 2012). Parents sometimes believe that early marriage is for the safety of the girl; so, that they don't go around misbehaving such that they end up falling pregnant out-of-wedlock. Some communities value the virginity of a girl before marriage; hence parents sometimes feel it is better to send them for a marriage at a young age so that they fall pregnant in marriage (Wadesango *et al*., 2011). Most of the time , it is not really saving them but rather depriving them their human rights because of the consequences this extreme measure brings (Wadesango *et al*., 2011). Some families allow that to happen to their daughters because they believe it is a reduction of the financial burden of supporting them financially as their children. In true sense, this rather causes the

http://etd.uwc.ac.za

intergenerational poverty trap. Girls who are forced to sacrifice their studies for marriage, they will have fewer opportunities to advance their skills and knowledge to earn an income.

2.5.1 Poverty

Poverty is both a risk factor and a result of teenage pregnancy. The level of its impact in the African communities is quite significant such that the reduction of poverty is the first in the millennium development goals, while teenage pregnancy on the contrary increases the likelihoods of it happening (UNFPA, 2013). When a girl becomes pregnant, her life can change drastically. For example, the girl's education may end which results in lesser chances of earning a good salary in the future (Sedgh *et al*., 2015). While some students still get chased out of school because of their pregnancy, some drop-out as a matter of choice because of failing to deal with the shame explained above. The data from Demographic Household Survey (DHS) on 23 countries in Sub-Saharan Africa that were reviewed in 2004 indicated that 18% of young women dropped out of secondary school due to pregnancy (Eloundou-Enyegue, 2004: 510). This means the end of education to some of these young girls which most times diminish their employment prospects.

Due to the decreased chances of employment they become more vulnerable to poverty and their health often suffers. Poverty arises in such circumstances. Among others, teenage pregnancy is the major causes of teenage girls dropping out of school. According to the report given by Planned Parenthood Association of South Africa (PPASA) (2003) previous studies in South Africa confirm that after financial concerns, adolescent pregnancy is one of the leading motives for high school drop-out rate. However, it mostly depends on the financial background of the young mother. For instance, a person who has a family that is financially stable and financially secured, and then this does not really result to poverty for them.

In addition to the above factors, despite the educational deprivation shame, shyness also contributes to the problem of teen pregnancy. As already mentioned above, some children get discouraged and do not want to go back to school after they have given birth because they feel it is a disgrace. Panday *et al*., (2009) provides an example in the author's study conducted in Limpopo, which reveals that only a 3rd of the students come back to school after birth. This indicates that after the birth of the babies, very few of the teenage girls are interested to go back to school. This might also be a result of the poor socioeconomic status or background of a person**.** Thus, it could be that they go and seek for jobs to support their babies. After birth some school girls feel too old to go back to school and repeat the same grade or totally lose

interest in schooling (Chigona and Chetty, 2007).This is as a result of the gap period after birth. Therefore,in this manner poverty possibility is enhanced.

2.5.2 HIV& AIDS

Complications from pregnancy and childbirth are said to be the leading cause of death among adolescents (WHO, 2012). Adolescents are also at a risk of being infected with STIs, for instance, UNICEF (2008) states that the highest rate of STIs globally is among the youth of ages 15-24, the statistics is as high as 500 000 adolescents that gets infected every day. This age category is usually the most active in terms of sex outside of marriage. Moreover, HIV which is a consequence of teenage pregnancy is also among the leading cause of death in South Africa (Bozzoli, 2016). It is estimated that 61% of orphans are a result of AIDS (Gou *et al*., (2007). This is how prevalent the HIV and AIDS is in South Africa.

2.5.3 High rate of abortion

Unfortunately, most of the teens that fall pregnant are not in any way ready/prepared for what they have to experience. Some of them get scared about disclosing their pregnancy to their parents because of shame. They therefore opt for abortion; some are forced by their boyfriends to go for abortion since they are both young and would not afford to support a child and the issue of not being ready for parenting. Those who are impregnated by older man are also influenced by them to abort the baby since they don't to risk their wives finding out.

Adolescent pregnancy is therefore associated with high rate of abortion, which is also a negative impact in today's generation particularly in the United States (Sedgh *et al*., 2015). Teenagers get pressure from their peers to actually commit abortion. In this manner, what is called the causal relationship therefore arises between adolescent pregnancy and the rate of abortion. Adolescents do not have basic income and normally do not disclose the abortion to their family or parents; that result to them seeking for the simple, quick, and cheaper ways and also want to keep it as confidential as possible. They therefore opt for abortion with illegal and inexperienced individuals who claim to be specialists when it comes to abortion in South Africa (Palamuleni and Adebowale 2014).

According to UNICEF (2008), it is estimated that out of 20 million unsafe abortions done every year, 14% of them are teenage girls. This therefore, results to 68 000 deaths per year. This tendency/behaviour is more popular in Africa mainly in South Africa. There are so many

individuals who claim to be specialists in assisting people to abort babies. These people charge a very cheap rate for abortion. The unsafe abortion they perform leading to high risk of after abortion complications; which sometimes results to death because of suffering from severe pain, and loss of blood. Each year about 3 million girls between the ages 15-19 undergo unsafe abortion (WHO, 2012)

Complications of pregnancy and childbirth are a leading cause of mortality among women between the ages 15-19 in the developing world (Shah *et al*., 2012). Maternal mortality thus consequently goes up because of the teenage pregnancy. Giving birth at a young age is a huge challenge to the young mothers. They might also suffer from what is called severe/extreme morbidities (afterbirth pains) which are the complications that occur after birth.. Babies born to adolescent mothers face a substantially higher risk of dying than those born to women aged 20 to 24. According to Shah *et al*., (2012), infant mortality is relevantly high for babies born from mothers of the ages 10-19 years.

Macleod and Tracey (2010) reports that women at the age 20 years and below have a higher infant mortality rate than women of ages 20-40. The babies born of the young mothers are also more likely to be low birth weight. It is about 5-30 times higher compared to the mothers of the ages 20-24 (Isa &Gani, 2012). To illustrate, if a mother of a baby is below 18 years of age, the chances that her baby will die in the first year of life is 60% higher than that of a baby of a mother older than 19 years (Isa &Gani, 2012). However, the complications of pregnancy and childbirth in low and middle income countries are the main cause of death in women of ages 15-19 years. Teenage pregnancy therefore contributes towards the rise in induced abortion, child mortality and maternal mortality. In essence, carrying a baby at a young age more especially at early adolescent stage is a high risk. Children in this stage are still developing in terms of physical changes; their bodies are still not used to the process or change, they are adapting to the change or physical development that is taking place.

Sometimes their bodies are not ready to physically carry a baby; even their wombs are not fit enough to carry a baby (Choplin and Beaumont, 2016). Falling pregnant at a young age is quite challenging in all aspects of the young mothers' lives. It affects the teenagers, physically, medically, emotionally, psychologically and financially.

There are also risks associated with the induced or abortion entirely. A number of approximately 75% of pregnancies are induced abortion globally, where 42% occurs in Colombia and 93% in Egypt (WHO, 2008). This is mainly associated with the poor maternal

nutrition from the mother, during the pregnancy. This indicates that the mothers sometimes do not feed the babies with the necessary nutrition before birth, or with the nutrition the baby needs to be sustained and be born as a healthy baby. This observation raises the need for mothers to follow health diets during their pregnancy.

Young mothers (adolescents) on the other side are or may not be as careful and knowledgeable as the adults (20-29) in terms of taking care of the unborn baby and knowing what to and not to eat because of the level of understanding of pregnancy.

2.6   Impact on the baby

Early childbearing harmfully affects the survival of the new born babies. Middle and low income countries are more vulnerable to such a challenge. For instance, in these countries the possibility of giving birth to dead babies is 50% more among the babies born to mothers under 20 years old, as compared to their counterparts which are mothers at 20-29 years and more (WHO, 2012). Shah *et al*., (2012) established that maternal death rates for teens under the age 16 (10-14) are four times higher than the women in the 20s.

 Adolescents also have great chances to experience obstructed labour, premature delivery and to give birth to a low birth / under weight babies than their counter parts (older women). Globally, the Adolescent Fertility Rate was at an estimation of 55.3 per 1000 births specifically for the period of (2000-2005), this now leads to an assumption that every year 5.5 adolescents give birth. Among the countries with high adolescent pregnancy rate are Mexico and Sub-Saharan African counties (Sedgh *et al*., 2015). Interestingly, the United States of America (USA) is also one among the countries with the highest rates of adolescent pregnancy. In 2013, the USA was number one among top ten countries with high teenage pregnancy globally (Sedgh *et al*., 2015). This is compared to the high prevalence rate region which is Sub-Saharan Africa (Nigeria,Kenya, Malawi,Uganda).

2.7   Conceptual framework

Scholars have used different theories to explain the main contributors to the teenage pregnancy and childbearing. Some studies had used the *Need for Children* theory, *Dorothea Orem's Self Care theory and Kohlberg's theory of moral development.* While different theories had been applied and tested in existing studies in South Africa*, Social Disorganisation theory* has not been applied in investigating teenage pregnancy in South Africa. This study used the *Social disorganisation theory* to explain teenage pregnancy. The

social disorganisation theory was developed by Shaw and McKay in 1942 and typically details the different contexts that can explain teenage pregnancy (Shaw & McKay, 1942).

Social Disorganisation theory explained

Basically, the theory states that the individual's behavioural choices that a person makes are primarily influenced by the physical and social environment or surroundings of the person. In addition, Shaw and McKay found that activities such as crime are location based: they vary in different locations based on the situations in the neighbourhood. For instance they identified that in neighbourhoods where there are high rates of crime, there's likely to be three common socioeconomic challenges, which are: *physical dilapidation, poverty, and high level of ethnic or culture missing*. These social scientists believed that lawlessness among young people was not caused at the personal level, but is rather committed by normal people in a normal situation in response to an abnormal situation. This theory is mostly used as the crucial interpreter of delinquency. The current study will adopt the poverty aspect on this theory which includes poverty and female employment status to predict the self-reported pregnancy and childbearing among the high school going teenagers in South Africa. Teenage pregnancy is not only associated with household poverty and unemployment, it is also influenced by community poverty, female employment status, and family disruption.

A study by Odimegwu and Mkhwanazi (2015) which investigated teenage pregnancy in Sub-Saharan Africa and its associated factors through the application of the social disorganization theory for the first time in a pregnancy study in Sub-Saharan Africa. This study studied the impact of social disorganisation theory as a predictor of teenage pregnancy in West, Central and Southern Africa. Therefore, the present study investigates the teenage pregnancy and childbearing in South Africa, this was more focused on macro-level variables, not necessarily crime but economic condition of the population understudy.

The theory has been previously used study crime levels, violence, educational behaviour of adolescents and childhood sexual abuse. This study applies this theory in explaining that the explanatory variables such as: family disruption, community female unemployment and community poverty. The conceptual framework in figure 2.1 displays how these variables lead to teenage pregnancy and childbearing. Therefore based on the research questions mentioned in chapter 1, this framework will ascertain the association between the independent variables and teenage pregnancy and childbearing.

Figure 2.1: Conceptual framework adopted for the study
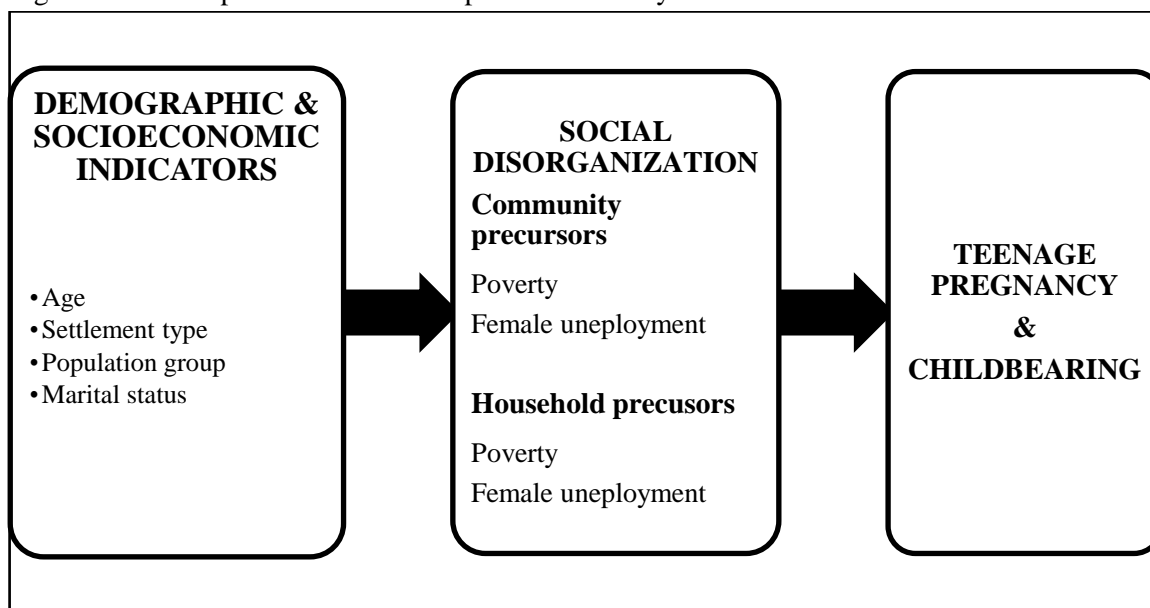
Source: Adapted from Shaw and McKay, 1942

2.8 Expected outcome: Hypothesis explained

H1: There is no single direction in the prevalence of self-reported pregnancies among teenage girls currently attending high school; it entirely depends on the nature of each explanatory variable from 2011 to 2014.

i) Based on the literature; the teenage girls in the *rural* areas are expected to have higher prevalence rate throughout the four year period. As discussed above in 2.4.8.

ii) The married teenagers are also expected to have higher prevalence rate compared to their counterparts (unmarried). This is also discussed 2.3.1.

iii) The households with no economically active members are expected to have high prevalence rate for both pregnancy and childbearing. This elaborated in 2.4.4.

H2: There's a higher prevalence of pregnancies among girls who are repeating the current grade as it significantly influence pregnancy.

H3: Household characteristics (such as *number of people in the household*, and *number of economically active people in the household*) significantly influence self-reported pregnancies as well as childbearing among teenage girls currently attending high school in South Africa.

2.9   Conclusion

It is important to note that the teenage pregnancy of high school girls is associated with quite a number of factors rather than a few. The factors that are associated with this issue are at an *individual*, *household* and *community* levels. Therefore, the pregnancy of high school girls in South Africa is determined by quite a number of external factors (household, community, and individual) rather than just internal factors (peer pressure and teachers behaviour). The consequences of teenage pregnancy are mostly individual and internal but they also affect the entire family. It is therefore not only the role of the government to ensure the prevention of teenage pregnancy to school going children, but the community and the households in which these young girls come from should also ensure that they provide all the academic support, do proper monitoring of these young girls and accurate provision of sexual information. Saving a girl from falling pregnant, is saving a family from recurring poverty, saving one family is saving a community and eventually saving the entire nation.
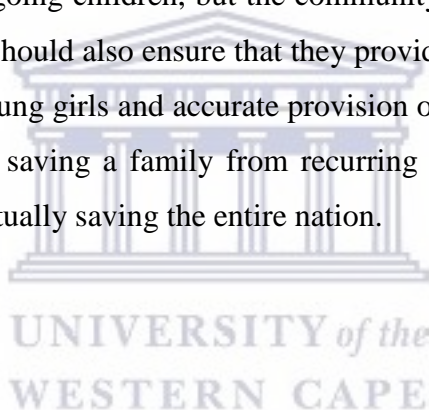
Chapter 3: Data and Methods

3.1   Introduction

This chapter describes the data used in the study as well as the analysis methods adopted. The study made use of secondary data from Statistics South Africa. The chapter also provides details on the sample sizes selected for each of the outcome variables used in the study, and discusses the different types of analyses that will be used in the study.

3.2   Data sources

There are two main datasets that were used in the study; namely: the General Household Surveys (GHS) data as well as the Census 2011 ten percent sample data. To study self-reported pregnancies, datasets were drawn from the General Household Surveys (2011-2014) conducted by Statistics South Africa. In order to examine childbearing among young girls, data from the 2011 South African census was used. Hence the application of two different datasets they satisfy different objectives of the study. Statistics South Africa uses a similar methodology across most of its surveys which often allows for comparability across different surveys.

3.2.1 Characteristics of GHS 2011 dataset

For the 2011 GHS, the target population consist of a sample of non-institutionalised and non-military people or households in South Africa. The GHS 2011 sample design was based on a master sample which was designed for the 2008 Quarterly Labour Force Survey. This master sample is used by other types of surveys conducted by Statistics South Africa. The master sample uses a two-stage, stratified design with probability-proportional-to-size sampling. The primary stratification was defined by the metropolitan and non-metropolitan geographic area types and at the secondary stratification, the Census 2001 data is summarised at primary sampling unit level. Overall, the sample for GHS 2011 was designed using a randomised-probability-proportional-to-size systematic sample of primary sampling units which were drawn in each stratum, with the measure of size being the number of households in the primary sampling unit. All in all, roughly 3 080 primary sampling units were selected in the

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sample. The overall response rate for the 2011 GHS was 94.2%, and the response rate was over 90% in all provinces except Gauteng.

3.2.2 Characteristics of GHS 2012 dataset

As with the 2011 GHS, for the 2012 GHS, the target population consisted of a sample of non-institutionalised and non-military people or households in South Africa. The GHS 2012 sample design is also based on a master sample which was designed for the 2008 Quarterly Labour Force Survey. The master sample made use of a two-stage, stratified design with probability-proportional-to-size sampling. The primary stratification was also defined by the metropolitan and non-metropolitan geographic area types and at the secondary stratification, the Census 2001 data was summarised at primary sampling unit level. Overall, the sample for GHS 2012 is also designed using a randomised-probability-proportional-to-size systematic sample of primary sampling units which were drawn in each stratum, with the measure of size being the number of households in the primary sampling unit. All in all, roughly 3 080 primary sampling units were also selected in the GHS 2012 sample. The overall response rate for the 2012 GHS was 94.1%; and the response rate was over 90% in all provinces except Gauteng.

3.2.3 Characteristics of GHS 2013 dataset

As with the previous General Household Surveys, for the 2013 GHS, the target population consisted of a sample of non-institutionalised and non-military people or households in South Africa. The GHS 2013 sample design was also based on a master sample which is designed for the 2008 Quarterly Labour Force Survey. The master sample made use of a two-stage, stratified design with probability-proportional-to-size sampling. The primary stratification was also defined by the metropolitan and non-metropolitan geographic area types and at the secondary stratification, the Census 2001 data was summarised at primary sampling unit level. Overall, the sample for GHS 2013 was also designed using a randomised-probability-proportional-to-size systematic sample of primary sampling units which were drawn in each stratum, with the measure of size being the number of households in the primary sampling unit. All in all, roughly 3 080 primary sampling units were also selected in the GHS 2013 sample. The overall response rate for the 2013 GHS was 94.7%; and the response rate was over 90% in all provinces except the Gauteng province (which had an 84.5% response rate).

3.2.4 Characteristics of GHS 2014 dataset

As with the previous General Household Surveys, for the 2014 GHS, the target population consisted of a sample of non-institutionalised and non-military people or households in South Africa. The GHS 2014 sample design is also based on a master sample which was designed for the 2008 Quarterly Labour Force Survey. The master sample made use of a two-stage, stratified design with probability-proportional-to-size sampling. The primary stratification was also defined by the metropolitan and non-metropolitan geographic area types and at the secondary stratification, the Census 2001 data was summarised at primary sampling unit level. Overall, the sample for GHS 2014 was also designed using a randomised-probability-proportional-to-size systematic sample of primary sampling units which were drawn in each stratum, with the measure of size being the number of households in the primary sampling unit. All in all, roughly 3 080 primary sampling units were also selected in the GHS 2014 sample. The overall response rate for the 2014 GHS was 93.7%; and the response rate was over 90% in all provinces except the Gauteng province.

3.2.5 Characteristics of Census 2011 dataset

Census 2011 was the third census to be conducted after the advent of democracy in South Africa. One of the main objectives of this census was to provide data related to population, demographic, social, economic and housing characteristics of South African households and population[4]. This census was a de facto population and housing census, which meant that all persons were enumerated at the place in which they spent the census night – which was of the night of nine-to-tenth October 2011. Three types of questionnaires were developed for this census, and these questionnaires were dependent on the location in which persons were found on the census night.   The three types of questionnaires included the (a) household questionnaires (which were for those who were in a household set-up on the census night); (b) a questionnaire for persons in collective living quarters (i.e. hospitals, prisons, etc.); and (c) a questionnaire for transients (these were persons who were either leaving the country or were on holiday on the census night).

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[4]http://www.statssa.gov.za/census/census_2011/census_products/Census_2011_Metadata.pdf

3.3 Study sample

For this study, the focus was on girls aged 14-19 years who reported that they were currently attending secondary education. Age fourteen was selected as the starting age because it is expected to be the starting age at high school level in South Africa, provided that the learner does not fail any primary level grade[5].Table 3.1 shows that the sample (*percentage*) of teenagers aged 14-19 years who reported that they had been pregnant in the past twelve months has had some increase over time. The number of teenagers who reported that they've had been pregnant in the past twelve months had a percentage change of 50.5% between 2011 and 2014.Table 3.2 shows results related to the sample of teenagers who reported that they had given birth by at least age nineteen. Overall, 8.4% of teenagers in the sample reported that they had given birth to at least two children.

Table 3.1: Distribution of self-reported pregnancy among teenagers in the past twelve months

Pregnancy	2011		2012		2013		2014	
	N	%	N	%	N	%	N	%
No	2 168 686	97.8	2 141 384	97.1	2 145 123	96.8	2 189 452	96.8
Yes	48 495	2.2	63 745	2.9	71 928	3.2	73 009	3.2
Total	**2 217 181**	**100.0**	**2 205 129**	**100.0**	**2 217 051**	**100.0**	**2 262 461**	**100.0**

Source: Own calculations from GHS data

Table 3.2: Distribution of having at least two children among teenagers aged 14-19 years, census 2011

Number of children	2011	
	N	%
One child	124 870	91.6
Two or more children	11 458	8.4
Total	**136 327**	**100.0**

Source: Own calculations from census 2011 data

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[5]Primary education begins at age seven, in grade one, and it takes seven years to reach grade seven (which is the final grade of primary school); and therefore, the learner should be around the age of fourteen by the time they reach grade eight (secondary school)

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3.4   Data management, methods and analysis techniques

The analysis for the study was carried out using Stata version 14 (StataCorp LP, Texas, USA), Statistical Package for the Social Sciences (SPSS) and Microsoft Excel 2013. Mapping was carried out using ArcGIS (ArCMap). Descriptive univariate and bivariate analyses were employed for the purposes of this study. All analyses were weighted in order to provide results which were generalizable to the entire population.

3.4.1 Definition of selected variables

The table below shows the variables that have been included in the study.

