



**Determinants of teenage pregnancies in Zimbabwe: Evidence from the Demographic  
and Health Survey.**

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## **COLLEGE OF HUMANITIES**

### **School of Built Environment and Development Studies**

#### **DECLARATION**

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## **Abstract**

Teenage pregnancy remains a big problem in Zimbabwe. The interaction of proximate and indirect determinants has perpetuated the problem of teenage pregnancy in Zimbabwe, despite the government's efforts and intervention mechanisms to put an end to it. This study investigates the socio-economic and demographic determinants of teenage pregnancy in Zimbabwe, as well as the associated risk factors. The study addresses the gap in the literature of lack of research on determinants of teenage pregnancy in Zimbabwe from a national perspective. This is done by using data from the Zimbabwe Demographic and Health Survey (ZDHS), which is a comprehensive national data set. The ZDHS sample of females aged 15-19 years, which was 2199 at the time of enumeration, will serve as the study sample. Accurate insights and inferences about the finite population represented by the survey will be ensured through the use of survey weights.

The factors linked to teenage pregnancy are identified using descriptive, bivariate, and multivariate analyses. Religion, education, gender-based violence, and marital status were identified as socio-demographic factors associated with teenage pregnancy in Zimbabwe. Teenage pregnancy was also found to be linked to socio-economic status (SES), teenagers' knowledge of contraceptive methods, and the ovulatory cycle.

The study concluded that findings on the impact of education on teenage pregnancy have policy implications that cannot be overlooked, especially in light of the high rates of teenage pregnancy in Zimbabwe. To curb teenage pregnancy, education must be fostered and prioritized across all levels. Policymakers should make it possible for young women to remain enrolled in school by subsidizing or exempting school fees payment, especially for those who come from poor households. The government should also subsidize education and provide scholarships to young women who have children or who have become pregnant but want to return to school.

## Acronyms

AIDS	Acquired Immunodeficiency Syndrome
CAPI	Computer Aided Personal Interviewing
CSPro	Census and Survey Processing System
DHS	Demographic and Health Survey
EAs	Enumeration Areas
FAO	Food and Agriculture Organization
GBV	Gender-based violence
HIV	Human Immune Virus
MOHCC	Ministry of Health and Child Care
SES	Socio-Economic Status
SRH	Sexual and Reproductive Health
SSA	Sub Saharan Africa
STI	Sexually Transmitted Infection
TFR	Total Fertility Rate
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UK	United Kingdom
US	United States of America
USAID	United States Agency for International Development
WHO	World Health Organization
ZDHS	Zimbabwe Demographic and Health Survey

## LIST OF CONTENTS

DECLARATION .....	ii
ACKNOWLEDGEMENTS .....	iii
Abstract .....	iv
Acronyms .....	v
LIST OF CONTENTS .....	vi
LIST OF TABLES AND FIGURES .....	viii
Chapter One: Introduction .....	1
1.1 Background to the study.....	1
1.2 Rationale for the study .....	3
1.3 Aims and objectives .....	5
1.4 Theoretical Framework .....	5
1.5 Organization of the study .....	10
Chapter Two: Literature Review .....	11
2.1 Introduction .....	11
2.2 Factors that contribute to teenage pregnancy .....	11
2.2.1 Knowledge of contraceptives .....	11
2.2.2 Knowledge of ovulatory cycle .....	12
2.2.3 Lack of education .....	13
2.2.4 Age at first sex.....	16
2.2.5 Place of residence.....	17
2.2.6 Alcohol abuse.....	18
2.2.7 Multiple sexual partners .....	19
2.2.8 Sexual abuse.....	19
2.2.9 Marital status .....	21
2.2.10 Religion .....	23
2.2.11 Gender-based violence (GBV) .....	24
2.2.12 Socio-economic status (SES) .....	25
2.2.12 Employment status .....	28
2.3 Summary .....	28
Chapter Three: Methodology .....	30
3.1 Introduction .....	30
3.2 Study Context.....	30

3.3 Research Design.....	32
3.3.1 Quantitative research methods .....	32
3.4 Data Sources.....	33
3.4.1 Secondary data .....	33
3.4.2 The Zimbabwe Demographic and Health Survey (ZDHS).....	34
3.4.2.1 Sample Design.....	34
3.6.1 Dependent variable.....	36
3.6.2 Independent variables.....	36
3.7 Analysis Techniques .....	40
3.7.1 Data Weights .....	41
3.7.2 Logistic regression .....	41
3.8 Ethical considerations .....	42
3.9 Limitations of the study.....	43
3.10 Summary .....	44
Chapter Four: Results .....	45
4.1 Introduction .....	45
4.2 Study sample characteristics .....	45
4.3 Bivariate Analysis .....	53
4.4 Logistic regression analysis .....	60
4.4.1 Multivariate analysis .....	60
4.5 Summary .....	63
Chapter Five: Discussion, Recommendations, and Conclusion .....	64
5.1 Introduction .....	64
5.2 Discussion .....	64
5.3 Recommendations .....	70
5.4 Conclusion.....	71
References .....	73

## LIST OF TABLES AND FIGURES

Table 3. 1: Independent variables. ....	39
Table 3. 2: Independent variables. ....	
Table 3. 3: Independent variable.....	
Table 4. 1: Percentage distribution of women in Zimbabwe. ....	45
Table 4.2: Distribution of women age 15-49 years in Zimbabwe by pregnancy outcomes. ...	46
Table 4. 3: Distribution of women age 15-19 years in Zimbabwe by teenage pregnancy outcomes. ....	47
Table 4. 4: Descriptive characteristics of women age 15-19 years in Zimbabwe .....	49
Table 4. 5: Descriptive characteristics of women age 15-19 years in Zimbabwe .....	50
Table 4.6: Percentage of females age 15-19 years by selected characteristics. ....	52
Table 4. 7 Bivariate analysis of women age 15–19 years by pregnancy outcomes and predictor variables, ZDHS 2015.....	55
Table 4. 8 Bivariate analysis of women age 15–19 years by pregnancy outcomes and predictor variables, ZDHS 2015.....	57
Table 4. 9 Bivariate analysis of women age 15–19 years by teenage pregnancy outcomes and selected characteristics, ZDHS 2015. ....	59
Table 4. 10: Multivariate analysis of predictor variables associated with teenage pregnancy in Zimbabwe. ....	62
Figure 1: Framework for organizing the relationship between sexual behavior, personal factors and the proximal and distal contexts.....	7
Figure 2: Map of Zimbabwe .....	31



## **Chapter One: Introduction**

### **1.1 Background to the study**

Teenage years commence with puberty and ends when physical and biological maturity happen as adulthood begins (Eldessouki et al., 2020). Sexual developments begin taking place as hormones increase, with puberty hair and axillary hairs developing in both males and females, genital enlargement and formation of moustache and beard in males, commencement of menstruation and breast development in females as they begin understanding the dynamics of their bodies (Kar et al., 2015). Teenage years are also highlighted by changes in the emotional, physical and social make-up of the teenager, signalling the end of childhood and the beginning of adulthood (Rankin et al., 2016). Sexual curiosity and interest in relationships develop at this stage as teenagers become conscious of gender roles (UNFPA, 2018). This may result in them experimenting in sexual relationships thereby increasing their exposure to the risk of early pregnancy. The impulsive and risky behaviour of teenagers not only exposes them to unwanted pregnancy but also short-term illnesses and sexually transmitted infections such as HIV/AIDS (Chimatiro et al., 2020). Around 85% of teenagers living with HIV/AIDS are in Sub-Saharan Africa, with 58% being females (UNICEF, 2018).

In some settings teenage years are known to involve moral, psychological and social aspects, with issues such as separation of teenagers from their parents also arising during this period as personal values develop (Czikszentmihalyi, 2021). Furthermore due to economic and social demands many parents do not spend enough time with their children to guide them on sexual matters, thereby leaving them to be influenced by their peers, television and the internet (Maemeko et al., 2018). This means that much of teenagers' education regarding sexual matters is from unfiltered sources. Males who mature early and feel more confident are more likely to influence the much younger males to participate in unprotected sexual activity, the same happens for females who mature early as they will more likely experience more sexual advances from older males and succumb to the pressure of engaging in unprotected sex (Kar et al., 2015). Whilst teenage years are a crucial time for both males and females between 13 and 19 years of age, it is time of high risk for females as they are more exposed to detrimental sexual and reproductive outcomes and unplanned pregnancy (Caffe et al., 2017).

Teenage pregnancy is when a young woman aged 19 years and below becomes pregnant (Amadi, 2019; Onwubuariri and Kasso, 2019). It is the pregnancy of young women aged 15-19 years prior to adulthood. Incidences of teenage pregnancy occur in young women aged 18 to 19 years three times more than it does in younger women (17 years and below), with the older women's birthrate being four times that of the younger women. (Yadufashije et al., 2017). Globally, teenage pregnancies are commonplace (Kirchengast, 2016), and they remain of priority concern worldwide especially for the developing nations (Guo et al., 2019). Teenage pregnancies are more prevalent in developing countries than in high-income countries (Geda, 2019), with 50% of all teenage pregnancies coming from only seven countries in the world; namely Ethiopia, Nigeria, Democratic Republic of Congo, India, Bangladesh, Brazil and the United States (Caffe et al., 2017; Islam et al., 2017 and Ayele et al., 2018).

The burden of teenage pregnancies has also weighed heavily on Zimbabwe as it has on many developing countries, with the largest proportion occurring mainly in the rural and marginalised areas (Mutanana and Mutara, 2015). Zimbabwe has a teenage pregnancy rate of 108 per 1000, which is one of the highest globally for a single country (Mavhunga, 2021). According to ZDHS (2015) 68% of Zimbabwe's teenage pregnancies come from young women aged 18-19 years. Also, annually 24% of female teenagers aged between 15 and 19 give birth (Zimbabwe National Adolescent Fertility Study, 2016). This is because teenagers in Zimbabwe are bombarded by a host of factors from every side and these hinder them from avoiding both teenage pregnancy and the risk of contracting HIV (Remez et al., 2014). Despite having some knowledge about HIV/AIDS and pregnancy, teenagers in Zimbabwe still choose to engage in unprotected sexual activity. There is sufficient evidence that shows that among male teenagers the average age at first sex has risen compared to that of females which has remained stagnant (Remez et al., 2014). Teenage boys are also commencing sexual intercourse at a much older age compared to their female counterparts.

The Zimbabwean government has implemented a number of laws and programmes to prevent teenage pregnancies. For instance, initiatives have been launched to provide free access to contraception, condom distribution in schools, and health awareness campaigns to inform youth about sexual and reproductive health (Mudonhi et al., 2019). The minimum age for marriage was also raised from 16 to 18 years in 2016, further reducing the abuse of young girls. Section 78 (1) of the Constitution, which mandates that a young woman must be at least 18 years old before she can marry, was chosen over Section 22 (1) of the Marriages Act (Chapter

5:11), which allowed marriage of females as young as 16 years old (Zhou et al., 2016). The government also ruled that any other law pertaining to the legal age of marriage was unconstitutional.