Table 3.3: definition of variables included in the study

Variable name	Coding	Definition
Dependent variables		
Pregnancy	0 = No; 1 = Yes	Variable for teenagers (girls) who reported that they had been pregnant in the past twelve months
Number of children	0 = One child; 1 = Two or more	Variable for teenagers (girls) who have ever given birth to a child born alive
Independent variables		
Age group	1 = 14-15; 2 = 16-17; 3 = 18-19	This variable depicts the age of the teenager (from age 14 to age 19)
Population group	1= Black African; 2 = Other	This variable depicts the population group of the teenager (other population groups are grouped as other because of smaller samples for certain population groups)
Marital status	1 = In union; 2 = Other	In union means (married/cohabiting). The other marriage types were grouped together
Current grade attending (GHS data only)	1 = Grade 8; 2 = Grade 9; 3 = Grade 10; 4 = Grade 11; 5 = Grade 12	Refers to the current school grade which the teenager is currently attending
Repeating current grade (GHS data only)	1 = Repeating; 2 = Other	Refers to whether or not the teenager is repeating the current school grade which she is currently attending
Number of people in household (GHS data only)	1 = 1-3 people; 2 = 4-5 people; 3 = 6+ people	Refers to the number of individuals (including the teenager) who stay in the household

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Number of economically active[6] people in household (GHS data only)	0 = None; 1 = 1-2; 2 = 3+	Refers to the number of economically active individuals who stay in the household
Teenagers' year of birth	1 = 1991-1992; 2 = 1993-1994; 3 = 1995-1997	This variable refers to the year in which the teenager was born (for census 2011 data only)
Age at first birth	1 = 12-13; 2 = 14-15; 3 = 16-17; 4 = 18-19	This variable refers to the age the teenager was when she first gave birth (for census 2011 data only)
Birth in the last 12 months	0 = No; 1 = Yes	This variable refers to whether the teenager has had a birth in the last twelve months or not (for census 2011 data only)
Type of main dwelling (GHS data)	1 = Formal; 2 = Traditional; 3 = Informal & other	This variable refers to the dwelling (any structure intended or used for human habitation) that individuals occupy
Type of main dwelling (census 2011)	1 = Formal; 2 = Traditional; 3 = Informal; 4 = Other	This variable refers to the dwelling (any structure intended or used for human habitation) that individuals occupy
Metropolitan area	1 = Metro; 2 = Non-metro	Derived from the municipality (there are eight metro areas in South Africa, including: City of Cape Town; Buffalo City; Nelson Mandela Bay; Mangaung; eThekwini; Ekurhuleni; City of Johannesburg; City of Tshwane)
Province	1 = Western Cape; 2 = Eastern Cape; 3 = Northern Cape; 4 = Free State; 5 = KwaZulu-Natal; 6 = North West; 7 = Gauteng; 8 = Mpumalanga; 9 = Limpopo	Refers to the nine provinces of South Africa
Settlement type[7]	1 = Urban; 2 = Non-urban	Refers to the geography (residence) type of South Africa

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[6] An economically active person is a person of working age who is available for work, and is either employed, or is unemployed but has taken active steps to find work in the reference period. See: http://www.statssa.gov.za/census/census_2011/census_products/Census_2011_Metadata.pdf

[7] South African has no clear distinct boundaries which demarcate between rural and urban. There's no clear definition of the two, hence it's better to use the definitions above

3.4.2 Analysing the prevalence: self-reported pregnancies and childbearing

To analyse the prevalence, bivariate cross-tabulations were used in the study. For the bivariate analysis, the variables were selected based on literature from various other studies which studied factors associated with teenage and/or adolescent pregnancies as well as childbearing among young girls. The study had two outcome variables: (a) *self-reported pregnancies within the twelve months preceding the survey* and (b) *having at least two children born alive*. Achi-square (χ^2) statistic was used with the bivariate cross-tabulations. The χ^2 test was used to test whether an association exists between the outcome and the independent variables.

For the General Household Surveys, the independent variables included age group; population group; marital status; current grade which the teenager is attending; whether or not the teenager is repeating current grade; type of main dwelling; number of household members; number of economically active household members; metropolitan area; province; and settlement type. For the census 2011 ten percent sample, the independent variables included age group; population group; marital status; teenagers' year of birth; age at first; whether the teenager has given birth in the last twelve months; type of main dwelling; metropolitan area; province; and settlement type.

For the purpose of analyzing the magnitude of changes in the prevalence of self-reported pregnancies over time, the percentage change[8] was used. This helps to determine the difference or percentage change of self-reported pregnancies between the years 2011 and 2014. The symbol "*t*" represents the recent year; "*t-1*" is the base year.

$$\text{Percentage change} = \frac{Pregnancy\ rate\ t - Pregnancy\ rate\ (t-1)}{Pregancy\ rate\ (t-1)} * 100$$

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[8] For **childbearing**, the percentage change was not possible as there was only one data point used

3.4.3 Analysing the determinants: self-reported pregnancies and childbearing

The determinants of self-reported pregnancies as well as childbearing were analysed using logistic regression analysis. Logistic regression is among the widely used estimation models in population and related research. This regression technique is most suitable for use when the dependent variable(s) is dichotomous, as in the case of this study. Therefore, for the purpose of this study, logistic regression modelling was deemed suitable to measure relationships between the outcome variables and the covariates. The logistic regression equation adapted for the study is presented below:

$$\ln\left(\frac{p}{1-p}\right) = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \ldots\ldots + \beta_i x_i$$

This equation refers to a regression model which is represented by more than one independent variable that is either dichotomous, ordinal, nominal, continuous, etc. The study has two outcome variables, namely: (a) self-reported pregnancies and(b) childbearing. These outcome variables are represented by (*p/1-p*) in the equation above. The purpose of regression coefficient (β_i) is that it increases natural logarithm (log-odds) for a one unit increase in predictor variable (x_i) when all others are constant. It measures association between x_i and natural logarithm (log-odds) adjusted for all other x_i s. β_i

3.5   Ethical considerations

This study is based on secondary analysis of data which is publicly available from the Statistics South Africa Nesstar website (http://interactive.statssa.gov.za:8282/webview/). Therefore, no ethical approval was required from our institution, and no attempt was made to locate the respondents through the analysis.

3.6   Conclusion

This chapter has outlined the methods and data used in this study. In order to answer the research questions and to realise the objectives the study, cross-tabulations (*bivariate analysis*) and logistic regression (*multivariate analysis*) were applied. Spatial analysis was also carried out in order to visualise some of the results using the South African demarcations.

Chapter 4: Results

4.1 Introduction

Teenage pregnancy at high school level is among the greatest challenges in South Africa and is still unacceptably high. While it is excessively high, South Africa is viewed as one of the countries with a low total fertility rate in comparison to many other African countries as well as other developing countries (Swartz, 2009). According to the latest statistics, the total fertility rate in South Africa was 2.6children per woman, which is one of the lowest in Africa (Statistics South Africa, 2017). Despite the low levels of fertility, teenage pregnancy is still high and adolescent fertility is the fifteenth lowest when compared to other African countries (United Nations Population Division, 2003).

This chapter profiles the prevalence of self-reported pregnancies as well as childbearing among teenagers aged 14-19 years. The chapter also profiles the determinants of self-reported pregnancies as well as childbearing among teenagers aged 14-19 years. Some of the results are mapped in order to visualise the prevalence of self-reported pregnancies as well as childbearing according to the South African demarcations.

4.2 Self-reported pregnancies[9]

This section profiles the results in relation to self-reported pregnancies among teenage girls currently attending secondary school. Firstly, the results describe the different samples in the datasets (GHS 2011 – GHS 2014). Secondly, the prevalence of self-reported pregnancies is profiled. Finally, the determinants of self-reported pregnancies are profiled using multivariate logistic regression. The tables for the results can be found in appendices one to three.

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[9] Due to the results table being too large, the results can be found in appendix 1 to appendix 3

4.2.1 Descriptive analysis of background characteristics: Self-reported pregnancies

Demographic characteristics

The results (see *Appendix 1*) show that across the years (2011-2014) the majority of teenagers in the samples were aged 16-17 years (with the median age being 16 years).The black African population group constituted the majority population group across the four survey points; and with regard to marital status, only a small percentage of teenagers in the sample were in union.

Socio-economic and household characteristics

The majority of teenagers reported that they were currently attending grade nine in 2011 and 2012, at 25.2% and 26.6% respectively. In contrast, the majority of teenage girls reported that they were attending grade ten in both 2013 and 2014, at 27.8% and 28.4% respectively. Furthermore, over 12% of teenagers reported that they were repeating the current school grade which they were attending. Moreover, over 77% of the teenagers were from formal dwellings[10], while between 11-14% reported that they lived in traditional dwellings[11]. Only a small percentage (between 6-9%) of the teenagers reported that they were from informal[12] and other types of dwellings.

The results also show that the majority of teenagers in the sample were from larger households, where there were six or more household members. Only a small percentage (13-15%) of the teenagers lived in households with smaller households (i.e. one-to-three household members). Moreover, the majority (58-61%) of the teenagers were from households with one-to-two economically active people in the household. There was also a large percentage (31-36%) of teenagers from households with no economically active[13] people in the household. Furthermore, about 29-30% of the teenagers were from the metro areas[14], while over 70% of the teenagers were from non-metro areas. It is important to profile the metro and non-metro areas in South Africa, as it is often believed that metro areas have better opportunities (i.e. employment, etc.) and are often more affluent than non-metro areas. Across the surveys, the majority of teenagers in the sample were from KwaZulu-Natal, while

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[10] Structures built according to approved plans

[11] Dwellings usually made of clay, mud, reeds and/or other locally available materials, i.e. huts, rondavels, etc.

[12] These are makeshift structures which are not erected according to approved architectural plans; i.e. shacks

[13] Remember, an economically active person is a person of working age who is available for work, and is either employed, or is unemployed but has taken active steps to find work in the reference period

[14] Remember, there are eight metropolitan areas in South Africa. See Table 3.3

the lowest percentage was from Northern Cape. With regard to settlement type, the results showed that the majority of the teenagers were found in urban areas compared to non-urban areas.

4.2.2 Prevalence of self-reported pregnancies

The results below are found in appendix 2. Overall, the results show a prevalence of self-reported pregnancies which increased between 2011 and 2013 (from 2% to 3.2%) and thereafter remained stagnant. The chi-square (χ^2) test shows that there was an association (at *p<0.001*) between self-reported pregnancies among teenagers currently attending secondary education and the selected independent variables. The results show that self-reported pregnancies increased with the teenagers' age across the years. This means that teenagers in the age group18-19 had a higher prevalence of reporting being pregnant in the past twelve months compared to those in the lower age groups (i.e. age 14-17).The black African population group as well as those teenagers who were in union had a higher prevalence of self-reported pregnancies compared to others. Moreover, there was a higher prevalence of self-reported pregnancies among teenagers attending grade eleven, compared to those attending other grades, across the years; in 2011 teenagers attending grade 11 had a prevalence of self-reported pregnancies which amounted to 3.0%, in 2012 it was 4.1%, in 2013 it was 4.9% and in 2014 it was 4.8%.Teenagers who reported that they were repeating the current school grade which they were attending had a higher prevalence of self-reported pregnancies compared to the others.

Furthermore, with regards to the type of main dwelling that the household occupies, there was a 2.6% prevalence of self-reported pregnancies among teenagers currently attending secondary education; and a higher prevalence was reported among teenagers from informal and other types of dwellings in 2012;a higher prevalence was reported among teenagers from formal types of dwellings in 2013; and finally, women from traditional dwellings had a higher prevalence of self-reported pregnancies in 2014.Teenagers from larger households had a higher prevalence of self-reported pregnancies compared to those from smaller households.

For instance, in 2014, a prevalence of 4.3% (with regard to self-reported pregnancies) was recorded among teenagers from households with six or more people; while it was only 1.7% for teenagers from households with one-to-three people. With regard to the number of household members who were economically active, there was a higher prevalence of self-reported pregnancies among teenagers from households with no economically active members

in 2011 and 2014; the prevalence of self-reported pregnancies was higher among teenagers from households with three or more economically active persons in 2012; in 2013 there were no noticeable variations with regard to self-reported pregnancies and number of economically active household members. There was a higher prevalence of self-reported pregnancies among teenagers from non-metro and non-urban areas. Maps 4.1-4.4 show that there were variations in the prevalence of self-reported pregnancies across the survey years. Map 4.1 shows that in 2011, Limpopo had the highest prevalence (4.4%) of self-reported pregnancies among teenagers currently attending secondary school, while Western Cape (0.8%), Free State (0.9%), Northern Cape (0.9%) and North West (1.2%) had the lowest prevalence of self-reported pregnancies. Eastern Cape (2.3%), KwaZulu-Natal (2.3%), Mpumalanga (2.2%) and Gauteng (1.7%) had a somewhat *moderate* prevalence of self-reported pregnancies.

Map 4.1: 1) 0.8-1.2 = low

2) 1.3 - 2.3 = moderate

3) 2.4 – 4.4 = high
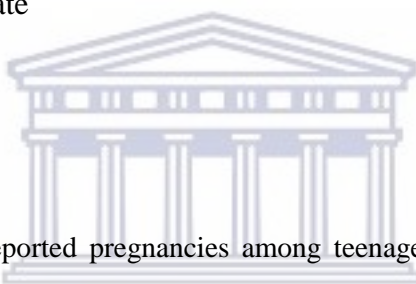
Map 4.1: Prevalence of self-reported pregnancies among teenagers currently attending secondary school by province, GHS 2011
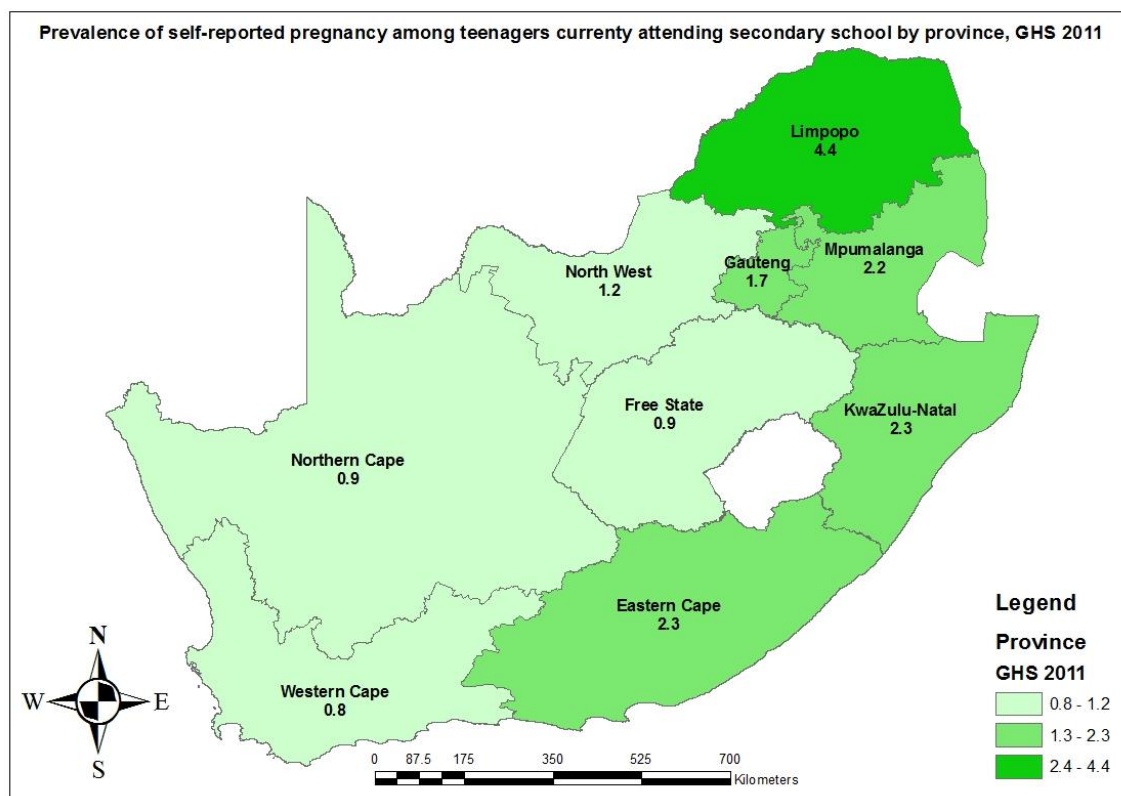
Source: Own calculations from GHS 2011 data: using Esri ArcMap. **Note**:χ^2value = 11577.0 (*p<0.001*)

Map 4.2 shows that in 2012, Mpumalanga had the highest prevalence (5.6%) of self-reported pregnancies among teenagers currently attending secondary school, while Western Cape (1.2%), Free State (1.5%), and Gauteng (2.1%) had the lowest prevalence of self-reported pregnancies. North West (4.1%), Eastern Cape (3.3%), Limpopo (3.1%), KwaZulu-Natal (2.9%), and Northern Cape (2.8%) had a somewhat *moderate* prevalence of self-reported pregnancies.

Map 4.2: 1) 1.2- 2.1 = low

2) 2.2 – 4.1 = moderate

3) 4.2 – 5.6 = high

Figure 4.2: Prevalence of self-reported pregnancies among teenagers currently attending secondary school by province, GHS 2012
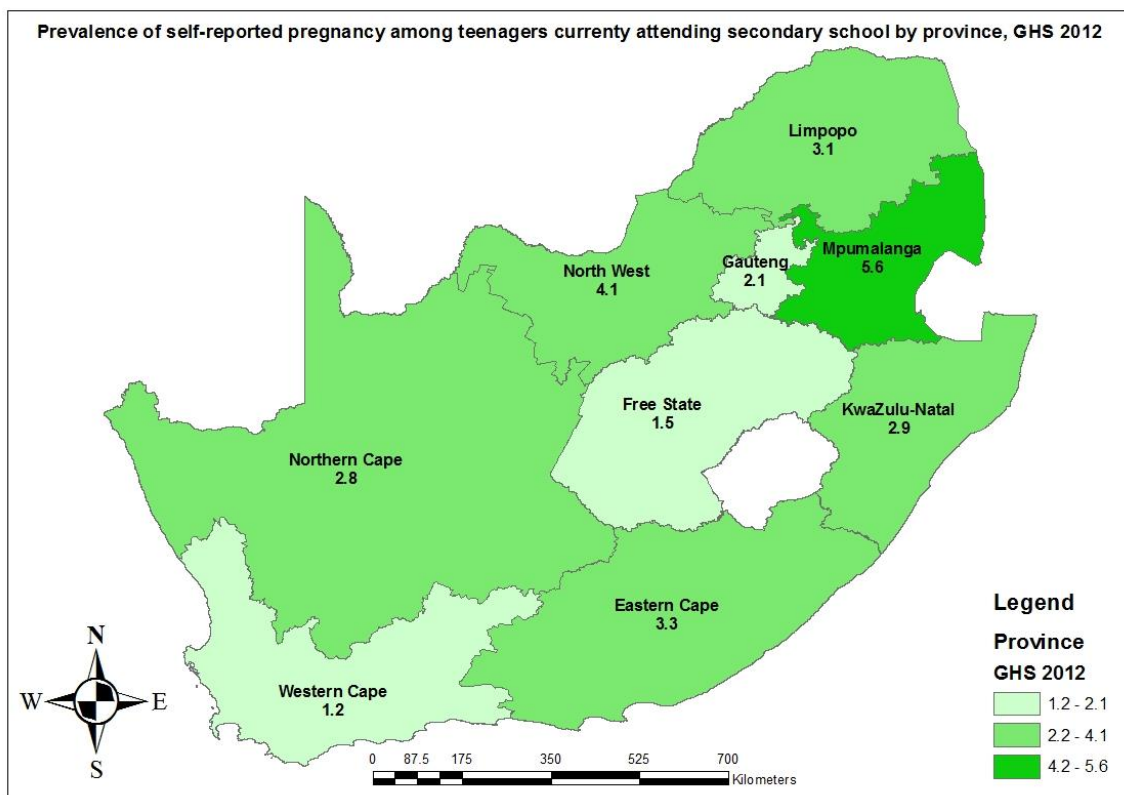
Source: Own calculations from GHS 2012 data: using Esri ArcMap. **Note**:χ^2value = 9484.8 (*p<0.001*)

Map 4.3 shows that in 2013, Mpumalanga also had the highest prevalence (5.3%) of self-reported pregnancies among teenagers currently attending secondary school, while Western Cape (1.4%), Northern Cape (2.2%) and Gauteng (2.0%) had the lowest prevalence of self-reported pregnancies. North West (4.1%), Eastern Cape (3.9%), KwaZulu-Natal (3.8%), Free

State (3.2%), and Limpopo (2.9%) had a somewhat *moderate* prevalence of self-reported pregnancies.

Map 4.3: 1) 1.4 – 2.2 = low

   2) 2.3 – 4.1 = moderate

   3) 4.2 – 5.3 = high

Map 4.3: Prevalence of self-reported pregnancies among teenagers currently attending secondary school by province, GHS 2013
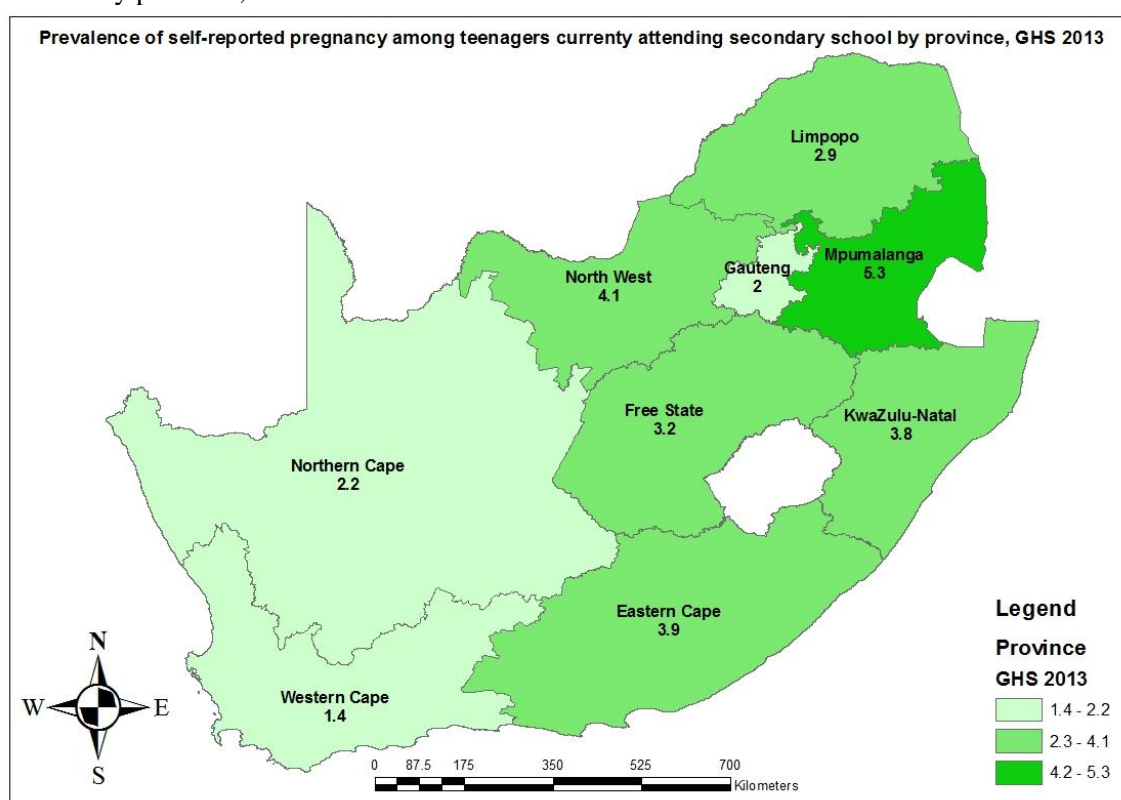
Source: Own calculations from GHS 2013 data: using Esri ArcMap. **Note**:χ^2value = 8231.3 (*p<0.001*)

Map 4.4 shows that in 2014, Free State (5.2%) and Mpumalanga (5.0%) had the highest prevalence of self-reported pregnancies among teenagers currently attending secondary school, while Western Cape (2.4%), Northern Cape (2.6%), Gauteng (2.1%) and North West (1.8%) had the lowest prevalence of self-reported pregnancies. Eastern Cape (4.1%), Limpopo (3.4%), and KwaZulu-Natal (3.2%) had a somewhat *moderate* prevalence of self-reported pregnancies.