## **1.2 Rationale for the study**

The interaction of proximate and indirect determinants has perpetuated the problem of teenage pregnancy in Zimbabwe, despite government's efforts and intervention mechanisms to put an end to it. Generally, teenage pregnancy has been particularly high in certain districts in Zimbabwe. Madondo (2015) asserts that teenage pregnancy rates have been high especially among the Venda people of the Beitbridge District in Zimbabwe, with almost 30% of teenage girls falling pregnant. According to Marisa and Marisa (2018) the Venda people believe that at 13 years of age a teenage girl must be drafted into the initiation rite process, since that is when she begins menstruating which is a sign of entering womanhood. They also state that during the initiation rite process a girl is exposed to sexual rituals which include taking care of her husband, giving birth and taking care of babies. Thus from a very tender age of 13 years, teenage girls from the Venda clan are introduced to the complex dynamics of womanhood. For most of them this is a rite of passage into adulthood as they sooner than later begin engaging in sexual activity, which in some instances result in teenage pregnancy and early child marriages. According to MOHCC (2016) traditional practices like early/forced marriage, traditional cleansing and HIV cleansing have been imposed on 58.4% of teenage pregnancies in Zimbabwe. Thus culture and traditional practices have greatly impacted teenage pregnancy and teenage motherhood.

Despite the well-researched and documented negative consequences of teenage pregnancy on teenagers, their babies, parents, societies and economies at large, there is a dearth of research on the subject in Zimbabwe. Two gaps exist in the literature, which this study will address. The first gap is the limited research on determinants of teenage pregnancy in Zimbabwe. To date only a few studies have addressed the issue. Mukoyi (2015) looks at the teenage pregnancies occurring in Mutare, concluding that most teenage pregnancies in Mutare are as a result of financial constraints and also sexual gratification, Mutanana and Mutara (2015) looks at the determinants of teenage pregnancy in Hurungwe district, identifying the socio-economic background and low education levels as the major causes of pregnancy in teenagers, Furumera

(2016) looks at the determinants of teenage pregnancy in the Chihota rural areas, citing abject poverty and peer pressure as causes of teenage pregnancy, Tapesana (2017) looks at the risk factors associated with teenage pregnancy in Zimbabwe, concluding that the risk factors are multifactorial and must remain targeted at policy, Marisa and Marisa (2018) focuses their study on the Venda people in the South Eastern parts of Zimbabwe, citing that teenage pregnancy increases the number of school dropouts as most teenagers find it difficult to continue attending school once they become pregnant, whilst Nunu et al. (2020) focuses their research on certain districts in Zimbabwe, concluding that teenagers are at the highest risk of contracting HIV/AIDS as they get involved in unprotected sexual activities. The second gap in literature is the lack of research on determinants of teenage pregnancy in Zimbabwe from a national perspective, with findings that can be generalized to the whole population. This study is therefore meant to cover the existing gap and limitation in literature by using data from the Zimbabwe Demographic and Health Survey (ZDHS) so that the correlates of teenage pregnancy in Zimbabwe are fully understood. The ZDHS is a comprehensive national data set and will therefore provide insights and findings that can be generalized to the entire population of Zimbabwe.

Health policy makers will find the results from this study to be very useful as they can adopt them to formulate policies and intervention mechanisms that will curb teenage pregnancy, both unplanned and repeat pregnancies, at the same time facilitating the achievement of desired national fertility rates. Furnishing policy makers with full information regarding determinants of teenage pregnancy also allows them to fully evaluate the success or failure of policies (Paton et al., 2020). Findings from the study could also assist in the formulation of effective sexual and reproductive health programs. Sexual and reproductive health outcomes remain elusive to a lot of young women aged 15-19 years as they are constantly denied the freedom to exercise their right to make safe decisions regarding their sexual and reproductive health, especially considering that the sexual and reproductive health of young women has implications, not only for the young women's health but also for the health of entire nations (Santhya and Jejeebhoy, 2015). Policy targeted at addressing sexual and reproductive health outcomes in young women will also facilitate easy access to standard sexual and reproductive health services, elimination of early childhood marriages, eradication of violence against women, both young and old, participation of critical gatekeepers and also empowerment of young women to have a say in matters that concern their sexual and reproductive health (Santhya and Jejeebhoy, 2015). Zimbabwe's teenage fertility rate stands at 80.36 births per 1000 women aged 15-19 years

which is too high for a country with just over 12 million people as its population (United Populations Division, 2019). Findings from this research could also be potentially useful to African countries with similar demographic profiles who might be facing similar teenage pregnancy challenges.

### **1.3 Aims and objectives**

The overall objective of the study is to shed insights into teenage pregnancy in Zimbabwe. The specific objectives are:

1. To establish the extent of teenage pregnancies in Zimbabwe.
2. To identify the socio-economic and demographic determinants of teenage pregnancy in Zimbabwe.
3. To establish risk factors linked to teenage pregnancies.

The following questions were formulated to address the study's objectives;

1. To what extent does teenage pregnancy occur in Zimbabwe?
2. What are the socio-economic and demographic determinants of teenage pregnancy in Zimbabwe?
3. What are the risk factors linked to teenage pregnancies?