Map 4.4: 1) 1.8 – 2.2 = low

2) 2.7 – 4.1 = moderate

3) 4.2 – 5.2 = high

Map 4.4: Prevalence of self-reported pregnancies among teenagers currently attending secondary school by province, GHS 2014
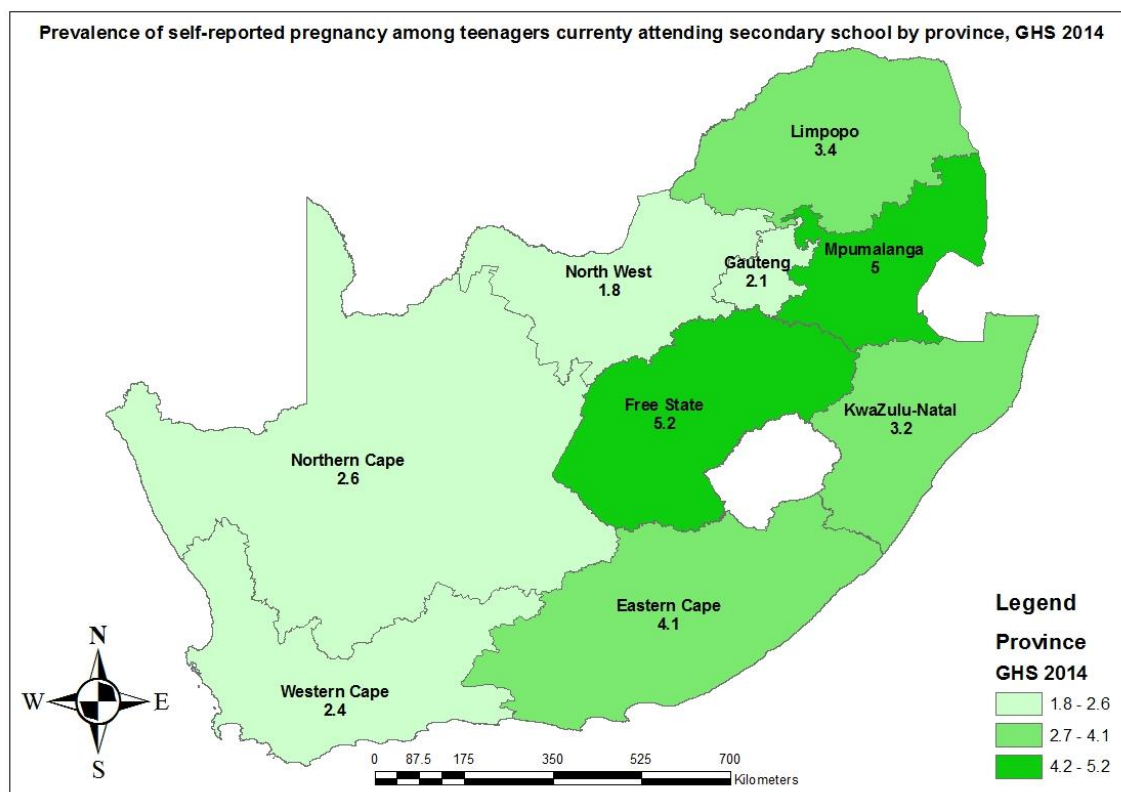
Source: Own calculations from GHS 2014 data: using Esri ArcMap. **Note**:χ^2value = 7349.0 (*p<0.001*)

4.2.2.1 Percentage change: self-reported pregnancies

This section profiles the percentage change in self-reported pregnancies using selected variables. Figure 4.1 shows that the percentage of self-reported pregnancies among teenagers currently attending secondary school has increased over time for most of the grades they are attending, except for teenagers attending grade nine. Teenagers who reported that they currently attend grade nine had a percentage decrease of about 34% between 2011 and 2014. The highest percentage increase in self-reported pregnancies among teenagers currently attending secondary education was for those attending grade eight (84%).

Figure 4.1: Percentage change in self-reported pregnancies by current grade attended

	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
■ % change (2011-2014)	84.0	-33.9	60.3	57.5	63.0
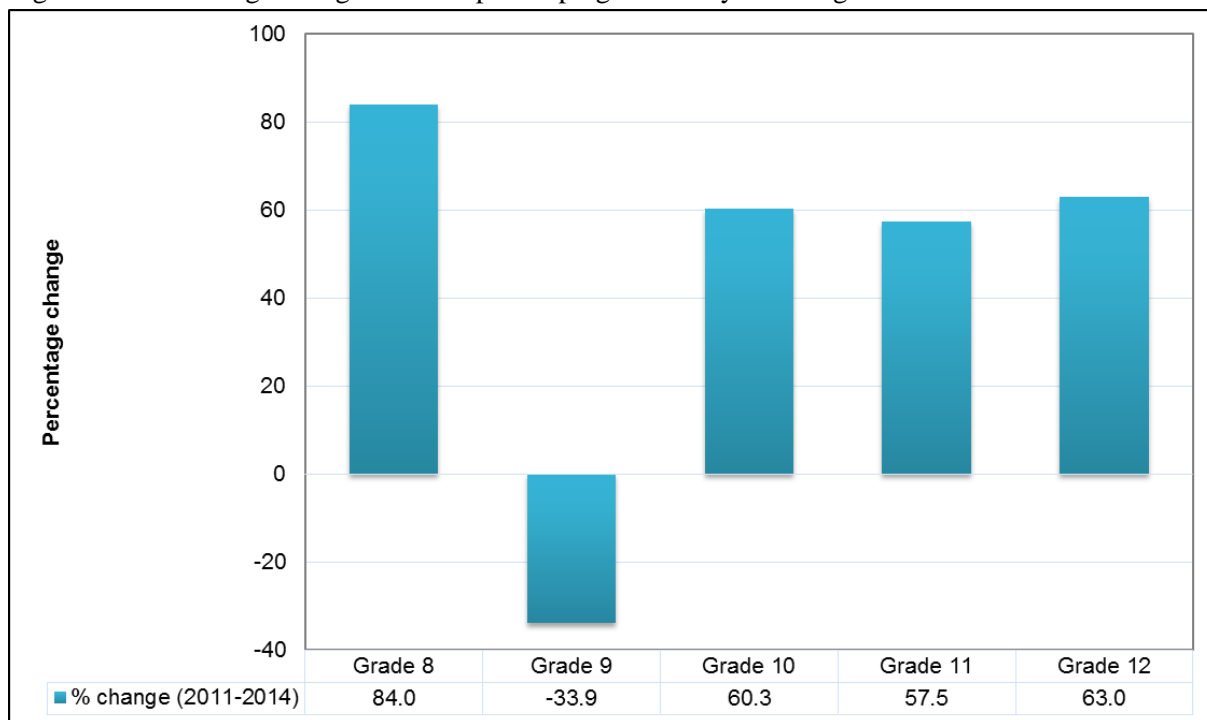
Source: Own calculations from GHS 2011 &2014 data

Figure 4.2 shows that the percentage of self-reported pregnancies among teenagers currently attending secondary school has increased over time for most of the provinces, except for Limpopo. Teenagers who were from the Limpopo province had a percentage decrease of about 22% between 2011 and 2014. The Free State province has the highest percentage growth (over 400%), followed by Western Cape, and Northern Cape. Gauteng province had the lowest percentage growth (21%) followed by KwaZulu-Natal (39%).

Figure 4.2: Percentage change in self-reported pregnancies by province

	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo
■ % change (2011-2014)	211.6	73.7	190.8	479.0	39.2	48.0	21.0	132.5	-22.2
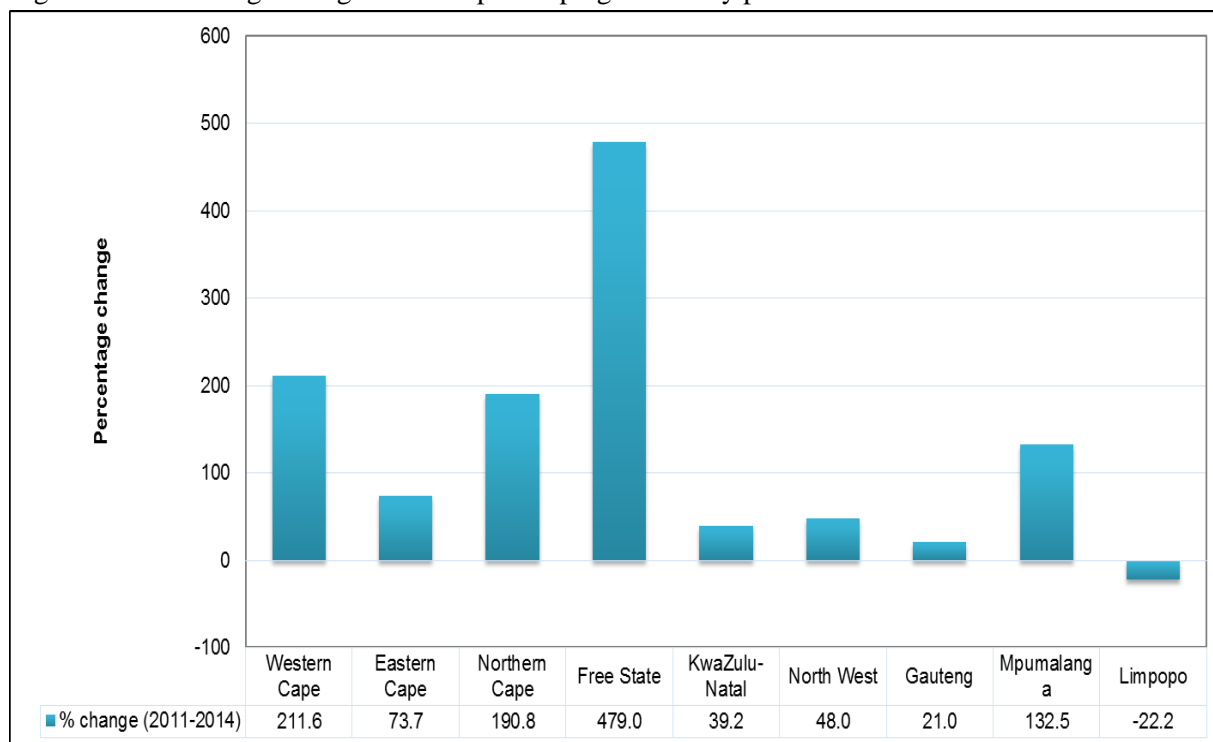
Source: Own calculations from GHS 2011 & 2014 data

4.2.2.2 Prevalence of self-reported pregnancies among teenagers currently repeating grade: selected characteristics

The results (Figure 4.3) show that the prevalence of self-reported pregnancies among teenagers who were repeating their current grade was higher compared to the one outlined in appendix 2. Among those who are repeating current grade, 2014 had the highest prevalence (7.4%) of self-reported pregnancies, while 2011 had the lowest prevalence. Figure 4.4 shows that there were age variations in the prevalence of self-reported pregnancies. Teenagers aged fourteen had the lowest prevalence of self-reported pregnancies, except for the year 2013, whereby teenagers in this age had the highest prevalence. Overall, self-reported pregnancies were mostly prevalent in teenagers (a) aged eighteen in 2011, (b) aged sixteen in 2012, and (c) aged nineteen in 2014. The results in Figure 4.5 represent the prevalence of self-reported pregnancies among teenagers who reported that they were repeating their current grade. Overall, self-reported pregnancies were mostly prevalent in teenagers who were repeating (a) grade nine in 2011, (b) grade eight in 2012, (c) grade twelve in 2013, and (d) grade eleven tin 2014.

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Figure 4.3: Prevalence of self-reported pregnancies among teenagers currently repeating grade: national figures
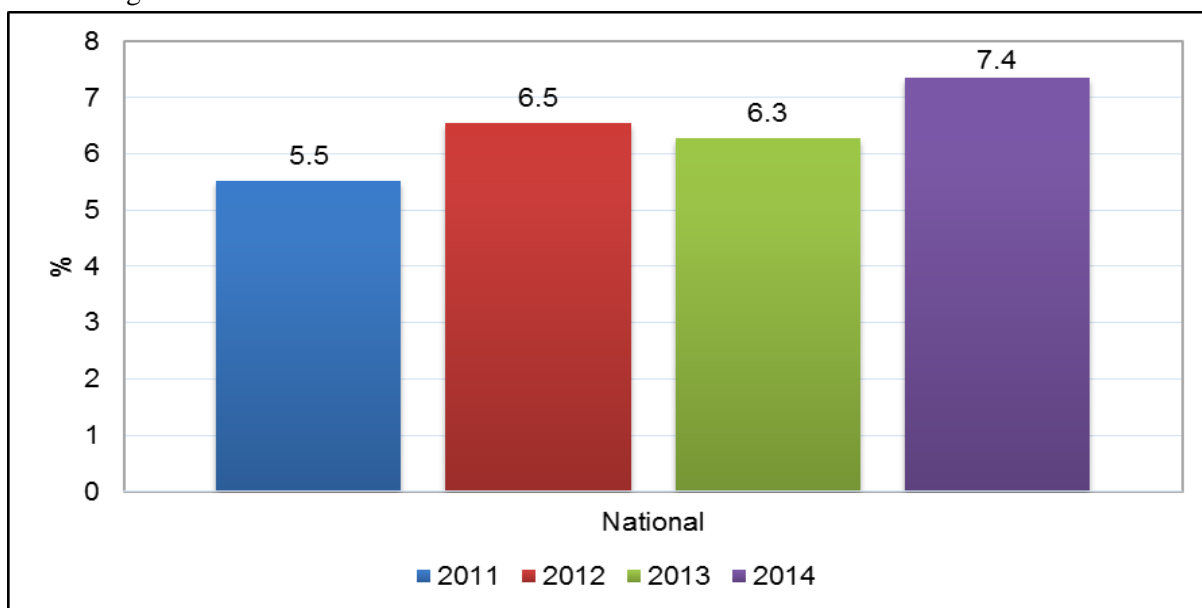
Figure 4.4: Prevalence of self-reported pregnancies among teenagers currently repeating grade by age

	14	15	16	17	18	19
2011	0.0	0.8	5.5	6.4	7.9	4.0
2012	0.0	5.8	9.1	4.9	6.3	8.4
2013	11.4	0.7	4.4	7.7	6.7	7.3
2014	0.0	0.0	2.3	8.4	9.4	14.8
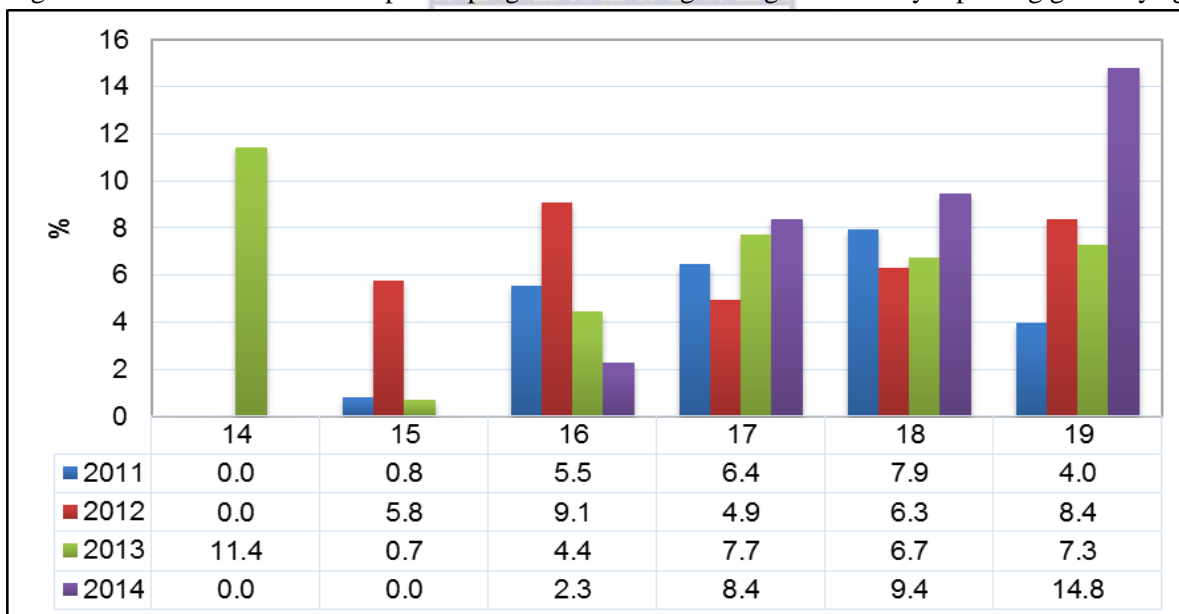
Figure 4.5: Prevalence of self-reported pregnancies among teenagers currently repeating grade by grade repeated

	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
2011	1.4	10.7	4.6	3.1	9.0
2012	9.1	5.2	6.7	6.2	4.9
2013	5.8	4.1	7.3	6.5	8.6
2014	1.6	3.6	9.9	10.8	2.5
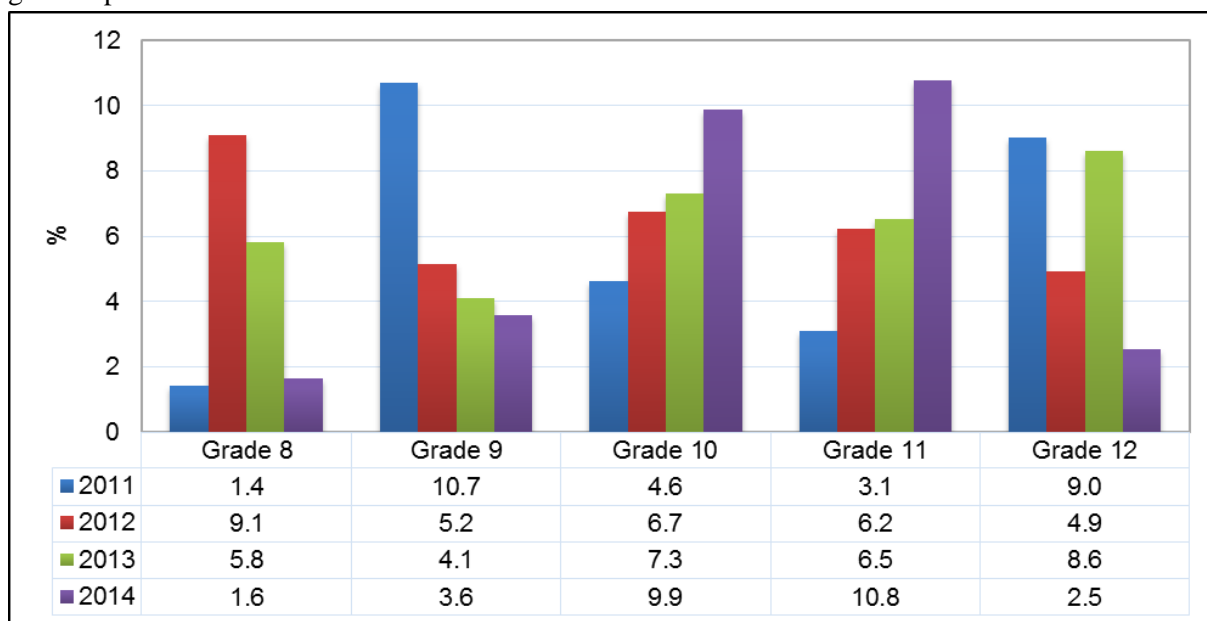
Source: Own calculations from GHS 2011-2014 data

Provincial differentials in the prevalence: repeaters

The results below show the prevalence of self-reported pregnancies among teenagers who were repeating their current grade by province, GHS 2011-2014. Map 4.5 shows that in 2011, KwaZulu-Natal (7.9%), Limpopo (7.0%), and Gauteng (6.5%) had the highest prevalence of self-reported pregnancies among teenagers who were repeating current grade, while Northern Cape (1.5%) and Western Cape (0.0%) had the lowest prevalence of self-reported pregnancies. Mpumalanga (5.1%, Free State (4.6%), North West (4.4%), and Eastern Cape (3.0%)had a somewhat *moderate* prevalence of self-reported pregnancies among teenagers who were repeating current grade.

According to Map 4.5: 1) 00-1.5= low

2) 1.6- 5.1= moderate

3) 5.2-7.9= high

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Map 4.5: Prevalence of self-reported pregnancies among teenagers who are repeating current grade by province, GHS 2011
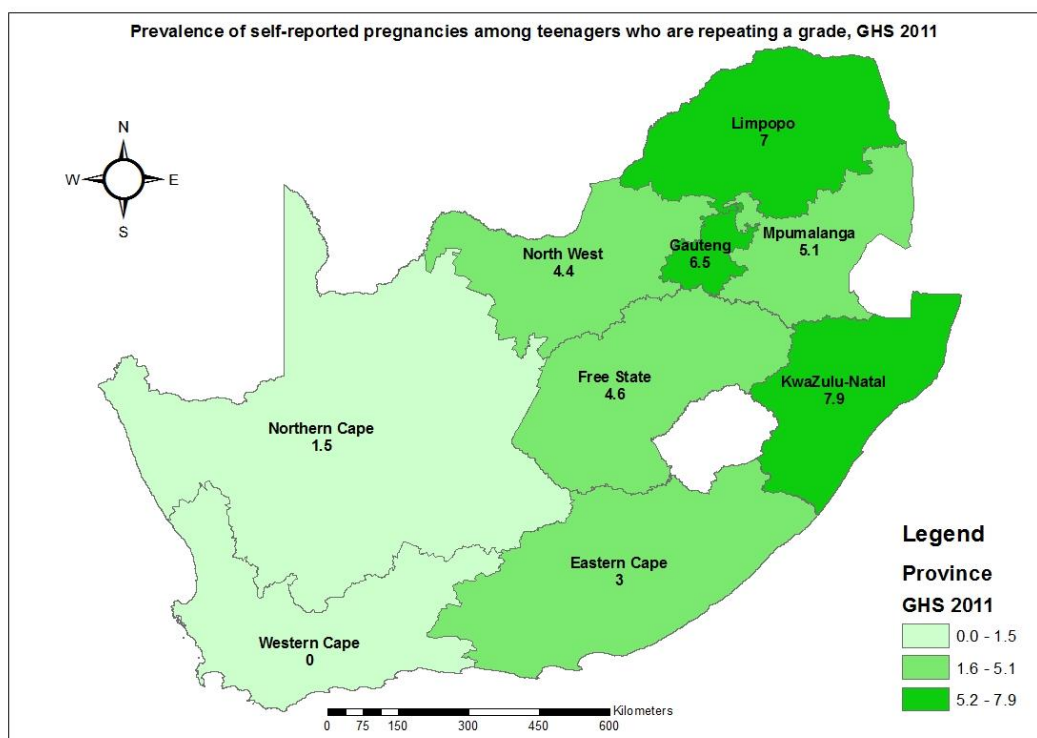
Map 4.6 shows that in 2012, Mpumalanga (10.9%), Eastern Cape (9.9%), and KwaZulu-Natal (9.6%) had the highest prevalence of self-reported pregnancies among teenagers who were repeating current grade, while Gauteng (1.3%) and Western Cape (0.0%) had the lowest prevalence of self-reported pregnancies. North West (7.0%), Northern Cape (6.3%), Limpopo (6.1%) and Free State (3.8%) had a somewhat *moderate* prevalence of self-reported pregnancies among teenagers who were repeating current grade.

Map 4.6: 1) 00-1.3 = low

2) 1.4-7.0 = moderate

3) $7.1 - 10.9$ = high

Map 4.6: Prevalence of self-reported pregnancies among teenagers who are repeating current grade by province, GHS 2012
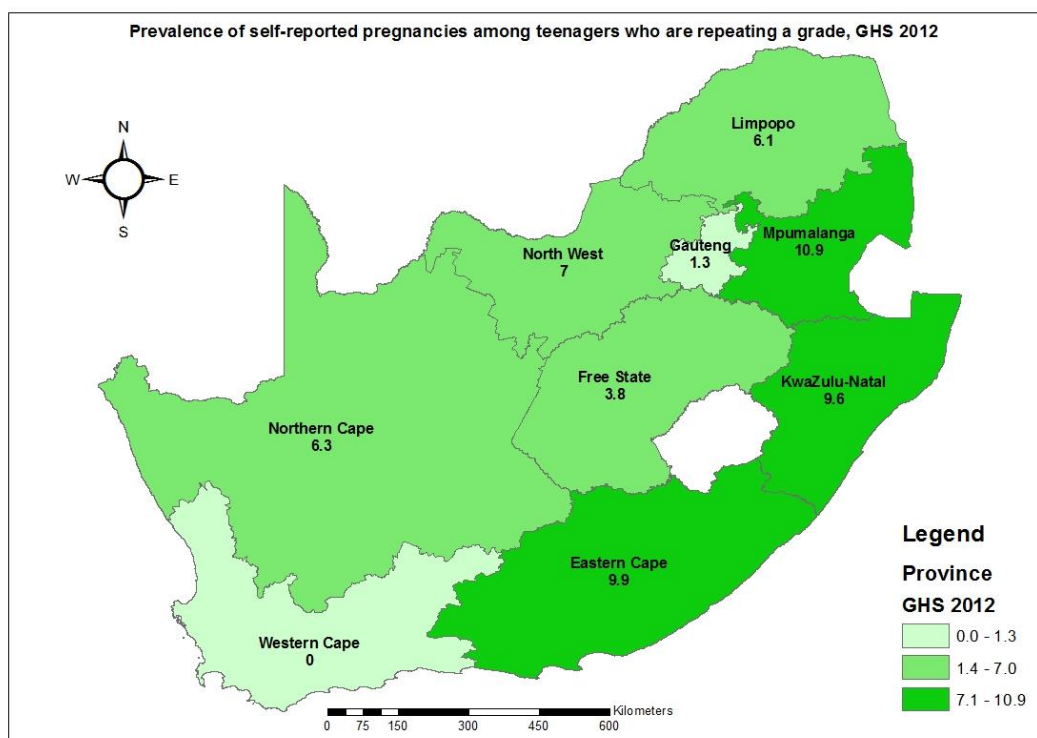
Source: Own calculations from GHS 2012 data: using Esri ArcMap

Map 4.7 shows that in 2013, Free State (11.7%), North West (10.2%), Gauteng (9.2%), and Western Cape (8.3%) had the highest prevalence of self-reported pregnancies among teenagers who were repeating current grade, while Northern Cape (2.6%) and Mpumalanga (1.8%) had the lowest prevalence of self-reported pregnancies. Limpopo (5.4%), KwaZulu-Natal (4.4%) and Eastern Cape (4.0%) had a somewhat *moderate* prevalence of self-reported pregnancies among teenagers who were repeating current grade.

Map 4.7: 1) 1.8-2.5= low

2) 2.6- 5.4 = moderate

3) 5.5-11.7= high.

Map 4.7: Prevalence of self-reported pregnancies among teenagers who are repeating current grade by province, GHS 2013
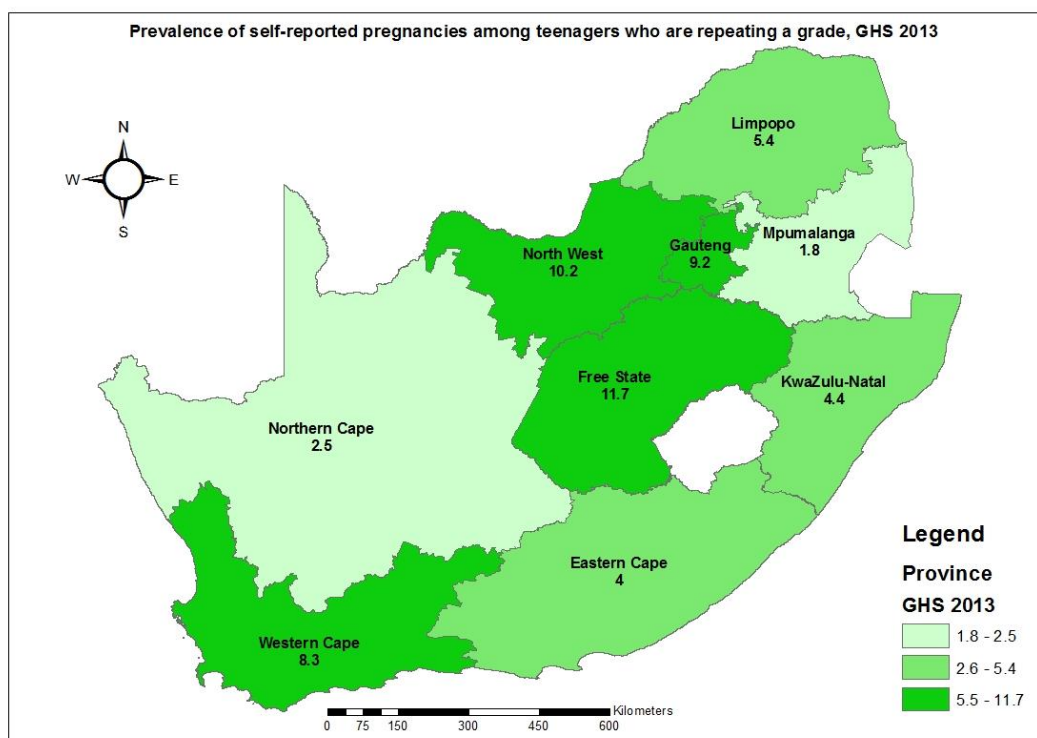
Source: Own calculations from GHS 2013 data: using Esri ArcMap

Map 4.8 shows that in 2014, Free State (13.1%) and Mpumalanga (12.9%) had the *highest* prevalence of self-reported pregnancies among teenagers who were repeating current grade, while Eastern Cape (9.7%), Northern Cape (9.1%), Gauteng (7.0%), KwaZulu-Natal (6.4%) and Limpopo (6.4%) had the lowest prevalence of self-reported pregnancies. Western Cape (2.7%) and North West (1.2%) had a somewhat *moderate* prevalence of self-reported pregnancies among teenagers who were repeating current grade.

Map 4.8: 1) 1.2-2.7 = low

2) 2.8- 9.7 = moderate

3) 9.8 – 13.1 = high

Map 4.8: Prevalence of self-reported pregnancies among teenagers who are repeating current grade by province, GHS 2014
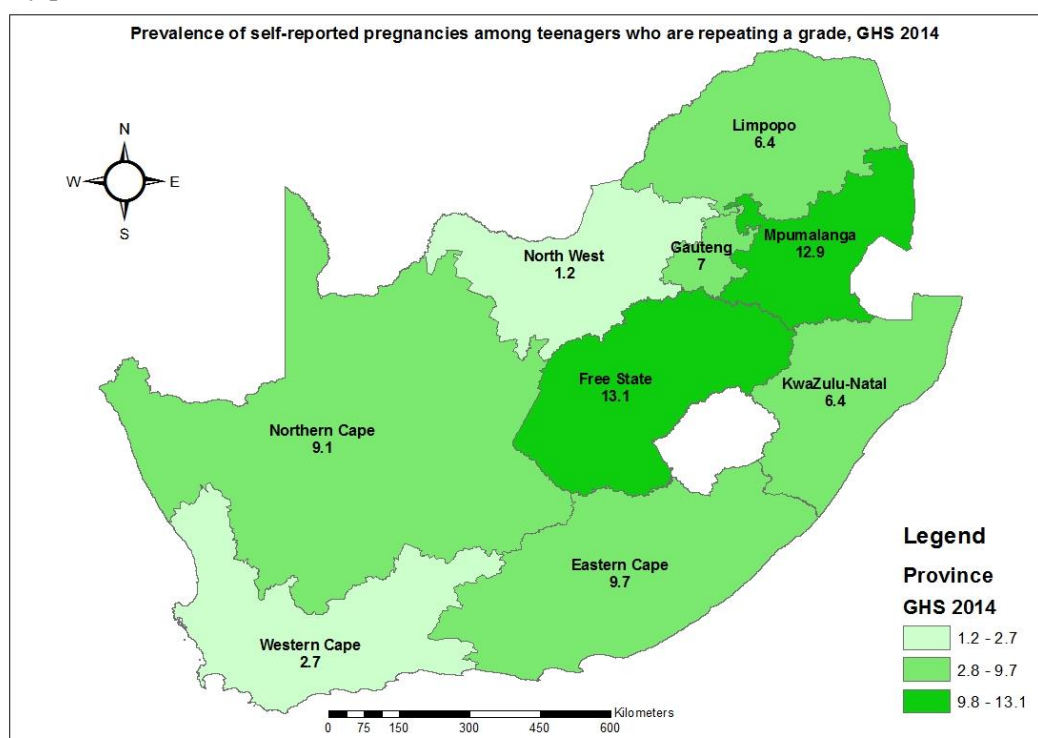
Source: Own calculations from GHS 2014 data: using Esri ArcMap

4.2.3 Determinants of self-reported pregnancies

Demographic determinants

The table for the results interpreted below are displayed in appendix 3.The results show that self-reported pregnancies increased with the teenagers' age, whereby teenagers at lower ages were less likely to report having been pregnant in the past twelve months before the survey. For instance, teenagers aged 14-15 years [O.R. 0.04, 95% CI: 0.04-0.05 in 2011; O.R. 0.18, 95% CI: 0.17-0.18 in 2012; O.R. 0.13, 95% CI 0.13-0.18 in 2013; and O.R. 0.23, 95% CI: 0.22-0.24 in 2014] were significantly less likely to report having been pregnant in the past twelve months compared to teenagers aged 18-19 years. Moreover, the black African population group[O.R. 5.46, 95% CI: 5.10-5.85 in 2011; O.R. 1.76, 95% CI: 1.69-1.83 in 2012; O.R. 7.65, 95% CI 7.23-8.10 in 2013; and O.R. 2.17, 95% CI: 2.09-2.25 in 2014] was significantly more likely to report having been pregnant in the past twelve months compared to teenagers from the other population groups. Teenagers who were in union[15][O.R. 10.82, 95% CI: 10.42-11.23 in 2011; O.R. 13.72, 95% CI: 13.15-14.31 in 2012; O.R. 14.15, 95% CI 13.63-14.70 in 2013; and O.R. 2.68, 95% CI: 2.57-2.79 in 2014] were significantly more

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[15] Married or cohabiting

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likely to report having been pregnant in the past twelve months compared to teenagers in other categories of marital statuses.

Socio-economic and household determinants

Furthermore, the output shows fluctuating results over the years with regards to current grade as a determinant of self-reported pregnancies among teenagers currently attending secondary school. For the years 2013 and 2014, self-reported pregnancies increased with the grade which the teenager was attending, up to grade eleven. For instance, in the years 2013 and 2014,teenagers who were attending grade eight[O.R. 0.58, 95% CI: 0.56-0.61 in 2013; and O.R. 0.36, 95% CI: 0.34-0.38 in 2014] were significantly less likely to report having been pregnant in the past twelve months compared to teenagers who were attending grade eleven. In 2011, teenagers who were attending grade nine [O.R. 1.68, 95% CI: 1.63-1.73] were significantly more likely to report having been pregnant in the past twelve months compared to teenagers who were attending grade eleven; while in 2012, those attending grade eight [O.R. 1.30, 95% CI: 1.26-1.34] were significantly more likely to report having been pregnant in the past twelve months compared to teenagers who were attending grade eleven. The results also revealed that teenagers who were repeating the current grade they were attending in the previous year(s) [O.R. 1.57, 95% CI: 1.54-1.61 in 2011; O.R. 1.82, 95% CI: 1.79-1.86 in 2012; O.R. 1.40, 95% CI 1.37-1.43 in 2013; and O.R. 2.10, 95% CI: 2.06-2.14 in 2014] were significantly more likely to report having been pregnant in the past twelve months compared to those who were not repeating the current grade.

It is important to understand the extent in which the type of dwelling the teenager stays, determines whether or not they become pregnant. The results revealed that in 2011 and 2013, teenagers who were staying in formal dwellings[O.R. 2.30, 95% CI: 2.19-2.42 in 2011; and O.R. 1.30, 95% CI: 1.26-1.35 in 2013] were significantly more likely to report having been pregnant in the past twelve months compared to teenagers staying in informal and other types of dwellings. Moreover, in 2011 and 2014, teenagers who were staying in traditional dwellings [O.R. 1.84, 95% CI: 1.73-1.95 in 2011; and O.R. 1.38, 95% CI: 1.32-1.43 in 2014] were significantly more likely to report having been pregnant in the past twelve months compared to teenagers staying in informal and other types of dwellings. In 2012, teenagers who were staying in formal dwellings [O.R. 0.47, 95% CI: 0.32-0.34] were significantly less

likely to report having been pregnant in the past twelve months compared to teenagers staying in informal and other types of dwellings.

With regards to the number of members in the households, the results showed that the less the household members, the less likely to report having been pregnant in the past twelve months preceding the survey. In fact, the results show that larger households were more likely to report pregnancies than smaller households. Furthermore, the results revealed that, teenagers who were staying in households with one-to-three people[O.R. 0.39, 95% CI: 0.38-0.40 in 2011; O.R. 0.33, 95% CI: 0.32-0.34 in 2012; O.R. 0.37, 95% CI 0.35-0.38 in 2013; and O.R. 0.32, 95% CI: 0.31-0.33 in 2014] were significantly less likely to report having been pregnant in the past twelve months compared to teenagers staying in households with six and more people. It is important to note that in 2011 and 2014, teenagers who were staying in households with no economically active members [O.R. 3.21, 95% CI: 3.04-3.40 in 2011; and O.R. 2.56, 95% CI: 2.46-2.66 in 2014] were significantly more likely to report having been pregnant in the past twelve months compared to teenagers staying in households with three and more economically active members. Moreover, teenagers who were staying in households with one-to-two economically active members [O.R.1.78, 95% CI: 1.68-1.88 in 2011; O.R. 1.08, 95% CI: 1.05-1.11 in 2012; O.R. 1.18, 95% CI 1.14-1.22 in 2013; and O.R. 1.91, 95% CI1.83-1.98 in 2014] were significantly more likely to report having been pregnant in the past twelve months compared to teenagers staying in households with three and more economically active members.

The spatial demarcation within which the teenager is located was also tested on whether it determines the extent in which they become pregnant. In 2011 and 2014, teenagers who were staying in non-metro areas [O.R. 0.76, 95% CI: 0.73-0.79 in 2011; and O.R. 0.65, 95% CI 0.63-0.67 in 2014] were significantly less likely to report having been pregnant in the past twelve months compared to teenagers staying in metro areas. In contrast, in 2012 and 2013, teenagers who were staying in non-metro areas [O.R. 2.41, 95% CI: 2.33-2.49 in 2012; and O.R. 1.85, 95% CI1.80-1.90 in 2013] were significantly more likely to report having been pregnant in the past twelve months compared to teenagers staying in metro areas. With regards to the provinces, the results showed that each province has its own dynamics of teenage pregnancy. For instance, in 2011 and 2014, teenagers from Limpopo [O.R. 1.20, 95% CI: 1.14-1.26 in 2011; and O.R. 1.33, 95% CI1.28-1.39 in 2014] were significantly more likely to report having been pregnant in the past twelve months compared to teenagers staying in Gauteng. Whereas, in 2012 and 2013, teenagers from Limpopo [O.R. 0.58, 95% CI: 0.55-

0.60 in 2012; and O.R. 0.82, 95% CI 0.79-0.85 in 2013] were significantly less likely to report having been pregnant in the past twelve months compared to teenagers staying in Gauteng. Furthermore, teenagers from Mpumalanga were significantly less likely to report having been pregnant in the past twelve months compared to teenagers staying in Gauteng for the years 2011 and 2012; whereas they were significantly more likely to report having been pregnant in the past twelve months compared to teenagers staying in Gauteng for the years 2013 and 2014. With regards to settlement type, in 2011 and 2013, teenagers residing in non-urban areas [O.R. 0.89, 95% CI: 0.87-0.92 in 2011; and O.R. 0.68, 95% CI0.79-0.85 in 2013] were significantly less likely to report having been pregnant in the past twelve months compared to teenagers residing in urban areas. Nonetheless, in 2012 and 2014, teenagers residing in non-urban areas [O.R. 1.22, 95% CI: 1.19-1.25 in 2012; and O.R. 1.04, 95% CI1.02-1.06 in 2014] were significantly more likely to report having been pregnant in the past twelve months compared to teenagers residing in urban areas.

4.3   Childbearing

This section profiles the results in relation to childbearing (*having given birth to at least children*) among teenage girls currently attending secondary school in South Africa. Firstly, the results describe the selected sample using the census 2011 ten percent sample data. Secondly, the prevalence of childbearing is profiled. Finally, the determinants of childbearing are profiled using multivariate logistic regression. Where possible; spatial analysis is used to visualise the prevalence results.

4.3.1 Descriptive analysis of background characteristics: Childbearing

Section 4.3.1 provides descriptive analysis of teenagers (14-19) who have given birth to at least two children. The analysis was carried out by analysing the background characteristics of the young girls based on 2011 census data. The background characteristics are given in three categories: *demographic characteristics*: age group, population group, marital status, teenagers' year of birth; *fertility variables*: age at first birth, birth in the last 12 months; and *household characteristics*: type of main dwelling, metropolitan area, province and settlement type. This section provides important analysis indicating the different characteristics of the teenagers who already have given birth to two or more children.

Table 4.1 below depicts that in terms of the age group, (parity increases as the teenagers are getting old or growing up) or as one would expect there are fewer teenagers who have given birth to at least two children in the younger age group. The number of the middle teenagers

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who have given birth to at least two children is more than the frequency of those who just began with their teenage stage. While the older teenagers contribute a greater number, which implies that the majority of teenagers who are at parity 2 or more, was from the teenagers at their late teenage stage. For instance, the rate for the teenagers at age group 14-15 is only 7.1%, for the teenagers at age group 16-17 is 31.4%, which gives a difference of 24.3%. Lastly, the rate of teenagers who have parity 2 and more at age group 18-19 is 61.5% (higher than the rate of the two age groups above). In addition, the median age is 18 years.

Most of the teenage girls who have given birth to at least two children are black Africans, then other races thereafter; the rates for black Africans and other population group are 95.2% and 4.8% respectively. However only 6.5% of the childbearing teenagers are in union, the majority of the teenagers (93.5%) are not in union, which is an important factor to note since most of these teenagers are at school and marriage in South Africa normally comes after the children finished schooling. Most of the teenagers who had one or two children in 2011 were born in 1993-1994 and they amount to 47.1% of the total population. Only 14.5% of the teenagers were born in 1995-1997.This implies that the minority of teenagers with children is from the youngest age group.

Furthermore, the majority (47.6%) of the teenagers with parity 2 and more had their first birth at ages 16-17, whereas only 4.6% of the teenage girls with parity 2 and more first gave birth at age group 12-13 years; fewer teenagers gave birth at age 12-13. However, according to the Census 2011 findings 38.4% of the teenagers who already have 2 or more children gave birth in the last 12 months. The top three provinces with the majority of teenagers that are already mothering 2 or more children is KwaZulu-Natal, followed by the Eastern Cape Province, then Limpopo; the rates in proportion to the total number are 24.1%, 18.0%, and 17% consecutively. Northern Cape has the lowest rate (1.6%) less than 2% as in the self-reported pregnancy above.

Table 4.1: Characteristics of the sample: teenagers who have at least two children

Characteristic	Census 2011	
	N	%
Age group		
14-15	9 643	7.1
16-17	42 844	31.4
18-19	83 840	61.5
Median age	*18*	
Population group		
Black African	129 734	95.2
Other	6 594	4.8
Marital status		

In union		8 842	6.5
Other		127 485	93.5
Teenagers' year of birth			
1991-1992		52 370	38.4
1993-1994		64 257	47.1
1995-1997		19 701	14.5
Age at first birth			
12-13		6 296	4.6
14-15		24 412	17.9
16-17		64 948	47.6
18-19		32 020	23.5
Birth in the last 12 months			
No		83 916	61.6
Yes		52 411	38.4
Type of main dwelling			
Formal		96 566	70.8
Traditional		25 040	18.4
Informal		11 674	8.6
Other		3 047	2.2
Metropolitan area			
Metro		30 926	22.7
Non metro		105 402	77.3
Province			
Western Cape		6 434	4.7
Eastern Cape		24 559	18.0
Northern Cape		2 196	1.6
Free State		5 635	4.1
KwaZulu-Natal		32 920	24.1
North West		6 498	4.8
Gauteng		17 436	12.8
Mpumalanga		17 418	12.8
Limpopo		23 231	17.0
Settlement type			
Urban		55 628	40.8
Non-urban		80 700	59.2

Source: Own calculations from Census 2011 data
Note: *6.3% of teenagers had unspecified age at first birth.*

4.3.2 Prevalence of having at least two children among teenagers aged 14-19 years

The prevalence of childbearing (minimum of two children) among the school going teenagers was analysed using the demographic variables, fertility and geographic variables based on the 2011 population census. Table 4.2 below provides the prevalence of childbearing by each characteristic with the use of the 10% population census data. All the below characteristics are statistically significant when analysed or tested against the outcome variable (childbearing/ having at least two children born alive).

The Chi-square test (χ^2) which was run for association purposes reveals that there was an association (at significance level *p<0.001*) between the prevalence of having at two children

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among the high school going girls and the specified explanatory variables. The output below displays that there was a fluctuation throughout the years in the prevalence of having at least two children and the teenage age group, without any specific direction. As presented in table 4.2 the prevalence of the teenagers at age 14-15 (8.8%) is more than the prevalence of the teenagers at age 16-17 (6.6%) but less than the prevalence of the teenagers at age 18-19 (9.3%) which has the highest rate of prevalence. The output from StatsSA with regards to prevalence of having at least two children among the teenagers currently attending secondary school per population group indicates that Black Africans were less (8.1%) as opposed to the rest or other population groups which had high prevalence (14.4%). In terms of union, the prevalence of having at least two children is high among those who are in union (11.9%) and lesser for other marital status groups.

However, pertaining the year of birth of the teenage mother the prevalence of having two or more children is higher to those who were born in early 90s (1991-1992) , followed by the teenagers born in the late 90s (1995-1997), then the teenagers that were born in the mid-90s (1993-1994). The rates are 10.2%, 8.2%, 7.1%consecutively. The prevalence of teenagers who are mothering at least two children already in terms of giving birth for the first time; most of them gave birth at their early adolescent stage which is 12-13 years with 18.8%, followed by those who gave birth at age 13-14 with 10.5%, then the pattern continues such that only 4.5 % of the teenage mothers (mothering at least two children) gave birth for the first time at age 18-19(late adolescent stage). Most of the teenagers had their first birth at a very young age. From the group of teenagers who are mothers of two or more children, 7.2% of these teenagers gave birth in the last twelve months while 9.1% reported to not have given birth in the last twelve months.