### **1.4 Theoretical Framework**

This study is guided by the theoretical framework on unsafe sexual behaviour proposed by Eaton et al. (2003). The framework proposed by Eaton et al. (2003) is appropriate for this study for two main reasons. Firstly its tenets provide a model for explaining and determining the occurrences of teenage pregnancies. Teenage sexual behavior, especially early onset of sexual activity is complex as it is influenced by hormones, parent's beliefs, chemical changes, friends and parent's income among other factors.

Studies have also shown early onset of sexual activity to be linked with self-esteem, where young men or women with a low self-esteem and poor sexual concept may depend on affirmation from others for them to feel good about themselves (Eaton et al., 2003). Young males and females with a low self-esteem may end up with multiple sexual partners as they

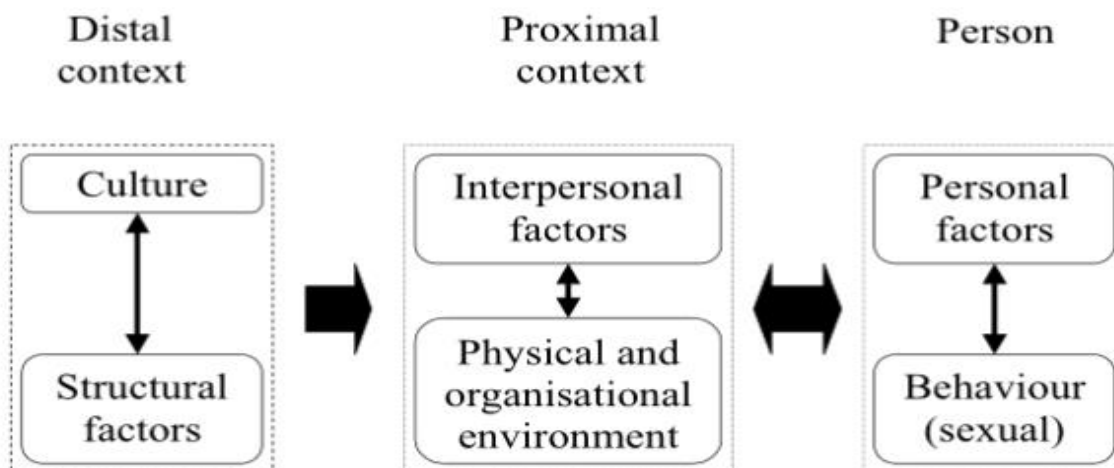
seek for external approval and affirmation. Young people who have low self-esteem experience massive shifts in their identities and feelings of personal worth, making them unbalanced and susceptible to rejection and subsequently negative peer influence (Moyano et al., 2021). Low self-esteem is a key factor regarding teenage pregnancy as it breeds feelings of insecurity, erratic emotional behaviour and feelings of being unwanted and unloved (Mora et al., 2015). On the other end of the spectrum teenagers possessing a high self-esteem mostly display better knowledge of sexual awareness, assertiveness and education which helps to cushion them from engaging in risky sexual activities (Ruiz-Palomino et al., 2017). Teenagers with a low self-esteem are also more concerned about their partners' perception of them and will do whatever they can to ensure that they do not upset them, even to the point of agreeing to engage in unprotected sex (Eaton et al., 2003). Due to their low self-esteem they are more likely to feel that suggesting use of condoms may offend and anger their partners and will thus choose not to bring up the idea and will indulge in unprotected sex (Eaton et al., 2003). In a study conducted in Uganda it was revealed that most young women aged 15-19 years involved in sexual activity were of the perception that the decision to use a condom was solely in the hands of their male partner and their main duty was to be agreeable to whatever the partner's demands are (Maly et al., 2017).

Young people have also been found to have low perception of personal risk. Risk perception involves how people view the possibility of negative circumstances such as hazards, diseases, and injury happening to them (Paek and Hove, 2017). Risk perception is crucial especially in sexual and reproductive health issues as it decides which threat or hazard people respond to and how they handle them (Paek and Hove, 2017). Risk perception has two forms, the cognitive form and the emotional form. The cognitive form deals with the way people are aware of and understand risk whilst emotional risk perception is about how people feel about risk (Paek and Hove, 2017). If young people have low risk perception of adverse sexual and reproductive health outcomes it means that their motivation to engage in safe sexual behavior will be reduced as they deem the threat or risk to their health to be low. They perceive their vulnerability to HIV/AIDS and to unwanted pregnancy to be low which results in them engaging in unprotected sex. Another consequence of low aversion to risk is the denial of the existence of HIV/AIDS by the youth due to the stigma attached to it.

The framework by Eaton et al. (2003) classifies the factors into personal, distal and proximate which enables the unsafe and HIV risk behaviour of teenagers to be fully contextualized and

explored much better than using other social-cognitive models. Secondly the framework is most appropriate for the study because it was developed from a thorough review of studies and research focusing on the dynamics of risky sexual behaviour among youth and the factors that promote it. Shown below in Figure 1 is the framework by Eaton et al. (2003).

**Figure 1: Framework for organizing the relationship between sexual behaviour, personal factors and the proximal and distal contexts.**



Source: Eaton et al. (2003).

The framework has three contexts, namely personal factors, the proximate context and the distal context. These three provide the lens through which the determinants of teenage unsafe sexual behaviour can be fully viewed and established.