Teenage girls from the traditional background had high prevalence of having given birth to two or more children(9.1%) , then those who are coming from formal, informal and other types of dwelling are almost equally prevalent (i.e. 8.2%, 8.4% and 8.7%). As it has already been distinguished above that the metro areas are normally economically developed in comparison to the non-metro areas; the results indicate that most of the teenage girls with high prevalence rate (10.2%) are from the metropolitan areas as compared to their counterparts who are from non-metro areas (7.9%).

As depicted in Table 4.2 the prevalence of having at least two children among teenagers currently attending secondary school is high among the teenagers from the Gauteng province

(10.7%), the second province in which the prevalence is high is the KwaZulu-Natal (9.8%) , then Western Cape (9.2%) followed by Eastern Cape (9.0%). The moderate prevalence was found in North West (7.4%), Mpumalanga (6.8%), Free State (6.7%), and Northern Cape. Lastly, table 4.2 also provides information on the prevalence of the having two or more children among teenage girls by settlement type which was reported that most of the teenagers with at least two children are from the urban areas (9.1%), to (7.9%) in contrary to those from other geographic areas.

Table 4.2: Prevalence of having at least two children among teenagers by background characteristics

Characteristic	Census 2011	
	%	χ^2
South Africa	8.4	
Age group		270.9*
14-15	8.8	
16-17	6.6	
18-19	9.3	
Population group		321.0*
Black African	8.1	
Other	14.4	
Marital status		145.9*
In union	11.9	
Other	8.2	
Teenagers' year of birth		362.7*
1991-1992	10.2	
1993-1994	7.1	
1995-1997	8.2	
Age at first birth		4301.9*
12-13	18.8	
14-15	10.5	
16-17	6.6	
18-19	4.5	
Birth in the last 12 months		148.4*
No	9.1	
Yes	7.2	
Type of main dwelling		18.8*
Formal	8.2	
Traditional	9.1	
Informal	8.4	
Other	8.7	
Metropolitan area		161.4*
Metro	10.2	
Non metro	7.9	
Province		503.6*
Western Cape	9.2	
Eastern Cape	9.0	
Northern Cape	5.6	
Free State	6.7	
KwaZulu-Natal	9.8	
North West	7.4	

Gauteng	10.7	
Mpumalanga	6.8	
Limpopo	6.0	
Settlement type		62.7*
Urban	9.1	
Non-urban	7.9	

Source: Own calculations from Census 2011 data
Note: significance level - * = *p<0.001*

4.3.2.1 Prevalence of having at least two children among teenagers who gave birth in the last twelve months: selected characteristics

Map 4.9 below illustrates the prevalence of having a minimum of two children among the school going teenagers that gave birth in the past twelve months. The map is meant to take a closer look of the prevalence within each province. Among the teenagers with two children, KwaZulu-Natal reported to have highest (9.5%) rate of those who gave birth in the previous year followed by the Eastern Cape Province at 8.5%, while three provinces have moderate rates (6% - 6.9%) Northern Cape (6.9%), Mpumalanga (6.5%), and Limpopo (6.3%), and lastly provinces with the lowest rates of prevalence (5.1%-5.9%) are Western Cape, North West, Gauteng and Free State; the rates are 5.9%, 5.7%, 5.1% and another 5.1% consecutively.

Districts were also mapped to zoom in within each of the provinces. Appendix 4a indicates the prevalence of having two children within the province of the Western Cape analysed per district in Cape Town. 12.7% of the teenagers in Overberg district with two kids gave birth in the last 12 months. The second district which reveals a high number of teenagers who gave birth a year ago while having two children is the West Coast district with 9.5% of such teenagers. Followed by the somewhat moderate districts which are City of Cape Town with 6.4% of the teenagers and Eden with 4.7% of the teenagers residing in that districts who gave birth a year ago while having a minimum of two children. Lastly, the districts with the low rates of teenagers who gave birth in the last twelve months are Cape Winelands at 2.5% and there is none of the teenagers who gave birth in the last twelve months with a minimum of two children in Central Karoo.

Appendix 4b maps the various districts in the Eastern Cape Province. The findings reveal that among the Eastern Cape districts with the teenage girls who have at least two children and have given birth in the past twelve months, most of them reside in Cacadu district which accounts for 14.2% of the population of young girls in the Eastern Cape. This is followed by Alfred Nzo district, which also has high number of teenagers with two or more children who

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gave birth in the past twelve months accounting for 12.2%. However, the prevalence in most of the districts is somewhat moderate : O.R Tambo have 9% prevalence of the teenage girls who have at least two children who gave birth in the last twelve months, followed by Joe Gqabi with a prevalence of 8.3%, Chris Hani prevalence is just 1% less than Joe Gqabi which is 8.2%, then from Amathole district 6.6% of the teenagers who gave birth in the previous twelve months have at least two children, finally Nelson Mandela Bay have 5.5% of the teenage girls who gave birth twelve months ago who also have a minimum of two kids. However on the lowest category there is only one district Buffalo City, with a prevalence of 1.8%.

Appendix 4c displays the prevalence of having two children minimal and having given birth in the previous twelve months in the districts within the Northern Cape Province. The majority of the teenagers with at least two children who also have given birth in the past twelve months reside in the John Thando Gaetsewe (14.8%), the second district with high prevalence is Pixley KaSeme which contributes 9.2%, and Frances Baard has 8.7% prevalence. Lastly, Siyanda and Nomakwa districts have none of the teenagers with who gave birth in the previous twelve months who also have at least two children.

Below in appendix 4d the prevalence of having given birth to two or more children and birth occurred in the past twelve months in Free State is illustrated, the rates are apportioned according to the five different metropolitan districts in the province. According to appendix 4d, the highest prevalence is found in Lejweleputswa district which contributes 8.3% of the teenage girls in this district, Xhariep accounts for 6.6% prevalence of the teenage girls with at least two kids who gave birth in the previous 12 months. Fezile Dabi district accounts for 5.1%, and Thabo Mofutsanyane 4.4% of the teenagers are having a minimum of two children and also gave birth in the last twelve months. Although there is a difference in the rates of prevalence in these districts, according to the Esri ArcMap rating, they are in somewhat moderate category 3.2%-9.5% see Appendix 4d below. Last district Mangaung accounts for 2.7%.

Furthermore, appendix 4e displays the prevalence of having at least two children among teenagers who gave birth in the previous twelve months in various districts within the province of KwaZulu-Natal. The province has eleven different metropolitan districts which is the province with many districts as compared to the number of districts in other provinces. However, we also find a district with the highest prevalence as compared to districts in other provinces. According to the scales in Asri ArcMap scales , it has reached the maximum in the

highest category 9.6%-15.7%, the district is Umkhanyakude in which the prevalence of having a minimum of two children among girls who gave birth in the last twelve months amounts to 15.7% of the total number of teenagers in that area. The district following this is Zululand which also has quite a high prevalence (14.5%). Three more districts are also categorised under high rate of prevalence category, iLembe, Umgungundlovu, Sisonke with 10.5%, 10.3% and 10% respectively. Nonetheless, the rest of the districts fall under somewhat moderate category: eThekwini with 8.2% cases found in that district, Amajuba has 7.8% cases, Ugu 6.9% cases were reported, Uthukela 6.5% cases, Umzinyathi 6.3% and in Uthungulu district 5.3% cases were reported.

In the North West province, there are only four metropolitan districts which are mapped in Appendix 4f. The district with the majority of teenagers who are having a minimum of two children among those who gave birth in the past twelve months is Bojanala district with a prevalence of 8.3%, followed by Dr Ruth Segomotsi Nompati with 7.3% prevalence, then Ngaka Modiri Molema at 4.5%, there were no cases reported in Dr Kenneth Kaunda district, therefore accounts for 0%.

The map in Appendix 4g shows the prevalence of teenagers with a minimum of two children in the group of teenagers who gave birth in the last twelve months given by different metropolitan districts of the Gauteng province. According to Census 2011, the majority of cases were reported in the City of Johannesburg with a prevalence of 6.3%, in Ekurhuleni 6.1% cases were reported, West Rand district 5.2% of the teenage girls in that area from those who gave birth in the previous twelve months have a minimum of two children. In City of Tshwane 3.1% cases were reported. All the above mentioned districts are categorised in somewhat moderate EstriArc Map categories. Then lastly, Sedibeng accounts for 2.9% prevalence, which is under the low prevalence category.

Mpumalanga province only have three different metropolitan districts namely; Ehlanzeni, Gert Sibande, and Nkangala district , and the prevalence of teenage girls with at least two children who gave birth in the past twelve months in the three districts is 7.4%, 5.7%, and 4.9% respectively. Only one district (Ehlanzeni) was categorised as having the highest number of cases reported and the other two districts (Gert Sibande and Nkangala) were categorised under somewhat moderate group.

Finally, Appendix 4i portrays the prevalence rates from various districts within the Limpopo province. Out of the 5 different districts in this province four have moderate prevalence. The

four districts are Mopani, Vhembe, Capricorn, and Greater Sekhukhune and the prevalence are 6.3%, 6.1%, where in two of these districts same number (5.5%) of cases was reported, respectively.

Map 4.9: Prevalence of having at least two children among teenagers who gave birth in the last twelvemonths
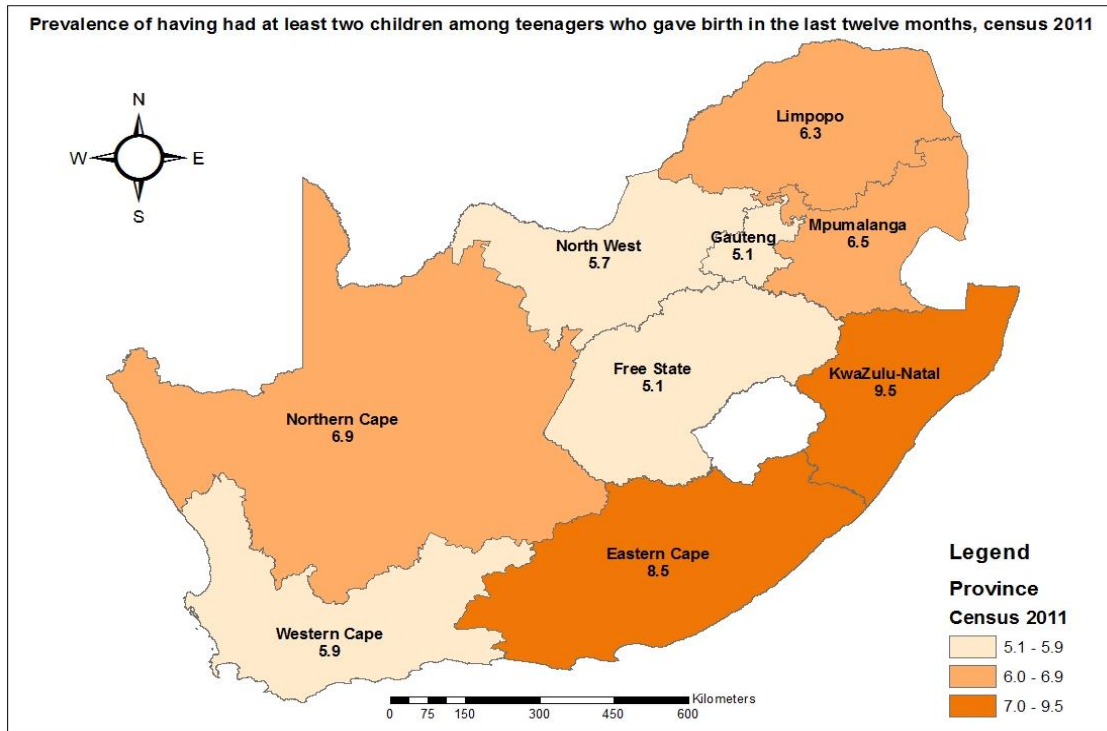
4.3.3 Determinants of childbearing (Multivariate analysis)

Table 4.3 below paints the multivariate analysis output or results for the determinants for childbearing(having at least two children) for the year 2011.The results show that age group, population, marital status, age at first birth, and province are significantly associated (p-value < 0.05) with childbearing (having at least two children). However, age group, population group, marital status, age at first birth and province are strongly associated with childbearing.

Demographic determinants

Table 4.3 below revealed that the teenagers were more likely to have at least two children as they grow older. For instance the odds of being 18-19 years old and being the mother of two or more children are 2.81 times more, compared to age 16-17. As for the population group probability, the "Other" population groups were 2.07 times more likely to have a minimum of two children than the Black population. However, the marital analysis indicates that the teenagers who are in union are 1.46 more times likely to have at least two children. Teenagers

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who were born in 1991-1992 were 1.47 times more likely to have a minimum of two children to their counterparts 1993-1994:0.99 & 1995-1996: 1 .The likelihood of having a minimum of two children having given birth for the first time at age 12-13 is 10.44 times more, while the likelihood of having at least two children among the teenagers who gave birth for the first time at age 14-15 is 4.86 times more. Then among the teenagers who gave birth for the first time at age 16-17 2.14 more likely to have at least two children. These results simply indicate that among the teenagers who gave birth at their early teenage stage (14-15), there are high chances of them having at least two children, as compared to giving birth for the first time at older ages (16-17 & 18-19).

Socio-economic and household determinants

As displayed in table 4.3 below, the teenage girls who reside in the formal and traditional dwelling were 1.49 times more likely to have a minimum of two children than those from other dwellings. Teenagers from other dwellings were 0.89 times more likely to have at least two children

According to the results based on the Census 2011,teenager girls from the Gauteng province were 2.43 more likely to have at least two children , while those who are from KwaZulu-Natal were 2.35 more likely to have a minimum of two children. However, the Eastern Cape teenage girls were 2.11 more likely to have at least two children already, and teenagers from North West were 2 times more likely to have at least two children. Furthermore teenagers from Mpumalanga were 1.64 times more likely to have two children, and then those from the Western Cape Province were 1.62 times likely to have at least two children. Then the likelihoods for a teenage girl to have a least two children in Limpopo was 1.42, and 1.53 in Free State.

Table 4.3: Binary logistic regression on the determinants of having at least two children

Characteristic	Odds Ratio	Standard error	P-value	95% Confidence Interval	
				Lower	Upper
Age group					
14-15[®]	1				
16-17	1.44	0.08	0.000	1.30	1.60
18-19	2.81	0.18	0.000	2.49	3.18
Population group					
Black African[®]	1				
Other	2.07	0.09	0.000	1.90	2.25
Marital status					
In union	1.46	0.05	0.000	1.36	1.57
Other[®]	1				
Teenagers' year of birth					
1991-1992	1.47	0.08	0.000	1.32	1.63

1993-1994	0.99	0.05	0.808	0.90	1.08
1995-1997[®]	1				
Age at first birth					
12-13	10.44	0.48	0.000	9.54	11.43
14-15	4.86	0.18	0.000	4.52	5.22
16-17	2.14	0.07	0.000	2.01	2.28
18-19[®]	1				
Type of main dwelling					
Formal	1.04	0.04	0.292	0.97	1.12
Traditional	1.04	0.05	0.418	0.95	1.14
Informal[®]	1				
Other	0.89	0.07	0.126	0.77	1.03
Metropolitan area					
Metro	1.01	0.03	0.794	0.95	1.08
Non-metro[®]	1				
Province					
Western Cape	1.62	0.17	0.000	1.31	1.99
Eastern Cape	2.11	0.21	0.000	1.73	2.57
Northern Cape[®]	1				
Free State	1.53	0.17	0.000	1.23	1.90
KwaZulu-Natal	2.35	0.24	0.000	1.93	2.87
North West	1.72	0.19	0.000	1.39	2.12
Gauteng	2.43	0.25	0.000	1.99	2.98
Mpumalanga	1.64	0.17	0.000	1.34	2.00
Limpopo	1.42	0.15	0.001	1.16	1.73
Settlement type					
Urban[®]	1				
Non-urban	0.97	0.03	0.331	0.92	1.03

Source: Own calculations from Census 2011 data

Note: ® = reference category

4.4   Conclusion

After testing the demographic, household and community characteristics against the response variables childbearing and self-reported pregnancy, the results are fluctuating from one year to another. The next chapter will further explain the results.

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Chapter 5: Discussion of the results

5.1   Introduction

This study aimed at investigating the factors that are perpetuating the occurrence of teenage pregnancy at secondary school level in South Africa, from the year 2011 to 2014. This was done through focusing on the teenage girls who were currently attending high school (grade 8 till 12)at the times when the GHS 2011,2012,2013, 2014 and Census 2011 was conducted, who are between 14-19 years of age. The aim of this chapter is to understand, further interpret and discuss the different characteristics of the teenage girls as indicated in Chapter 4. As this chapter is building up from chapter four, it is partitioned into different subsections that are similar with chapter four subsections.

5.2   Changing prevalence of self-reported pregnancies and childbearing

Research Design Procedures Reviewed

The research design used in this study "teenage pregnancies in the teenage girls attending secondary school in South Africa' was cross-sectional quantitative method. Correlation analysis was used to identify and evaluate the relationship and association between the different independent variables (teenage characteristics) and the responding variables. Independent variables included age group, marital status, age at first birth, year of birth, population group, current grade, repeating current grade, number of people who are economically active in the household, type of main dwelling, metropolitan area, province and settlement type. There were also two dependent variables which are self-reported pregnancy and number of children (child bearing).

The study was centred on the determinants of teenage pregnancies among high school girls, whereby the General Household Survey for the years 2011 to 2014 and the South African population Census 2011 from Statistics South Africa was used in order to achieve the objective of the study. However, the abovementioned surveys by Statistics South Africa were used to acquire the information on background characteristics (demographic and socioeconomic characteristics) of the teenage girls (14-19 years) who were at secondary schooling (grade 8-12) during the times of the surveys. In order to run the statistical analysis,

the GHS data and Census data was accessed from the StatsSA website in SPSS format, which made it convenient and possible to perform the analysis. Through the SPSS (V.23) software, it was possible to undertake the descriptive analysis, bivariate and multivariate analysis. Therefore, the research questions and hypothesis in chapter one were addressed.

5.3   Determinants of self-reported pregnancies and childbearing

Research Questions and Hypothesis tested

- o Q1: Has there been a change in the prevalence of self-reported pregnancies among teenage girls currently attending high school since 2011?

- o Q2: What is the prevalence of self-reported pregnancies among teenage girls repeating current grade?

- o Q3: Does the size of the household have an impact on the self-reported pregnancies?

- o Q4: What is the prevalence of childbearing among teenage girls currently attending high school for the period under study?

- o Q5: What are the determinants of self-reported pregnancies and childbearing among teenage girls currently attending high school in South Africa?

- o Q6: Are teenagers from socially disadvantaged backgrounds more vulnerable to teenage pregnancy and childbearing?

1.5   Hypotheses

- o H1: The prevalence of self-reported pregnancies as well as childbearing among teenage girls currently attending high school differs according the nature of each explanatory variable from 2011 to 2014.

- o H2: There's a higher prevalence of pregnancies among girls who are repeating the current grade as it significantly influence pregnancy.

- o H3: Teenage girls living in larger households in size are more likely to experience teenage pregnancy than those living in smaller size households.

o H4: Teenagers from communities with high unemployment rate are more prone to self-reported pregnancies.

5.3.1 Individual level determinants

In the previous chapter 4, the determinants of self-reported pregnancies and childbearing among secondary school were outlined and were given at person level and household level. This was performed to discover the characteristics that are significantly related to self-reported pregnancy and childbearing. The research question " *What are the determinants of self-reported pregnancies and childbearing among teenage girls currently attending high school in South Africa*?" was formulated and covered all the variables discussed below. Due to the nature of the surveys/study; General Household Survey (2011-2014) was employed to conduct analysis based on self-reported pregnancies among the teenagers currently attending secondary school, while Census 2011 was preferred to conduct analysis based on childbearing. The different demographic characteristics are discussed further below.

5.3.1.1 Age group

Generally, the age characteristic is the essential component in any study of pregnancy. Age is very crucial when analysing the childbearing and pregnancy, because the childbearing ages starts from a certain age: normally start from 15 years to 44/ (WHO, 2011). However, this study on teenage pregnancies focuses only on the teenage age groups 14-19 years. Therefore, in order to understand and answer the question above in 5.3.1, the relationship between self-reported pregnancy and relationship between childbearing and the age group of the teenager was tested. The age groups were divided into three age groups (14-15; 16-17; and 18-19) to determine in which age the teenagers give birth the most and which age groups have more teenage mothers.

In order to understand the magnitude of pregnancy among the teenage girls, the results were given comparing the different age groups and years. Therefore to achieve that the research question suggested was: *Has there been a change in the prevalence of self-reported pregnancies among teenage girls currently attending high school since 2011*? This question was purposed at testing different background characteristics of the teenage girls studied to self-reported pregnancy. Age therefore is one of these characteristics, which was tested to reveal the age group that had a majority of the teenagers reported being pregnant in the past 12 months before the surveys and identify any change between the years.

Appendix 1 below indicates that the age group with the highest number of self-reported cases is 16-17, and the older teenagers 18-19 have the minimal number of self-reported cases reported. This can be explained by the level of maturity the older teenagers are at; at this stage they are not naive they make informed decision before they perform any sexual activity as compared to their counterparts (teenagers at early stages) who do things under the influence of friends. The sexual reproductive knowledge they possess may also be advanced enough to equip them in sexual related matters, than the knowledge possessed by the younger teenagers. The age differences can also be compared with the current grade where the highest grade had least cases reported and grade 9 and 10 had the most cases.

In addition, results in appendix 2 revealed that there is a significant relationship and an association between the age group and self-reported pregnancy prevalence. Therefore the prevalence of self-reported pregnancy increases with age. However, the trend in years indicates an increment from 2011 till 2013 then the prevalence is constant in 2014. This implies that in all the years 2011 to 2014 the chi square indicates positive association between the age group of the teenagers and self-reported pregnancies. The more they grow, they more they become pregnant or report pregnancy.

Furthermore, as described in chapter 4 section 4.3.3, the results in appendix 3 revealed that the self-reported pregnancy among the teenagers was associated with their age. There were few teenagers who reported to have been pregnant in the past twelve months in the younger age group (14-15), while the majority was found among the older teenagers (18-19). This can be explained by the need for sexual fulfilment and sexual knowledge and understanding the older teenagers turn to have as compared to their counterparts. Some young girls are still not sexually active in their early teens, nor have any understanding about sex. Hence majority of self-reported pregnancies is found among the older teenagers throughout the four year period (2011-2014).

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5.3.1.2 Population group

Pregnancy varies in population groups, it is therefore crucial to include the population group in any kind of a pregnancy study. In the present study the teenage pregnancy prevalence are also given per population group. This variable is included in the testing of all the above research questions. According to the findings in appendix 2, the chi-square test of association revealed that there was an association at ($p<0.001$) between self-reported pregnancies on the teenagers currently attending secondary education and population group. Black population was more prevalent to the self-reported pregnancies as compared to other population groups, throughout the period of four years (2011-2014).

Furthermore, in order to investigate research question number 4 (*What are the determinants of self-reported pregnancies and childbearing among teenage girls currently attending high school in South Africa*?), the significant impact of the population group to the self-reported pregnancy was tested. The results showed that this variable was significantly at ($p<0.05$) associated with self-reported pregnancy. Concerning the two population groups tested, black population was leading in terms of significance from 2011 till 2014. This implies that the teenagers from the black population were more likely to report having been pregnant in the previous 12 months as compared to the other population groups in South Africa. This can be explained by the type background black people are coming from as most of them are residing on the rural/traditional areas.