Personal factors involve feelings and thought patterns regarding sexual behaviour, which also include feelings about oneself especially self-worth (Eaton et al., 2003). People with low self-esteem are more likely to seek validation from outside and for teenagers this may include having multiple sexual partners, which increases the incidences of teenage pregnancies. Personal factors also include aspects such as knowledge and beliefs, perception of personal risk, self-efficacy, costs and benefits and intentions. Regarding knowledge and beliefs, many youths lack adequate understanding of HIV and its interaction and relationship with AIDS (Eaton et al., 2003). They do not fully understand the transmission mechanisms of HIV/AIDS and its prevention, which puts them at high risk. Youth also seem uncertain about condoms and

their efficacy in protecting against unwanted pregnancy and HIV/AIDS, whilst some are of the misconceptions that the same condom can be used twice (Eaton et al., 2003).

Proximal context refers to interpersonal factors which include discussion about condom use between sexual partners, male-dominated coercive sexual relationships, peer pressure, interaction with adults and the physical and organizational environment. The balance of power in teenage sexual relations is skewed towards the male partner, leaving the female partner without any control regarding the decision to practice safe sex. Introducing condoms into a relationship brings up issues of mistrust which may force the teenage female to abandon the whole idea (Eaton et al., 2003). Youths are of the view that condoms are only for short term sexual relationships which makes it even more difficult for teenage females to introduce condoms in a relationship as this may raise issues of mutual monogamy. This further increases the chance of teenage pregnancies.

Many sexual relationships among the youth are male dominated and coercive which leaves little or no room at all for sexual negotiation. Sexual coercion and bullying are therefore rife in many youths' sexual relationships with few cases of sexual violence if any at all being reported. Since sexual activity in these relationships is controlled by males in they do not hesitate to use physical violence whenever they feel their sexual demands have not been met. Fear of rejection or violence causes the teenage females to give in to their male partner's demands of having unprotected sex even when the HIV/AIDS status of the male partner is unknown (Eaton et al., 2003).

Peer pressure is another factor that influences teenage pregnancies among the youth. Teenage males face pressure from friends to prove how manly they are and this may involve having many female partners which increases incidences of pregnancy and the risk of HIV/AIDS. Teenage females on the other hand have to deal with peer pressure from friends who are sexually experienced who may encourage them to have multiple sexual relationships before they can become part of their social groups.

Most youths report a lack of interaction with their parents. Lack of communication between teenagers and parents especially regarding sexual matters results in the teenagers having to learn on their own through trial and error, which results in an increased number of teenage pregnancies. The interaction of teenagers with health staff at public health facilities such as



clinics and hospitals has also not been as helpful as it should be. Teenagers report that the health officials are not helpful at all and most of the times they are rude towards them for asking for contraceptives when they are so young (Eaton et al., 2003). The lack of confidentiality among public health officials results in teenagers not visiting the public health facilities at all to access free contraceptives and HIV/AIDS counselling, which further increases their exposure to pregnancy and HIV/AIDS.

Poor access to the media for many teenagers especially those in the rural areas means that they have little knowledge regarding contraceptives and the risk involved in engaging in unprotected sex. Teenagers who have access to the media have displayed better knowledge regarding HIV/AIDS and contraceptives and have been able to make decisions that have reduced their risk of contracting STI's and unwanted pregnancy (Eaton et al., 2003). Lack of hobbies and recreational activities have resulted in some teenagers resorting to sexual intercourse which has further increased cases of teenage pregnancies.

Distal context involves cultural and structural factors that influence unsafe sexual behaviour (Eaton et al., 2003). Cultural factors are marked by how patriarchal our society is, where it is believed that a male partner has a right to demand sex from the female partner in a romantic relationship whenever he desire it. Cultural and social norms also allow males to forego monogamy since the African culture permits polygamy. Teenage males have therefore used this as motivation to have multiple sexual partners, thereby putting themselves and their partners at risk from HIV/AIDS and unintended pregnancy. Mostly teenagers also believe sexual desire and impulse as something that cannot be controlled but is necessary for them to stay healthy. Social norms have also dictated certain beliefs regarding sexual behavior namely that a male who beats up their female partner does so because of love. (Eaton et al., 2003) This has caused teenage males to exercise sexual domination over their female partners through violence all in the name of love.

Structural factors include poverty and whether one is from the urban or rural areas. Poverty may lead to sex commodification with teenagers engaging in unsafe sexual behaviour to fulfil their economic needs, thereby increasing the chances of having unwanted pregnancies. For teenage females having a male sexual partner sometimes acts as a source of money, gifts and status which might be lacking from parents. Social status therefore plays a greater role in teenage sexual behavior and subsequently in teenage pregnancy.

## **1.5 Organization of the study**

The study consists of five chapters whose sole intent is to explore the determinants of teenage pregnancies in Zimbabwe using evidence from the ZDHS. The first presents the introduction and background to the study on teenage pregnancy in Zimbabwe. It reviews global, regional and national teenage pregnancy trends in Zimbabwe. It also presents the aims and objectives of the study, the research problem under study, rationale of the study and the theoretical framework guiding the study, at the same time defining the tone and structure of successive chapters. Chapter two critically reviews extant literature on teenage pregnancy. It explores the socio-economic and demographic factors that act as predictors and determinants of teenage pregnancy whilst identifying gaps in the literature for future research. Chapter three explores the research design and methodology adopted in the study, whilst proving outlining the empirical stages taken to tackle research questions. The study's validity and anticipated problems and limitations are also addressed in this chapter. Chapter four then presents findings of the study on the determinants of teenage pregnancies in Zimbabwe. Lastly, the final chapter is an in-depth discussion and analysis of the study's findings at the same addressing the research questions. Lastly the chapter gives a conclusion and suggests areas of future research.

## **Chapter Two: Literature Review**

### **2.1 Introduction**

The occurrence of teenage pregnancy has continued to rise worldwide and there is a need for robust and effective policies to address unwanted pregnancy among young women. Teenage pregnancy is a threat not only to the lives and future of teenagers but also to the economies of nations. Understanding the possible factors that influence teenage pregnancy is therefore imperative as it will enable policymakers to regulate teenage fertility rates to desirable levels. Extant literature that focuses on teenage pregnancy determinants is reviewed in this chapter with the sole objective of providing a framework and context through which the different factors can be explored and understood. The chapter will look at teenager's knowledge, attitudes, and behaviours in relation to the factors that cause teenage pregnancy.

### **2.2 Factors that contribute to teenage pregnancy**

#### **2.2.1 Knowledge of contraceptives**

Lack of access to information regarding contraceptives, their use and sexual health has also been noted to be a major determinant of teenage pregnancy (Sychareun et al., 2018). Young women face obstacles and difficulties in seeking sexual and reproductive health information due to a lack of anonymity, confidentiality, and a judgement free atmosphere at the health care facilities (Svanemyr et al., 2015). According to Onwubuariri and Kasso (2019) contraception and reproductive information are inaccessible in many underdeveloped nations due to lack of resources, and this condition may be aggravated by religious views that oppose artificial birth control methods. Alabi and Oluwafemi (2017) submit that most teenage pregnancy victims lacked information or were likely undereducated on safe-sex practices by their parents, schools, or governmental agencies, which could have prepared them to deal with peers who lured them into engaging in sex too soon. Hampton and Mazza (2015) also argue that unintentional or unintended pregnancy in marriage, as well as unsafe abortion among unmarried teens, are all consequences of a lack of information about contraceptives. According to Kyilleh et al. (2018)

most teenagers, particularly those who were not in school, relied heavily on their friends for reproductive health knowledge.

In some sections of Ghana, Kyilleh et al. (2018) discovered that both in-school and out-of-school teenagers lacked full understanding of reproductive health issues and choices. They were vulnerable to dangerous reproductive health behaviour and improper choices due to their lack of awareness. Some of these decisions jeopardize their reproductive health and future. A poor decision, for example, can result in an unintended pregnancy or a sexually transmitted infection (STI) infection. Early commencement of coital relations and undesired pregnancies are also linked to a lack of knowledge regarding contraceptives (Kyilleh et al., 2018). Unintended pregnancies have a wide range of consequences, some of which can last a lifetime. Most out-of-school teenagers rely on their in-school friends and the media for reproductive health information, and these sources make them vulnerable to misinformation (Kyilleh et al., 2018). In such situations, teenagers make decisions based on inaccurate information, which have a detrimental impact on their sexual and reproductive health. To make matters worse is the fact that most parents, who should be the best source of information, are prevented from discussing reproductive health issues with their children by the socio-cultural hurdles. In the African society, talking about sex is frowned upon by both traditional and religious adherents, making it difficult, if not impossible, for teenagers to obtain information regarding sex and contraceptives from their parents or older family members (Kyilleh et al., 2018).

### **2.2.2 Knowledge of ovulatory cycle**

Maemeko et al. (2018) interviewed a sample of students and also found that a lack of knowledge awareness about sexuality and reproductive education among teenagers is a predictor of teenage pregnancy. Teenagers who are uninformed about sexual matters are more likely to become pregnant unintentionally (Alabi and Oluwafemi, 2017). Thus knowledge of the ovulatory cycle through sex education lowers young women's chances of experiencing teenage pregnancy (Geda, 2019). For example, studies conducted in Malawi and Ghana found that women who were aware of their ovulatory cycle were 75% more likely to use contraceptives than their counterparts who were unaware of their ovulatory cycle (Geda, 2019). Similar findings were obtained by Sama et al. (2017) regarding the impact of knowledge of contraceptives pertaining to teenage pregnancy. Mohr et al. (2019) also supported increasing

knowledge of the ovulatory cycle among female teenagers as an important measure of curbing teenage pregnancy by citing that it increases contraception use and allows girls to understand sex and reproduction education resources. The ability to understand the associated hazards of sexual behaviour and make decisions about early pregnancy improves with knowledge of the ovulatory cycle (Mezmur et al., 2021). The prevalence ratio of teenage pregnancy was found to be 1.3 times greater among teenagers who did not know the fertile time throughout their ovulatory cycle compared to teenagers who knew the fertile time (Mezmur et al., 2021).

According to Kar et al. (2015) unprotected sexual intercourse, unplanned pregnancy and STIs, are all common outcomes of a lack of comprehensive sex education, especially knowledge of the ovulatory cycle. In Uganda, Tanzania and Kenya, Neal et al. (2015) found that young women with little or no knowledge regarding their ovulatory cycle, especially those under the age of 16 years, had the highest rates of teenage pregnancy. Knowledge of the ovulatory cycle involves awareness about the possibility of conception at the time of menstruation (Hampton and Mazza, 2015), and being fully aware of the potential risks involved, and choices to make regarding early pregnancy. Thus when young women lack the knowledge regarding their ovulatory cycle they are vulnerable to the risk of teenage pregnancy.