It is important to test the pregnancy prevalence and parity in order to identify and understand the different factors that contribute towards high teenage pregnancies in South Africa .Parity in this study is explained by childbearing, meaning teenagers who have given birth to at least two children. In terms of childbearing per population group, the output indicated that other population groups had high prevalence of childbearing as compared to the Black population group. The majority of teenagers who were most likely to have at least two children were found among Other population groups, these were lesser in black population; while, the odds of reporting to be pregnant were more likely prevalence of self-reported pregnancies.

5.3.1.3 Marital status

Marital status of the teenagers during their pregnancy and childbearing is regarded as one of the most important characteristics to consider as mentioned in chapter 2. This is due to the fact that other teenage girls get married at a young age; this is explained in section 2.3.1 and section 2.3.2 elaborating on the impact of the early marriage in teenage pregnancy. This section attempts to answer or respond to the first, second and fourth research questions mentioned above. These research questions were intended to investigate the prevalence of self-reported pregnancies, childbearing and determinants of teenage pregnancies in teenagers of various marital statuses. After having discovered their prevalence in different years, this variable had to be tested whether it is one of the determinants of teenage pregnancies or not.

Although there was a small group of the teenagers currently attending high school who were in union in real terms throughout the period 2011-2014; the majority of those who reported to be pregnant in the twelve months preceding the survey were found among the teenagers who were in union than those in other marital groups. Appendix 2 indicates that the number of teenagers in union was increasing throughout the period from 2011 till 2013, then declined in 2014. Due to non-use of contraceptives (as some communities do not approve contraception use by married women, UNICEF, 2001) among the married teenagers, it is for this reason that self-reported pregnancies were high and increasing. While the multivariate results in Appendix 3 reveals that the likelihood of teenagers in union to have reported being pregnant was high during the period 2011 till 2013 and increasing with years, then the number decreased in the 2014 but still remained high than the rest of that of teenagers in other marital statuses. Married couples generally have birth as one of their marriage goals. Therefore, the high probability of the married teenagers to have been reported pregnant can be explained by the need for child in the marital union as opposed to teenagers in other marital groups who might not have much pressure to bear children. It is good to note that although this aspect has been explained in detail in the literature, it is not a big deal in South Africa.

5.3.1.4 Current grade

Conducting a study based on teenagers attending high school, requires a clear understanding of the classes/grades studied in the study. Current Grade serves as one of the key variables, as it provides more insight on the secondary grades that have majority of teenagers who are victims of pregnancy prevalence. This variable is also related to research question 1, 3 and 4 stipulated above. The results in Appendix 2 with the various characteristics of the teenage girls who were attending high school during the times of the GHS surveys revealed that

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teenagers who were in grade 11 had highest pregnancy prevalence as compared to their counterparts. The rate continuously increased until 2013 then it slightly dropped in 2014. Therefore in terms of currently grade, the majority of teenagers who reported to have been pregnant in the previous 12 months were always in grade 11. Most teenagers fall pregnant when they get to grade 11. This can be possibly explained by the new information more especially in subjects such as life science and life orientation based in human reproductive process even in preparation for grade 12. Some teenagers maybe carried away by desiring to experiment and have practical experience of what was taught in class.

5.3.1.5 Current grade repeaters

Investigating the pregnancy rate among teenagers who are repeating a class is also empirical as it will also contribute on understanding of pregnancy among the girls that have repeated a class or a grade. This section is purposed at responding to the research question *"What is the prevalence of self-reported pregnancies among teenage girls repeating current grade?* The purpose of this question was to determine whether teenage pregnancy at the high school level has any relationship with whether the student is repeating a grade or not. Put differently, it was to discover the number of teenagers who are in the same grade as the previous year who have fallen pregnant as compared to other teenagers who had not fallen pregnant. The results in Appendix 2 reveal that the majority of teenagers who are repeating a grade have reported to have been pregnant in the 12 past months as compared to the rest of the teenagers. The rate was in increasing in relation to the number of years but declined in 2013 then it picked up again in 2014. These teenage girls were also found to be in a higher risk of childbearing (having a minimum to two children). Repeating a grade can be very discouraging to most teenagers and therefore probably propels them to make negligible decisions/uncalculated risks of being involved in sexual intercourse without a protection/prevention. Some may have resorted to it to ease away the depression feeling. Some teenagers maybe repeating the class due to their misbehaviour hence pregnancy.

5.3.2 Household-level determinants

This section identifies the relationship between the household variables provided below and teenage pregnancy among the high school girls. Statistical relationship between self-reported pregnancy by secondary school girls and childbearing (having two or more children) and the household characteristics is being tested. Teenage pregnancy is influenced by various factors; therefore the prevalence of pregnancy among teenagers attending high school level and the

household variables is being tested. Self-reported pregnancy and childbearing prevalence are tested with the household variable in order to determine whether they have an impact in pregnancy and childbearing or not and how much is the impact if there is any.

5.3.2.1 Type of main dwelling

This section seeks to address all the above mentioned research questions, except for research question number 2. The first research question is "*Has there been a change in the prevalence of self-reported pregnancies among teenage girls currently attending high school since 2011*?" This question was analysed in order to determine whether the self-reported pregnancies have been increasing or decreasing over the four year period. Appendix 1 displays the different variables in relation to self-reported pregnancy in the years 2011 till 2014. The majority of teenagers currently attending secondary school reside in the formal dwelling, followed by the traditional, then informal dwelling. As portrayed in table 4.1, from 2011 to 2012 the proportion for the teenage girls who resides in the formal settlement decreased by 1.2% but picked up in 2013 and increased with the years consecutively. This is followed by the teenage girls residing in traditional dwelling/settlement, however the proportion for these young girls decreases by less than 1% from 2011 to 2012, then decreases perpetually thereof. The contrast between the formal and traditional dwelling may be as a result of the increasing rate of urbanization in South Africa. Put differently, people migrate from the traditional dwellings i.e. farms and tribal setting to live in towns and cities , due to the development attractions in towns, some for jobs and live in the suburbs. For instance according to Barbarin & Ritcher (2013) the majority of children will grow up in the urban areas (cities) than rural areas. About 53% (more than half) of the teenagers live in the urban areas and the rate is increasing almost yearly. Lastly, the least group of teenagers who attend high school who reported to have been pregnant reside in the Informal and Other settlements, which increased in 2012 and decreased perpetually in the last two years of the surveys.

The majority of the teenage girls at secondary school with a minimum of two children are from the Formal dwelling, followed by Traditional dwelling, then Informal dwelling and Other dwellings. This could be that most people are moving from traditional, informal and other dwellings to reside in the formal dwellings due to different development characteristics and standard of living. South Africa is one of the countries with higher rate of urbanisation which result in majority of the country living in cities. However, the amount of resources

therefore cannot sustain the number of people coming in to cities (UNICEF, 2012). These results are similar to the results found in the self-reported pregnancy by GHS.

Furthermore, in analysing the prevalence of self-reported pregnancy in all the variables tested were statistically significant (p<0.001). Appendix 2, the results indicate that in the years 2011, 2012 and 2014 the prevalence of self-reported pregnancies among the high school girls was dominant among the girls who stayed in the Traditional areas. This could be due to the lack of the resources in the traditional areas and also totally relying on traditions which may prevent them from using contraception methods (UNICEF, 2001). The prevalence of self-reported pregnancies from the Formal dwellings comes in the second place, which also increases with the years but the number decreased in 2014. Lastly, the prevalence of teenagers who reported to have been pregnant in the last twelve months who stay in the Informal/Other dwelling was minimal. It can be noticed that as the pregnancy prevalence of teenagers who resided in informal areas is decreasing over the years, the pregnancy prevalence of those who stay in the formal settlement is increasing. This therefore implies that there's a trade-off by the teenagers in these two places.

5.3.2.2 Number of household members

Once again the results in Appendix 2 respond to the research question 1, while Appendix 3 is meant to address research question 4(see 5.3.1.1 above). This variable is only directed to self-reported pregnancies and not the childbearing. The results in Appendix 2 portray a positive relationship between childbearing and the number of household members. The rate is distributed in accordance to the number of the household members, for instance for the households with 1-3 members the rate is low for all the years and household with many members (6+) have the highest rates of self-reported pregnancy throughout the years (2011-2014). Nevertheless, the rates of prevalence increase with the number of years in all the three different categories. Due to possible family disruption

Appendix 3 clearly indicate that every year from 2011 till 2014, the teenagers living in households with quite large sizes are more exposed to early pregnancy as compared to their counterparts(those who live in small households). Due to the amount of responsibility and factors such as family disruption which normally occur in huge households than small households, this can be explained. Also the attention of a parent is divided to the number children under their care, the more the dependents the lesser attention they receive from their parents and the opposite is true. Therefore, it is easy for children to hide some things

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(behaviour, actions and character) from their parents. This becomes even worse when the parents are working, for they spend even lesser time within the household with their children.

This can also be a trend of teenage pregnancy within a household. One teenager that falls pregnant may influence the behaviour of other teens within the household. The teens may not fear or be careful of teenage pregnancy as they would be due to the fact that it is experienced by one of their sisters within the household.

5.3.2.3 Number of economically active household members

This variable also is only focused on the first and the last research questions above. Appendix 2 seeks to respond to the abovementioned research questions. The purpose of the first research question in relation to this variable was to determine whether or not there is significant change in the number of teenagers who reported to have been pregnant in the previous twelve months. According to chapter 4of the current study the households with no economically active members within the household had highest self-reported pregnancy in 2011 and 2014. During those two periods there was also a high unemployment rate profiled in the youth of South Africa. Meanwhile, the households with at least 3 economically active members had the highest prevalence in 2012 and an equal number of cases in both households with no economically active members and those with at least three economically active members was reported in the year 2013, which is the highest number in that year. On average the prevalence of teenage pregnancy is the highest among the teenagers from the households where there's no one working in the household, followed by the teenagers from the households where only a limited number of household members are working or employed.

5.3.2.4 Metropolitan area

Metropolitan area is also one of the main variables in this study, as it indicates the different demographic locations according to municipalities in each province. The question posed for this variables was "*Has there been a change in the prevalence of self-reported pregnancies among teenage girls currently attending high school since 2011?*" and "*What are the determinants of self-reported pregnancies and childbearing among teenage girls currently attending high school in South Africa?*" Appendix 2 indicates that there was a positive correlation or association between self-reported pregnancies and metropolitan area in each year.

This was aimed at predicting whether most teenagers who reported to have at least two children were from Metro or Non-Metro districts or areas in their provinces. According to

table 4.1, the majority of teenagers who had a minimum of two kids were from the Non-metro areas. This variable showed statistical significance in table 4.2. There's therefore a positive relationship between the teenage pregnancy prevalence and metropolitan area. This implies that the pregnancy prevalence rate depends on the metropolitan area in which every individual teenager stays in. The prevalence of teenage pregnancy differs in different years from 2011 till 2014. The difference was not significant in both teenagers who stay in Metro and those who stay in Non-metro. The majority who have reported to have been pregnant stays in the Non-metro areas which are generally less developed areas than metro and therefore usually lack resources to take care of the health and reproductive needs of the teenagers.

5.3.2.5 Province

Generally, the prevalence of self-reported pregnancies are distributed according to the different provinces. In the previous studies, KwaZulu-Natal was leading in terms teenage pregnancy in South Africa. The proposed question for this variable was: "*What are the determinants of self-reported pregnancies and childbearing among teenage girls currently attending high school in South Africa*?" Obtaining the relevant information about this variable helped in determining whether or not the variable was one of the determinants of self-reported pregnancy. Does the province in which people stay in have any relationship or impact towards the self-reported pregnancy: as social disorganisation theory states that it is also influenced by location. Appendix 4 indicates that in 2012 the teenagers were less likely to report the pregnancy. In contrary, from 2013 the likelihood of self-reported pregnancy cases in all the provinces was high, so in 2014.

Table 4.1 indicates a popular trend: KwaZulu-Natal has the highest cases of teenagers who reported to be having a minimum of two children, followed by the Eastern Cape Province then Limpopo. Most of the teenage pregnancy studies conducted in South Africa have similar findings which indicates that it matters where a teenager stays, as it determines whether they fall in a trap of having children at young stage or not. Table 4.2 communicates that there is a positive correlation between childbearing and province, which indicates that self-reported childbearing depends on the province in which a teenager dwells in.

5.3.2.6 Settlement type

This variable was intended to respond to the following research questions: "*Has there been a change in the prevalence of self-reported pregnancies among teenage girls currently attending high school since 2011*?" and "*What are the determinants of self-reported*

pregnancies and childbearing among teenage girls currently attending high school in South Africa?"

The results in Table 4.1 showed that the majority if teenagers who reported to have at least two children are from Non-urban areas (rural, traditional). While, Table 4.2 indicated that there's a positive correlation between the number of teenagers who reported to have at least two children and settlement type. However, in terms of self-reported pregnancies; Appendix 1 reflects that there has been fluctuations in the number secondary school teenagers who had reported to be pregnant in the past twelve months throughout the period of 2011 to 2014, despite the fluctuations the majority of teenagers reported to have been pregnant in the past twelve months were from the urban areas, this can be mainly caused by the popular urbanisation in South Africa. As most people are moving to the urban areas in South Africa due to different reasons, the urban areas are becoming more populated than rural and traditional. For this reason, most teenagers who reported were found in the urban areas. However, appendix 2 indicated that there is a positive relationship between the settlement type and teenage pregnancy prevalence; this implies that self-reported pregnancy was influenced by the place at which an individual teenager was residing during the time of the surveys (GHS and Census). Lastly, Appendix 3 portrays that in 2011 and 2013 self-reported pregnancy was less likely to be reported among the teenagers residing in the Non-urban areas, while in the years 2012 and 2014 it reveals that the teenagers residing in the Non-urban areas were most likely to self-reported pregnancy as compared to those urban areas.

5.4   Conclusions

Based on the information discussions above it can be noted that the self-reported pregnancy is more associated with other factors than the others. While childbearing is not related or doesn't have association with some characteristics at all (settlement type and metropolitan area). There was also a variation in the occurrence of childbearing and self-reported pregnancy across the different years. The conclusions drawn in the above discussion is outlined and clearly stated in the next chapter.

Chapter 6: Conclusions and recommendations

6.1 Introduction

This study set forth to inspect the teenage pregnancy rate and trends in different years based on the General Household Survey in the years 2011 to 2014. Hence, this section of the thesis is meant to encapsulate the research conclusions with discussions. The comprehensive objective of this study was to determine the factors that are associated with teenage pregnancy and childbearing, focusing on the girls that were currently pursuing their high school grades (grade 8 to 12) during the time of the survey (2011-2014). This was outlined through demographic and socioeconomic variables such as age, sex, marital status, province, and current grade, income, number of people in the household, number of people employed in the household, and repeating current grade. These attributes contributed to addressing the research questions and hypotheses outlined in the first chapter of this study.

6.2 Overall conclusion

Through the statistical analysis done in chapter 4, from the output displayed it can be concluded that since year 2011 till 2014 there has been changes in the prevalence of self-reported pregnancy among the secondary school girls in South Africa. It can be noted from the findings in the analysis chapter 4 that the teenage pregnancy prevalence among the school going girls differs in different socio-economic, household variables and across the different years. Likewise, the childbearing also fluctuates in different demographic, individual and household characteristics. For instance the results that were found are quite interesting: The number of self-reported pregnancy cases reported among the teenage girls were increasing with the age of the teenagers. While the married teenagers reported more cases of self-reported pregnancy, fewer cases were reported for the teenagers who were unmarried. Unmarried teenagers are girls who usually stay with their parents and therefore are expected to have less chances of giving birth, while married teenagers are wives who are expected to give birth as a sign of family expansion and achievement. The results further showed that the majority of black teenagers reported to have given birth as compared to their counterparts. Like the findings in other studies, the majority of teenagers who reported to be having been pregnant and have two children were found among the Black population. However, in terms of economic background: teenage girls who were from households where there was no one working were most likely to report being pregnant as compared to their counterparts. While this was not absolute in all the years (2011-2014), those teenagers from households with at

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least 3 members working they were less likely to have self-reported pregnancy and childbearing cases than the households with no household members working.

6.3 Hypotheses Confirmation

In order to confirm the hypotheses understudy, the statistical tests were conducted. Tests that were put in place are descriptive, bivariate, and multivariate analysis. To test relationship between the dependant and independent variables Chi-square was performed. However, these statistical tests helped to answer the research questions and hypothesis understudy which were introduced in chapter One. The first hypothesis "*There is no single direction in the prevalence of self-reported pregnancies among teenage girls currently attending high school, it entirely depends on the nature of each explanatory variable from 2011 to 2014*". To confirm this hypothesis a test for prevalence in Appendix 2 is displayed: as the diagram displays prevalence of self-reported pregnancy from the year 2011 till 2014. For instance, the age group with high prevalence was the teenagers in their late teens (18-19) and in 2013 the younger teens (14-15) were more prevalent than the mid-teens (16-17). While, the population group; proved that Black population had the highest prevalence throughout the four year period. Married teens were also more prevalent to pregnancy compared to unmarried from 2011 till 2014. The prevalence of childbearing proved the same for the age group and marital status. However the prevalence was tested with all the different variables which are outlined on the table in Appendix 2 and discussed in chapter 5.

In this study it was also hypothesised that "*There's a higher prevalence of pregnancies among girls who are repeating the current grade as it significantly influence pregnancy*". This hypothesis was also confirmed by looking at the prevalence table in Appendix 2. Under the variable "*repeating current grade*", those who were repeating the grade had the highest prevalence score as compared to teenage students in other groups. This is a trend holds throughout the years from 2011 to 2014.

Finally, the last research question "*What are the determinants of self-reported pregnancies and childbearing among teenage girls currently attending high school in South Africa?*" and hypotheses "*Teenage girls living in larger households in size are more likely to experience teenage pregnancy than those living in smaller size households*" and "*Teenagers from communities with high unemployment rate are more prone to self-reported pregnancies*" significantly influence self-reported pregnancies as well as childbearing among teenage girls currently attending high school in South Africa". This hypothesis was confirmed by

http://etd.uwc.ac.za

conducting the logistic regression analysis for both of the dependant variables (childbearing and self-reported pregnancy). Therefore all the independent variables understudy were undertaken against the two dependent variables to determine the likelihood of the self-reported pregnancy occurrence and childbearing. Unfortunately the variables on the hypothesis are not included in the Census 2011 data; therefore in relation to childbearing these variables could not be tested. However, the hypothesis was confirmed in Appendix 2 by applying the analysis and testing the self-reported pregnancy which indicated that the bigger the size (6+) of the household the higher the chances of teenagers reporting pregnancy and vice versa. It was also associated with the number of economically active people in the household where the less the number or none, the higher the chances of a teenager reporting pregnancy.

6.4 Policy Implications and Future Research

Based on the results portrayed in chapter 4 and the discussions carried out in chapter 5 of this study, it is recommended that the households have proper supervision upon their young ones (teenagers) regardless of the size of the household. Proper family structure will help monitor the performance of the children within the household properly. Sexual reproductive education for the adults would also raise awareness on teenage pregnancy.

Job creation and introduction of continuous community projects and programs where people will earn something and not resort to transactional sex would be beneficial and contribute towards fighting teenage pregnancy and childbearing. It is also recommended that when formulating strategies to reduce the prevalence of teenage pregnancy, the issue be addressed according to different provinces, municipalities and so forth. This will help to address the specific issues that are more influential to this social issue. Students who are repeating current grade may receive some form of motivation to keep the focused.

Moreover, the inclusion of variables such as sex and age of the household head in the household surveys would have a great impact on a study of this nature and other relevant studies. Other variables that would add more value in the household surveys are the crime related variables in order to study the social living conditions in the communities in relation to the behaviour of the children. Therefore it is recommended that these be included by StatsSA in their upcoming household surveys. Lastly, there are variables that were included in the General Household Surveys (repeating current grade, number of the household members) but

not in the Census 2011 which made it difficult to analyse the childbearing associated factors thoroughly and comparison.

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Appendices

Appendix 1: Characteristics of teenagers in self-reported pregnancy sample: pregnancy among teenagers in the past twelve months

Characteristic	2011		2012		2013		2014	
	N	%	N	%	N	%	N	%
Age group								
14-15	817 102	36.9	813 471	36.9	780 063	35.2	837 392	37.0
16-17	911 516	41.1	879 832	39.9	937 223	42.3	905 755	40.0
18-19	488 563	22.0	511 827	23.2	499 765	22.5	519 314	23.0
Median age				16				
Population group								
Black African	1 873 251	84.5	1 851 927	84.0	1 891 812	85.3	1 929 627	85.3
Other	343 930	15.5	353 202	16.0	325 239	14.7	332 834	14.7
Marital status								
In union	18 868	0.9	12 404	0.6	15 301	0.7	31 916	1.4
Other	2 198 313	99.1	2 192 726	99.4	2 201 750	99.3	2 230 545	98.6
Current grade attending								
Grade 8	378 096	17.1	343 577	15.6	285 355	12.9	301 349	13.3
Grade 9	558 247	25.2	585 960	26.6	542 039	24.4	506 234	22.4
Grade 10	552 385	24.9	548 526	24.9	616 146	27.8	642 833	28.4
Grade 11	453 579	20.5	448 967	20.4	470 666	21.2	500 398	22.1
Grade 12	274 874	12.4	278 100	12.6	302 846	13.7	311 647	13.8
Repeating current grade								
Repeating	267 782	12.1	315 797	14.3	322 810	14.6	293 427	13.0
Other	1 949 399	87.9	1 889 332	85.7	1 894 241	85.4	1 969 034	87.0
Type of main dwelling								
Formal	1 748 887	78.9	1 713 451	77.7	1 805 335	81.4	1 859 113	82.2
Traditional	298 367	13.5	289 173	13.1	263 575	11.9	254 038	11.2
Informal & other	169 927	7.7	202 505	9.2	148 141	6.7	149 311	6.6
Number of people in household								
1-3 people	339 904	15.3	293 542	13.3	327 570	14.8	332 242	14.7
4-5 people	781 173	35.2	778 310	35.3	817 338	36.9	838 018	37.0
6+ people	1 096 103	49.4	1 133 277	51.4	1 072 143	48.4	1 092 201	48.3
Number of economically active people in household								

None	787 213	35.5	727 408	33.0	698 077	31.5	723 314	32.0
1-2	1 287 371	58.1	1 324 292	60.1	1 348 421	60.8	1 368 480	60.5
3+	142 597	6.4	153 430	7.0	170 554	7.7	170 666	7.5
Metropolitan area								
Metro	643 541	29.0	653 063	29.6	634 158	28.6	673 793	29.8
Non metro	1 573 640	71.0	1 552 066	70.4	1 582 893	71.4	1 588 668	70.2
Province								
Western Cape	193 698	8.7	210 063	9.5	194 788	8.8	215 907	9.5
Eastern Cape	305 515	13.8	324 289	14.7	308 781	13.9	330 818	14.6
Northern Cape	45 517	2.1	43 887	2.0	45 789	2.1	46 214	2.0
Free State	121 117	5.5	114 385	5.2	115 774	5.2	121 489	5.4
KwaZulu-Natal	480 094	21.7	466 342	21.1	459 443	20.7	483 360	21.4
North West	155 948	7.0	142 699	6.5	153 998	6.9	143 548	6.3
Gauteng	384 262	17.3	387 229	17.6	406 843	18.4	421 704	18.6
Mpumalanga	201 069	9.1	181 553	8.2	187 237	8.4	183 418	8.1
Limpopo	329 961	14.9	334 682	15.2	344 398	15.5	316 002	14.0
Settlement type								
Urban	1 214 319	54.8	1 168 235	53.0	1 170 572	52.8	1 226 132	54.2
Non-urban	1 002 862	45.2	1 036 894	47.0	1 046 479	47.2	1 036 329	45.8