A study by Iyanda et al. (2020) found that in SSA teenage pregnancy was significantly associated with teenage pregnancy. Their study established that knowledge of the ovulatory cycle was absent in most of the young women who became pregnant. Their study established that the risk of unplanned pregnancy increased when the young women lacked knowledge of the ovulatory cycle and they were married.

### **2.2.3 Lack of education**

The socio-demographic, familial, cultural, and reproductive behaviour elements that contribute to teenage pregnancy are numerous and complicated (Kar et al., 2015). At the knowledge, one of the factors that impact teenage pregnancy is lack of education. Teenagers frequently lack the knowledge necessary to make educated and responsible decisions about whether or not to engage in potentially life-altering sexual behaviour (Alabi and Oluwafemi, 2017). According to Mezmur et al. (2021) not being in school and a lack of formal education are some of the major causes of pregnancy among teenagers. When compared to teenagers without a formal

education, Wado et al. (2019) found that having a secondary or higher education lowered the likelihood of teenage pregnancy by 67% in Kenya, 65% in Tanzania, 63% in Malawi, 68% in Uganda, and 65% in Zambia. Education has been shown to protect against unwanted and early pregnancies in both developing and developed countries (Girma and Paton, 2015; Koppensteiner and Matheson, 2016; Yakubu and Salisu; 2018). When youth acquire better access to education, their chances of avoiding early motherhood improve dramatically due to enhanced information which enables them to prevent unwanted pregnancies, delay sexual relations, and marriage (Wado et al., 2019).

Research has established that the lack of formal education provides the backdrop for countries with high early pregnancy rates, contrary to what is seen in most wealthy countries such as the US and UK (Monteiro et al., 2019). Additionally, in a multilevel analysis study by Rojas et al. (2016), which draws on data from Nicaragua's 2011/2012 Demographic and Health Survey to identify risks associated with a teenager's sexual encounter, revealed that education was one of the key factors influencing teenage pregnancy, with girls with higher educational attainment delaying their first sexual encounter and birth. Similarly, Exavery et al. (2016) used longitudinal data from Tanzania's Rufiji Health and Demographic Surveillance System to explore distinct trends and factors associated with teenage pregnancy in a multilevel analysis research. They discovered that when a young woman's education level rises, her chances of falling pregnant drop. They also discovered that after young women completed secondary school, their birth rate plummeted by 83%. Education was found to be significantly associated with adolescent pregnancy in their study, indicating that education can help prevent teenage pregnancy. In order to assess adolescent pregnancy factors in low- and lower-middle-income countries, Pradhan et al. (2015) conducted a comprehensive literature review. They discovered that having little or no education was a risk factor for teenage pregnancy; the risk of pregnancy was more than doubled for young women with little or no education, while those with more education had a decreased risk of becoming pregnant, and were also better educated about safe sexuality and contraception. Also, in a study conducted in Ethiopia, young women with primary education had much higher pregnancy exposure than those with secondary education (Geda, 2019; Guo et al., 2019). This is because young women with a good education are five times less likely to get pregnant, have fewer child marriages, and have healthier future pregnancies compared to those who do not have education (Indongo, 2020).

In their study, Mohr et al. (2019) established that even after controlling for other characteristics, whether a teenager was currently enrolled in school was the best predictor of teenage pregnancy, and teenage pregnancy was lower among teenagers who had completed secondary school than among those who had completed less than secondary school. They also opined that a young woman's degree of education is linked to the age at which she becomes pregnant, and being enrolled in school postponed childbearing. Meaning that the longer a young woman stays in school, the higher her education level and the lower her risk of teenage pregnancy. Teenagers with little or no education are unsure how to avoid becoming pregnant, are unable to obtain contraceptives even when they are readily available, and when they are sexually active, are less likely to utilize contraceptives (Ghose et al., 2017). Thus having an education protects young women from unplanned pregnancy by empowering them with sexual and reproductive health knowledge which enables them to make informed decisions regarding their bodies. One argument for the link between low education and teenage motherhood is that women with less education may have less access to information and health services, as well as information on contraceptives (Faisal Cury et al., 2017). These findings demonstrate how important it is to provide early education and to keep young women in school to reduce their likelihood of becoming teenage mothers, and subsequently to improve their quality of life.

Schools are an important entity with regards to eradicating teenage pregnancy because interventions in the school system during primary and secondary school allow for sex education to take place before puberty and before the age when many girls opt out of school (Mohr et al., 2019). Students spend a significant amount of time in school with trusted teachers in a structured and supportive learning environment, where sexual and reproductive health programming is easily integrated into existing curriculum structures, and schools also serve as social centres trusted by the entire community, allowing them to build bridges between families and health centres (Mohr et al., 2019).

Similar results were also found by Sungwe (2015) in their study which focused on determinants of teenage pregnancy in Lusaka, Zambia. Beyene et al. (2015) also found similar results. It is interesting to note that there are studies which found no association between teenage pregnancy and education. In their study, Envuladu et al. (2014) found no association between teenage pregnancy and education.

#### **2.2.4 Age at first sex**

According to Wado et al. (2019) one of the risk factors for teenage pregnancy and early motherhood is an early age at first sex. Early age at first sex, defined as having had one or more sexual encounters before the age of 14 years, extends the period during which an adolescent girl is at risk of becoming pregnant, and is primarily influenced by personal, familial, environmental, and social factors (Bingenheimer et al., 2015). Birhanu et al. (2019) submitted that early sexual initiation increases the likelihood of early pregnancy, according to research conducted in Cameroon, South Africa, and Nicaragua. They further argued that beginning sexual activity at or before the age of 14 years is linked to a lack of contraception use and higher incidence of HIV and STIs.