Source: Own calculations from GHS data
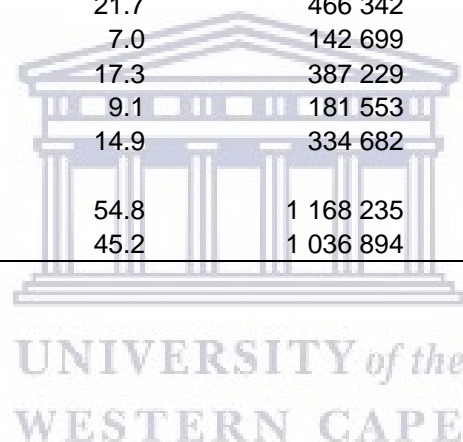
Appendix 2: Prevalence of self-reported pregnancy in the past twelve months preceding the survey among teenagers currently attending high school

Characteristic	2011		2012		2013		2014		Percentage change
	%	χ^2	%	χ^2	%	χ^2	%	χ^2	2011-2014
South Africa	2.2		2.9		3.2		3.2		47.5
Age group		34098.9*		23318.7*		42277.9*		50408.4*	
14-15	0.2		0.8		0.7		1.0		433.3
16-17	2.5		3.4		3.2		2.6		6.8
18-19	5.0		5.2		7.3		7.9		56.5
Population group		6948.9*		5306.3*		9597.1*		5281.5*	
Black African	2.5		3.2		3.7		3.6		41.1
Other	0.3		1.0		0.4		1.2		324.0
Marital status		52098.6*		43937.2*		62490.7*		4107.8*	
In union	26.4		34.3		38.9		9.5		-63.9
Other	2.0		2.7		3.0		3.1		58.5
Current grade attending		7224.8*		7544.6*		11470.1*		17308.2*	
Grade 8	0.5		2.6		1.2		0.9		84.0
Grade 9	2.1		1.5		2.0		1.4		-33.9
Grade 10	2.4		3.6		3.7		3.8		60.3
Grade 11	3.0		4.1		4.9		4.8		57.5
Grade 12	2.9		2.9		3.9		4.7		63.0
Repeating current grade		15743.2*		17460.4*		11089.0*		18435.5*	
Repeating	5.5		6.5		6.3		7.4		33.5
Other	1.7		2.3		2.7		2.6		50.9
Type of main dwelling		1415.8*		7203.4*		151.9*		2927.6*	
Formal	2.2		2.4		3.3		3.0		34.4
Traditional	2.6		3.9		3.2		5.0		94.9
Informal & other	1.0		5.4		2.7		2.9		197.9
Number of people in household		5958.9*		14279.7*		5427.2*		7552.0*	
1-3 people	1.3		1.3		1.6		1.7		36.3
4-5 people	1.5		1.6		2.8		2.5		63.6
6+ people	2.9		4.2		4.1		4.3		44.1
Number of economically active people in household		7533.6*		782.8*		42.7*		3306.2*	

None	3.3		2.6		3.3		4.1		23.9
1-2	1.6		2.9		3.2		2.9		80.5
3+	1.0		4.0		3.3		1.8		80.6
Metropolitan area		1010.1*		6850.3*		5538.3*		1502.2*	
Metro	1.7		1.5		1.8		2.5		48.8
Non metro	2.4		3.5		3.8		3.5		47.6
Settlement type		4701.8*		5932.7*		1013.2*		2680.0*	
Urban	1.6		2.1		2.9		2.7		211.6
Non-urban	2.9		3.8		3.6		3.9		73.7

Source: Own calculations from GHS data

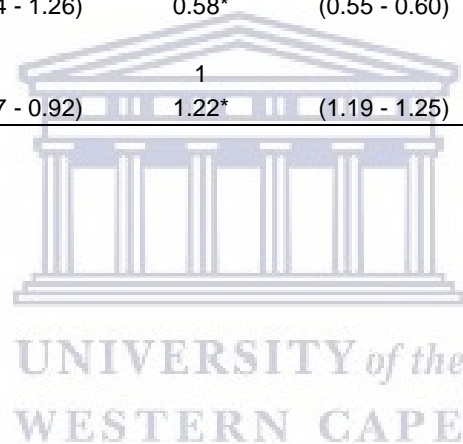**Note:** significance level - * = p<0.001

Appendix 3: Binary logistic regression on the determinants of self-reported pregnancy among teenagers currently attending high school
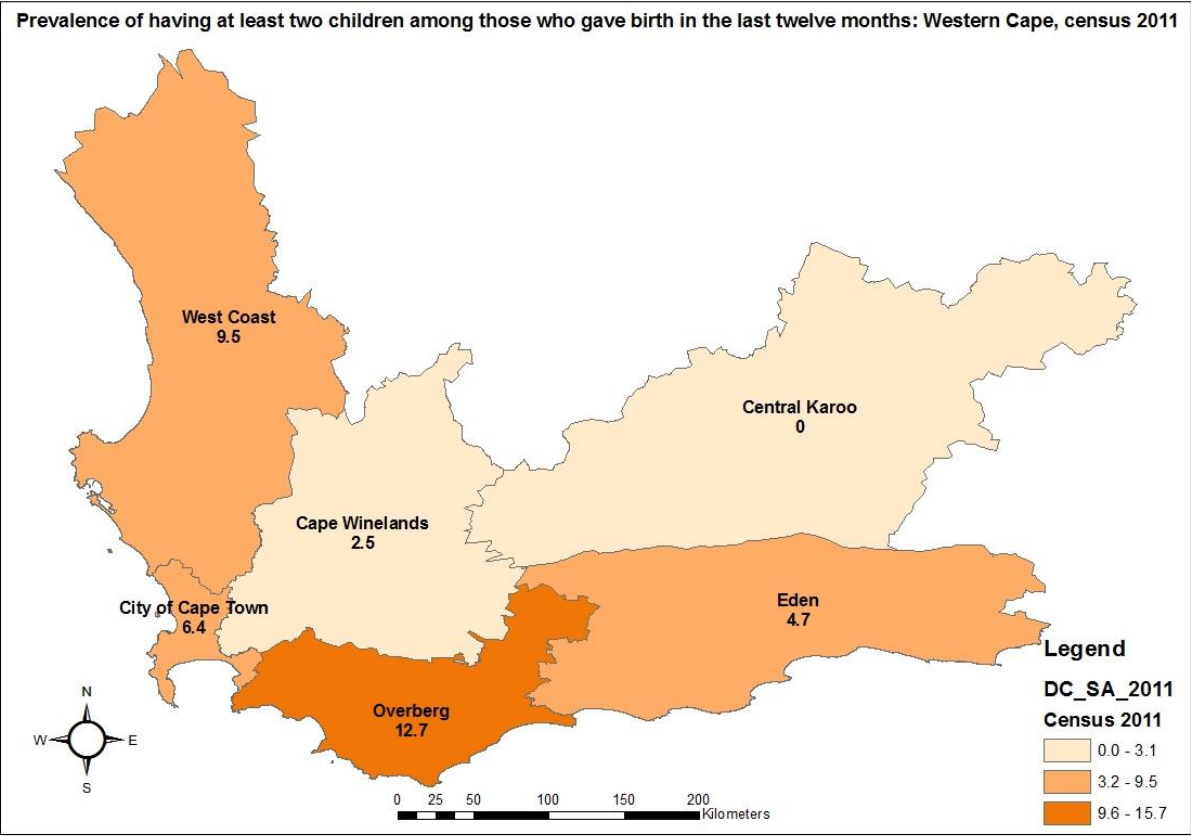
Characteristics	2011		2012		2013		2014	
	Odds Ratio	95% C.I	Odds Ratio	95% C.I	Odds Ratio	95% C.I	Odds Ratio	95% C.I
Age group								
14-15	0.04*	(0.04 - 0.05)	0.18*	(0.17 - 0.18)	0.13*	(0.13 - 0.13)	0.23*	(0.22 - 0.24)
16-17	0.53*	(0.52 - 0.54)	0.74*	(0.73 - 0.76)	0.51*	(0.50 - 0.52)	0.38*	(0.38 - 0.39)
18-19[®]	1		1		1		1	
Population group								
Black African	5.46*	(5.10 - 5.85)	1.76*	(1.69 - 1.83)	7.65*	(7.23 - 8.10)	2.17*	(2.09 - 2.25)
Other[®]	1		1		1		1	
Marital status								
In union	10.82*	(10.42 - 11.23)	13.72*	(13.15 - 14.31)	14.15*	(13.63 - 14.70)	2.68*	(2.57 - 2.79)
Other[®]	1		1		1		1	
Current grade attending								
Grade 8	0.66*	(0.63 - 0.70)	1.30*	(1.26 - 1.34)	0.58*	(0.56 - 0.61)	0.36*	(0.34 - 0.38)
Grade 9	1.68*	(1.63 - 1.73)	0.58*	(0.57 - 0.60)	0.79*	(0.77 - 0.81)	0.44*	(0.43 - 0.46)
Grade 10	0.97**	(0.94 - 0.99)	0.94*	(0.92 - 0.96)	0.94*	(0.92 - 0.96)	0.95*	(0.93 - 0.96)
Grade 11[®]	1		1		1		1	
Grade 12	0.87*	(0.85 - 0.90)	0.74*	(0.72 - 0.76)	0.83*	(0.81 - 0.85)	0.95*	(0.93 - 0,98)
Repeating current grade								
Repeating	1.57*	(1.54 - 1.61)	1.82*	(1.79 - 1.86)	1.40*	(1.37 - 1.43)	2.10*	(2.06 - 2.14)
Other[®]	1		1		1		1	
Type of main dwelling								
Formal	2.30*	(2.19 - 2.42)	0.47*	(0.46 - 0.48)	1.30*	(1.26 - 1.35)	0.90*	(0.87 - 0.93)
Traditional	1.84*	(1.73 - 1.95)	0.59*		0.93*	(0.89 - 0,97)	1.38*	(1.32 - 1.43)
Informal & other[®]	1		1		1		1	
Number of people in household								
1-3 people	0.39*	(0.38 - 0.40)	0.33*	(0.32 - 0.34)	0.37*	(0.35 - 0.38)	0.32*	(0.31 - 0.33)
4-5 people	0.60*	(0.58 - 0.61)	0.40*	(0.40 - 0.41)	0.81*	(0.80 - 0.83)	0.61*	(0.60 - 0.62)
6+ people[®]	1		1		1		1	
Number of economically active people in household								
None	3.21*	(3.04 - 3.40)	0.68*	(0.66 - 0.71)	1.10*	(1.06 - 1.14)	2.56*	(2.46 - 2.66)
1-2	1.78*	(1.68 - 1.88)	1.08*	(1.05 - 1.11)	1.18*	(1.14 - 1.22)	1.91*	(1.83 - 1.98)
3+[®]	1		1		1		1	
Metropolitan area								

Metro®	1		1		1		1
Non-Metro	0.76*	(0.73 - 0.79)	2.41*	(2.33 - 2.49)	1.85*	(1.80 - 1.90)	0.65*
Province							
Western Cape	0.95	(0.89 - 1.00)	0.71*	(0.68 - 0.75)	1.48*	(1.41 - 1.55)	1.76*
Eastern Cape	1.03	(0.98 - 1.07)	0.57*	(0.55 - 0.59)	1.66*	(1.60 - 1.72)	1.48*
Northern Cape	0.61*	(0.55 - 0.68)	0.71*	(0.66 - 0.76)	1.05	(0.98 - 1.13)	1.89*
Free State	0.46*	(0.43 - 0.50)	0.36*	(0.34 - 0.38)	0.89*	(0.86 - 0.94)	2.63*
KwaZulu-Natal	1.01	(0.97 - 1.05)	0.65*	(0.62 - 0.67)	1.57*	(1.51 - 1.62)	1.22*
North West	0.53*	(0.50 - 0.56)	0.75*	(0.71 - 0.78)	1.31*	(1.26 - 1.37)	0.80*
Gauteng®	1		1		1		1
Mpumalanga	0.90*	(0.85 - 0.95)	0.90*	(0.87 - 0.94)	1.40*	(1.35 - 1.45)	2.25*
Limpopo	1.20*	(1.14 - 1.26)	0.58*	(0.55 - 0.60)	0.82*	(0.79 - 0.85)	1.33*
Settlement type							
Urban®	1		1		1		1
Non-urban	0.89*	(0.87 - 0.92)	1.22*	(1.19 - 1.25)	0.68*	(0.79 - 0.85)	1.04*

(Continued CI column values: Non-Metro (0.63 - 0.67); Western Cape (1.69 - 1.83); Eastern Cape (1.42 - 1.53); Northern Cape (1.76 - 2.02); Free State (2.52 - 2.74); KwaZulu-Natal (1.18 - 1.26); North West (0.76 - 0.84); Mpumalanga (2.16 - 2.34); Limpopo (1.28 - 1.39); Non-urban (1.02 - 1.06))

Note: ® = reference category; ***= *p<0.05*; ** = *p<0.01*; * =*p<0.001*

Appendix 4a: Prevalence of having at least two children among teenagers who gave birth in the last twelve months: Western Cape districts
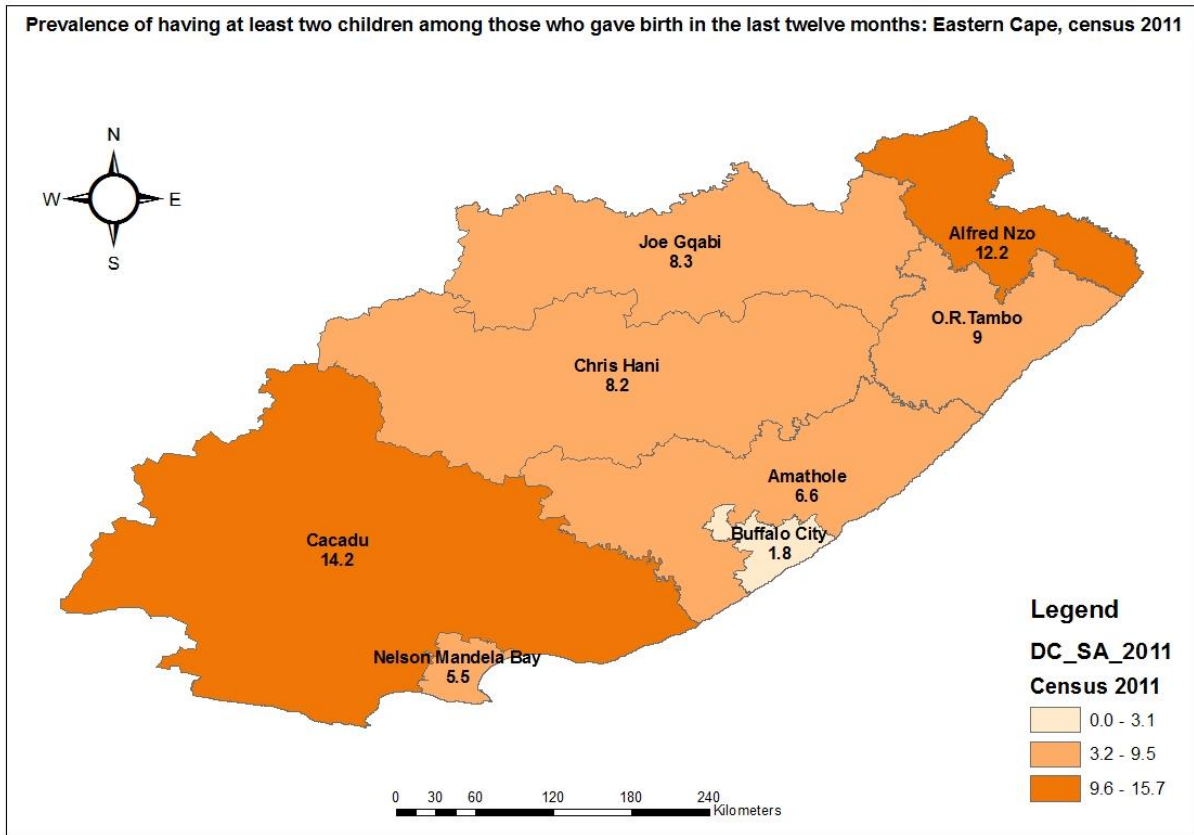

Prevalence of having at least two children among those who gave birth in the last twelve months: Western Cape, census 2011

West Coast
9.5

Central Karoo
0

Cape Winelands
2.5

City of Cape Town
6.4

Eden
4.7

Overberg
12.7

Legend

DC_SA_2011
Census 2011
0.0 - 3.1
3.2 - 9.5
9.6 - 15.7

N
W   E
S

0 25 50   100   150   200
Kilometers

Source: Own calculations from Census 2011 data: using Esri ArcMap
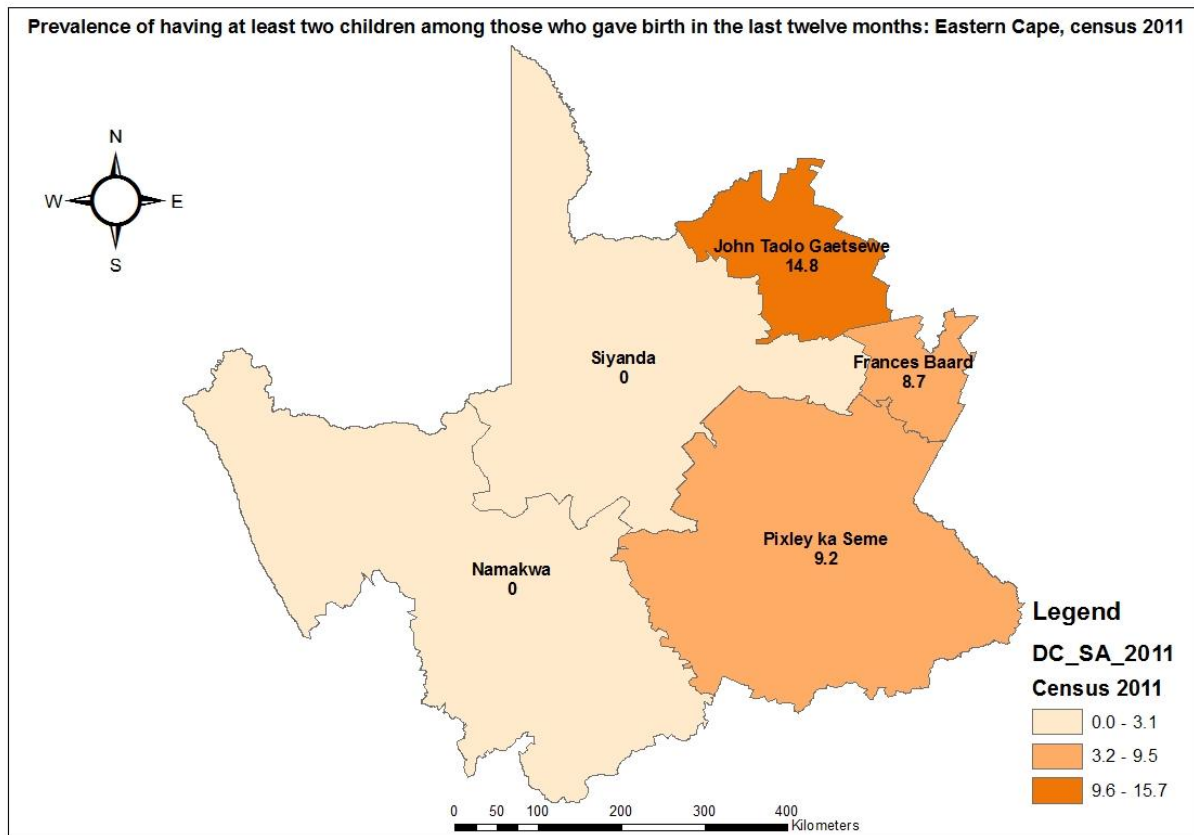
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Appendix 4b: Prevalence of having at least two children among teenagers who gave birth in the last twelve months: Eastern Cape districts

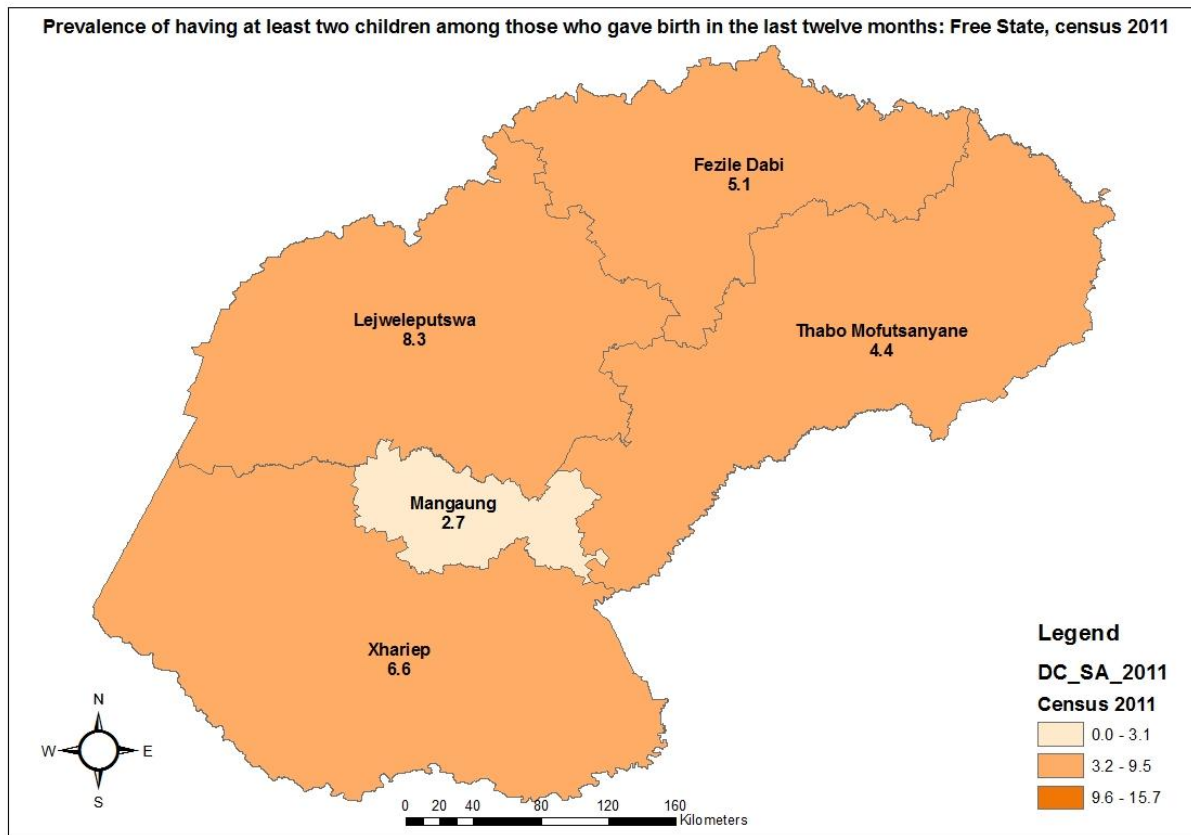**Source**: Own calculations from Census 2011 data: using Esri ArcMap

Appendix 4c: Prevalence of having at least two children among teenagers who gave birth in the last twelve months: Northern Cape districts

Prevalence of having at least two children among those who gave birth in the last twelve months: Eastern Cape, census 2011

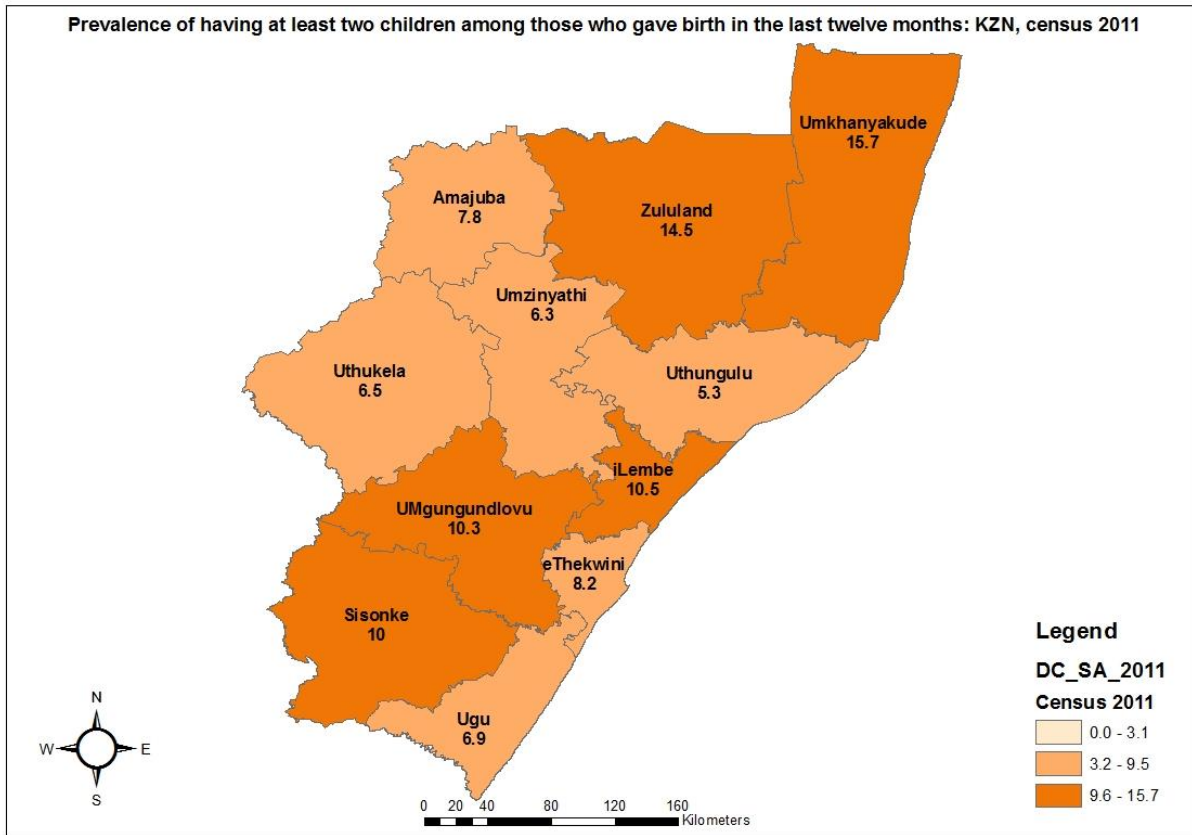**Source**: Own calculations from Census 2011 data: using Esri ArcMap

Appendix 4d: Prevalence of having at least two children among teenagers who gave birth in the last twelve months: Free State districts

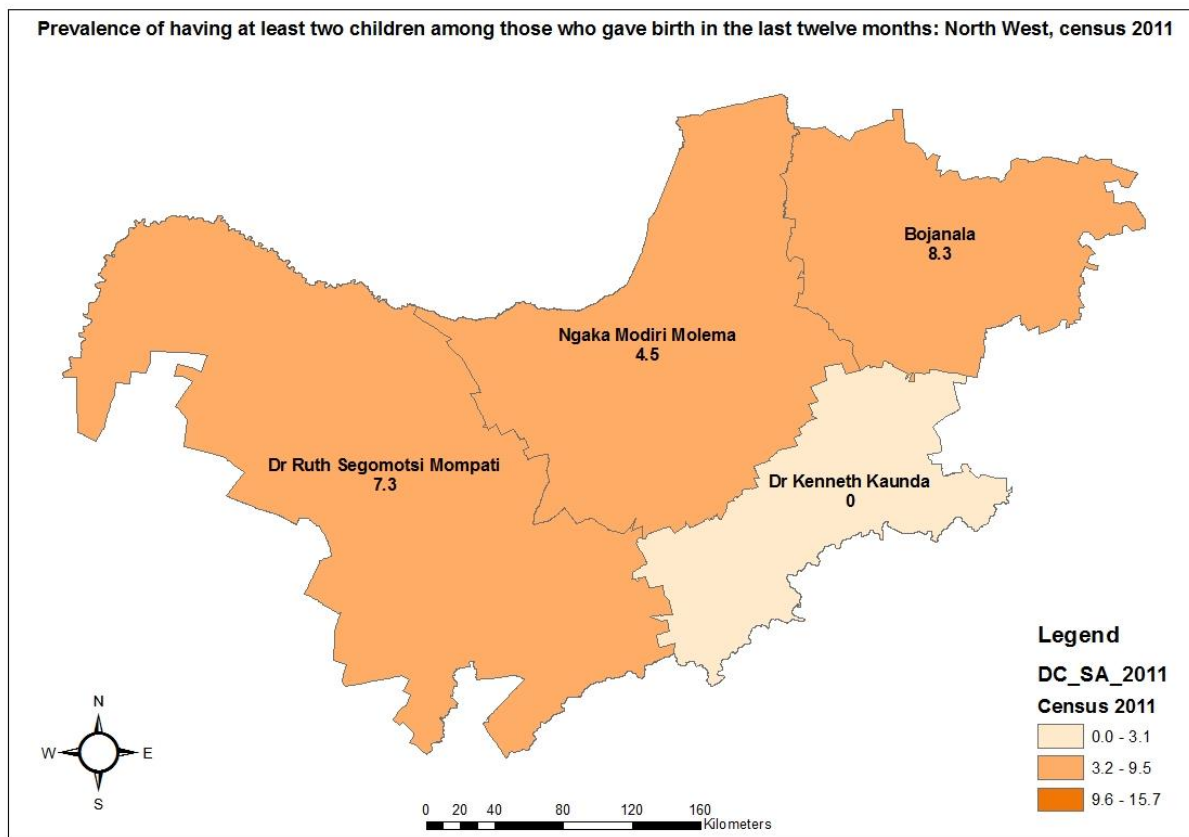**Source**: Own calculations from Census 2011 data: using Esri ArcMap

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Appendix 4e: Prevalence of having at least two children among teenagers who gave birth in the last twelve months: KwaZulu-Natal districts

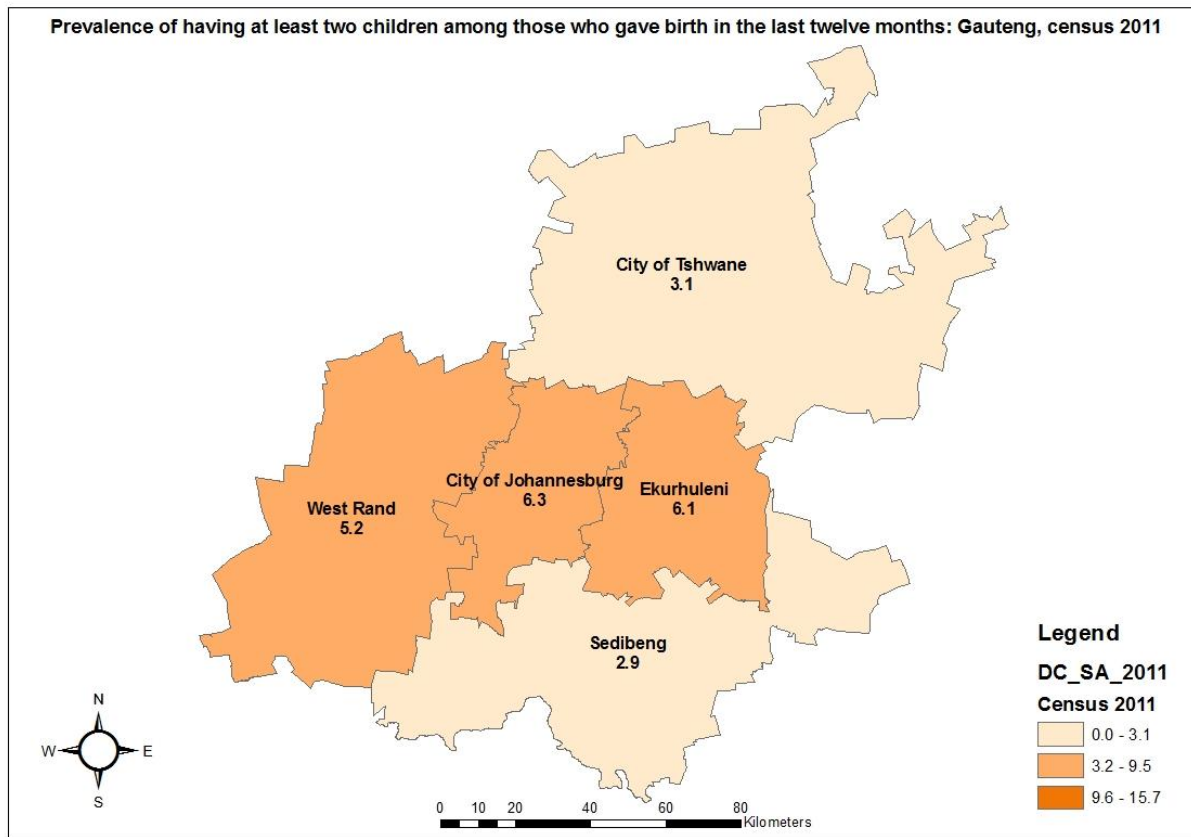**Source**: Own calculations from Census 2011 data: using Esri ArcMap

Appendix 4f: Prevalence of having at least two children among teenagers who gave birth in the last twelve months: North West districts

Prevalence of having at least two children among those who gave birth in the last twelve months: North West, census 2011

Source: Own calculations from Census 2011 data: using Esri ArcMap

Appendix 4g: Prevalence of having at least two children among teenagers who gave birth in the last twelve months: Gauteng districts

Prevalence of having at least two children among those who gave birth in the last twelve months: Gauteng, census 2011

City of Tshwane
3.1

City of Johannesburg
6.3

Ekurhuleni
6.1

West Rand
5.2

Sedibeng
2.9

Legend
DC_SA_2011
Census 2011
0.0 - 3.1
3.2 - 9.5
9.6 - 15.7

Source: Own calculations from Census 2011 data: using Esri ArcMap

113

Appendix 4h: Prevalence of having at least two children among teenagers who gave birth in the last twelve months: Mpumalanga districts
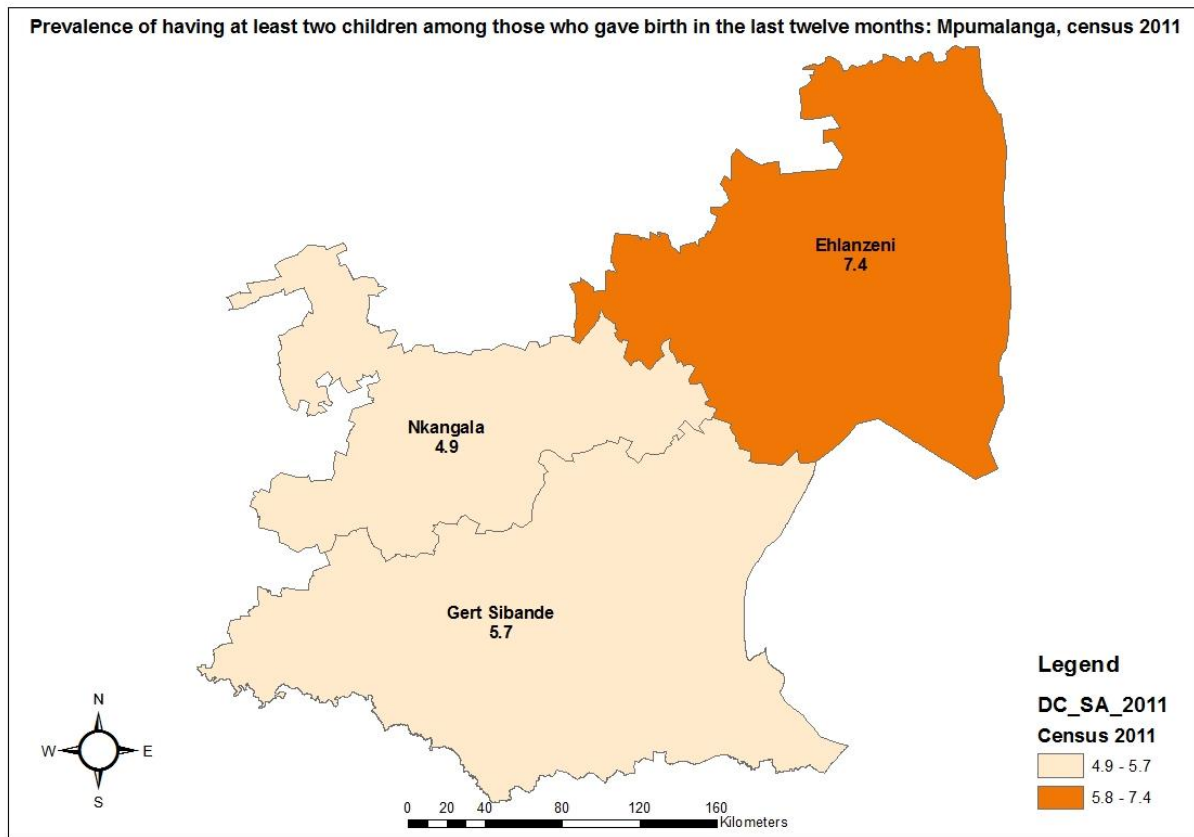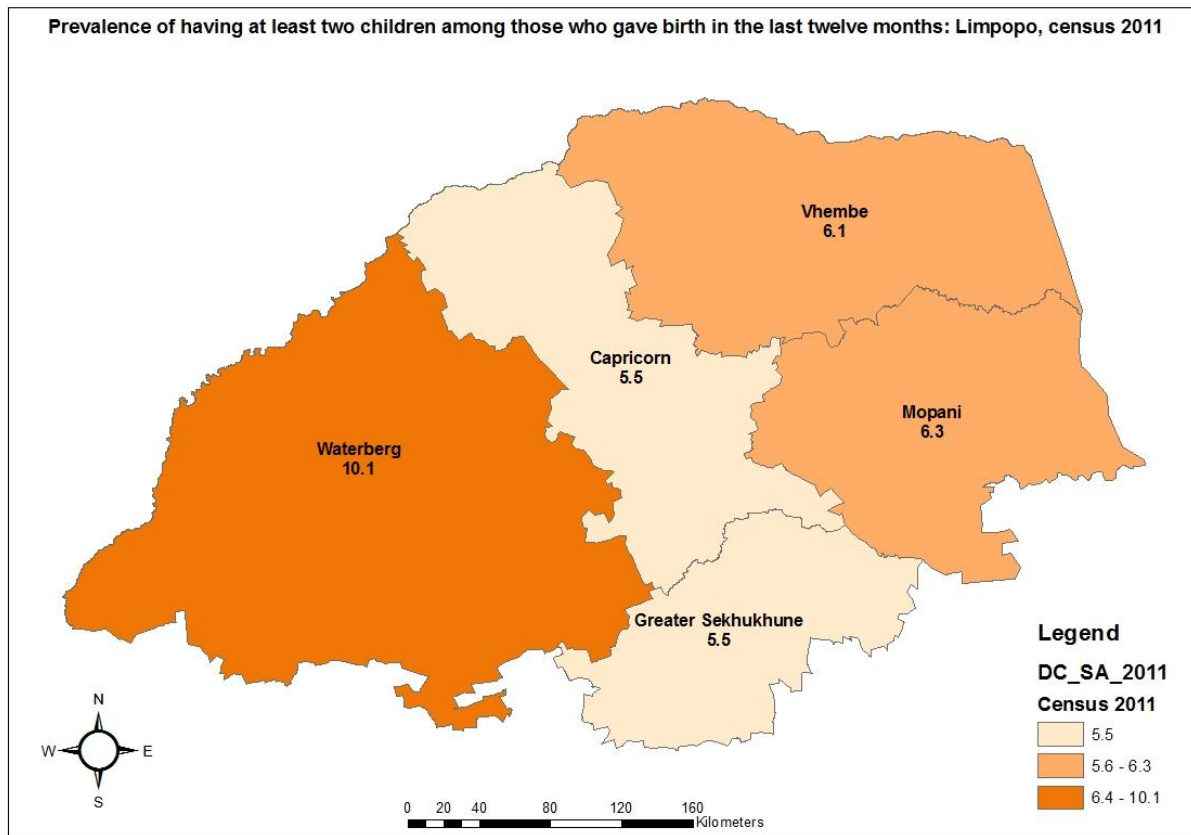

Source: Own calculations from Census 2011 data: using Esri ArcMap

Appendix 4i: Prevalence of having at least two children among teenagers who gave birth in the last twelve months: Limpopo districts

Source: Own calculations from Census 2011 data: using Esri ArcMap

Appendix 5a: SPSS syntax for the computation of results: self-reported pregnancy [GHS 2011-2014]

```
** WEIGHTING THE DATA **

WEIGHT BY weight.


* TABLE: UNIVARIATE ANALYSIS FOR APPENDIX 1

FREQUENCIES
VARIABLES=teenage_pregcurrently_pregage_groupspop_groupmarital_statcurrent_graderepeating_grad
edwelling_typehouse_sizemembers_econ_active Metro Provsettlement_type geotype2

  /ORDER=ANALYSIS.


* TABLE: PREVALENCE ANALYSIS & CHI-SQUARE (% ONLY): FOR APPENDIX 2

CROSSTABS


/TABLES=age_groupspop_groupmarital_statcurrent_graderepeating_gradedwelling_typehouse_sizememb
ers_econ_active Metro Provsettlement_type geotype2 BY teenage_preg

/FORMAT=AVALUE TABLES

  /STATISTICS=CHISQ

  /CELLS=ROW

/COUNT ROUND CELL.


* TABLE 2: PREVALENCE ANALYSIS & CHI-SQUARE (NUMBERS ONLY): FOR APPENDIX 2

CROSSTABS


/TABLES=age_groupspop_groupmarital_statcurrent_graderepeating_gradedwelling_typehouse_sizememb
ers_econ_active Metro Provsettlement_type geotype2 BY teenage_preg

  /FORMAT=AVALUE TABLES

 /STATISTICS=CHISQ

  /CELLS=COUNT

  /COUNT ROUND CELL.



**************************************************



*** LOGISTIC REGRESSION

LOGISTIC REGRESSION VARIABLES teenage_preg
```

```
   /METHOD=ENTER
age_groupspop_groupmarital_statcurrent_graderepeating_gradedwelling_typehouse_sizemembers_econ
_active Metro Provsettlement_type

  /CONTRAST (age_groups)=Indicator(3)

  /CONTRAST (pop_group)=Indicator(2)

  /CONTRAST (marital_stat)=Indicator(2)

  /CONTRAST (current_grade)=Indicator(4)

  /CONTRAST (repeating_grade)=Indicator(2)

  /CONTRAST (dwelling_type)=Indicator(3)

  /CONTRAST (house_size)=Indicator(3)

  /CONTRAST (members_econ_active)=Indicator(2)

  /CONTRAST (Metro)=Indicator(1)

  /CONTRAST (Prov)=Indicator(7)

  /CONTRAST (settlement_type)=Indicator(1)

  /PRINT=CI(95)

  /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).


*******************************************************************************************

* TABLE: PREVALENCE OF SELF-REPORTED PREGNANCY AMONG GIRLS WHO ARE REPEATING CURRENT GRADE

* BY SELECTED CHARACTERISTICS: FOR SECTION4.2.2.2

** PREVALENCE BY REPEATERS

USE ALL.

COMPUTE filter_$=(repeating_grade = 1).

VARIABLE LABELS filter_$ 'repeating_grade = 1 (FILTER)'.

VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.

FORMATS filter_$ (f1.0).

FILTER BY filter_$.

EXECUTE.

CROSSTABS

  /TABLES=Age
age_groupspop_groupmarital_statcurrent_graderepeating_gradedwelling_typehouse_sizemembers_econ
_active Metro Provsettlement_typeBYteenage_preg

  /FORMAT=AVALUE TABLES

  /CELLS=ROW
```

117

```
   /COUNT ROUND CELL.
```

Appendix 5b: SPSS syntax for the computation of results: childbearing [Census 2011]

```
** WEIGHT **

WEIGHT BY weight.

* TABLE: UNIVARIATE ANALYSIS (DESCRIPTIVE STATS)

FREQUENCIES VARIABLES=childbearing age_groupspop_groupmarital_statteenage_YOBAge_at_birth
Birth_Last_12Months dwelling_type Metro Province settlement_type District

  /ORDER=ANALYSIS.

* TABLE: PREVALENCE ANALYSIS & CHI-SQUARE (% ONLY)

CROSSTABS

  /TABLES=age_groupspop_groupmarital_statteenage_YOBAge_at_birth Birth_Last_12Months
dwelling_type Metro Province settlement_type District BY childbearing

/FORMAT=AVALUE TABLES

  /STATISTICS=CHISQ

  /CELLS=ROW

/COUNT ROUND CELL.

* TABLE: PREVALENCE ANALYSIS (NUMBERS ONLY)

CROSSTABS

  /TABLES=age_groupspop_groupmarital_statteenage_YOBAge_at_birth Birth_Last_12Months
dwelling_type Metro Province settlement_type District BY childbearing

  /FORMAT=AVALUE TABLES

  /STATISTICS=CHISQ

  /CELLS=COUNT

  /COUNT ROUND CELL.

*******************************************************************************

* LOGISTIC REGRESSION ANALYSIS
```

```
LOGISTIC REGRESSION VARIABLES childbearing

  /METHOD=ENTER age_groupspop_groupmarital_statteenage_YOBAge_at_birthdwelling_type Metro
Province settlement_type

  /CONTRAST (age_groups)=Indicator(1)

  /CONTRAST (pop_group)=Indicator(1)

  /CONTRAST (marital_stat)=Indicator(2)

  /CONTRAST (teenage_YOB)=Indicator(3)

  /CONTRAST (Age_at_birth)=Indicator(4)

  /CONTRAST (dwelling_type)=Indicator(3)

  /CONTRAST (Metro)=Indicator(2)

  /CONTRAST (Province)=Indicator(7)

  /CONTRAST (settlement_type)=Indicator(1)

  /PRINT=CI(95)

  /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).


*********************************************************************************************************************************8


** FOR THOSE WITH BIRTHS IN THE LAST TWELVE MONTHS


USE ALL.

COMPUTE filter_$=(Birth_Last_12Months = 1).

VARIABLE LABELS filter_$ 'Birth_Last_12Months = 1 (FILTER)'.

VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.

FORMATS filter_$ (f1.0).

FILTER BY filter_$.

EXECUTE.

* CROSSTABS (%)

CROSSTABS

  /TABLES=Province District BY childbearing

  /FORMAT=AVALUE TABLES

  /CELLS=ROW

  /COUNT ROUND CELL.

* CROSSTABS (N)
```

```
CROSSTABS

  /TABLES=Province District BY childbearing

  /FORMAT=AVALUE TABLES

  /CELLS=COUNT

  /COUNT ROUND CELL.
```