A similar study conducted in Nigeria discovered that teenage pregnancy was more common among teenage girls who were older at first sex than those who were younger at first sex (Ayuba and Ibukun, 2012). Other studies produce contradictory results, claiming that the risk of teenage pregnancy is higher for teenage females with a younger age at first sex (Nyakubenga, 2010; Thobejane, 2015). They argue that having sexual intercourse at a younger age increases the likelihood of engaging in risky behavior, which increases the likelihood of becoming pregnant. Nonetheless, these findings also contrast with those of a study by Indongo (2020), which discovered that while the average age at first sex is 15 years and below, the majority of teenage pregnancies in Namibia occur at 17 years of age.

Early sexual initiation can also lead to increased levels of sexual risk-taking, such as having several partners and not utilizing contraception, as well as early pregnancy. Early marriage can also determine a young girl's sexual debut, putting the latter on the causal pathway between teenage pregnancy and educational attainment (Bengesai et al., 2021). Most young women are initiated into sexual activity at the age of 15 years and their parents are favourably disposed towards teenage pregnancy (Sychareun et al., 2018). Thus teenage pregnancy in Africa is also caused by young women's incapacity to negotiate a safer and delayed sexual debut (Ayele et al., 2018). The role of male dominance in African societies has an impact on attitudes toward healthy sexual activities, and the ability of young women to negotiate safe sexual behaviours is highly influenced by their relational power (Franjic, 2018; Skosana et al., 2020). Inequalities in power between men and women in Africa leave women at the mercy of men, as young women's decision-making power, particularly their ability to negotiate safe sex, is hampered



by gender inequity. According to a household survey by Nash et al. (2019) 38 % of Malawian girls aged 12 to 19 indicated that their first sexual experience was forced or pressured (Nash et al., 2019).

### **2.2.5 Place of residence**

Place of residence has been found to be a determinant of teenage pregnancy. Asare et al. (2019) found that teenagers who live in cities have a lower risk of early pregnancy than those who live in rural areas. In many parts of SSA, the results are also very similar and this is largely due to the fact that most SSA regions are dominated by impoverished people with cultural that encourage early marriages (Odimegwu and Mkwanaenzi, 2015). According to UNFPA (2020) teenage pregnancy disproportionately affects young women who are already marginalized. In Zimbabwe, there are substantial differences between rural and urban locations, as well as among provinces, in the distribution of teenage pregnancy in Zimbabwe. In rural areas, teenage pregnancy is over three times higher than in urban areas (27 versus 10%, respectively) (ZDHS, 2015). Provincially, teenage pregnancy is most common in Mashonaland Central and Matabeleland South (31% and 30%, respectively) and least common in Harare (10%) (UNFPA, 2015). Poor socio-economic circumstances in rural places play a role in the negative health consequences. Teenagers in remote areas have limited access to contraception information and services that are appropriate and sufficient for their sexual and reproductive health requirements (Obasohan, 2015).

Teenagers from urban regions have better understanding of safe sex than those from rural areas, who are misinformed, do not know much about safe sex, and those who do know do not know how it works due to existing superstitious ideas about contraceptives and therefore do not use them (Odii et al., 2020). As a result, young women in rural areas are more likely than those in urban areas to engage in unprotected premarital intercourse and become pregnant. Furthermore, a study by Kassa et al. (2018) involving pooled meta-analysis revealed that teenagers (15–19 years) living in the lowest 20% of rural households have additional vulnerability compared to their urban counterparts. They also established that apart early pregnancy, teenagers in rural were more likely childbearing earlier than their urban counterparts. A possible explanation for this could be lack of education opportunities and being trapped in poverty (Ochen et al., 2019). Furthermore, rural young women have twice as many

births as urban young women (Chintsanya et al., 2021). These results are complemented by a study by Kalisa (2021) in Rwanda, which found teenage pregnancy to be high among teenage girls from the rural and marginalized areas, where access to basic health care and contraception services was limited. Their study also revealed that teenage girls from the Eastern provinces of Rwanda were more vulnerable to the risk of early pregnancies compared to those from other provinces. It is interesting to note that a study by Ochen et al. (2019) found no significant association between place of residence and teenage pregnancy.

### **2.2.6 Alcohol abuse**

According to Maemeko et al. (2018) alcohol is a major determinant of teenage pregnancy, due to the fact that when teenagers are under its influence, they make poor decisions (Maemeko et al., 2018). This is supported by a study by Chimatiro et al. (2020) in Malawi where it was found that substance addiction, particularly alcohol drinking and marijuana smoking (chamba), were among the leading factors contributing to the high rates of pregnancy among teenagers in their communities (Chimatiro et al., 2020). Furthermore Guo et al. (2019) showed in their study that alcohol consumption is linked to unprotected intercourse, teenage pregnancies and abortion, particularly among teenagers who are still gaining the knowledge and abilities to regulate their sexual behaviour in appropriate ways (Guo et al., 2019). Muche et al. (2017) found that alcohol abusers were more likely to participate in risky sexual behaviour, which was consistent with findings from the World Health Organization (WHO) and the United Nations Programme on HIV/AIDS (UNAIDS) research in eight countries and a meta-analysis in Latin America. This could be because alcohol impairs decision-making, which can lead to unsafe sexual behaviour and, as a result, teenage pregnancy.

A study by Rizkianti et al. (2020) further confirmed that substance usage (tobacco, narcotics, and alcohol) is linked to an increased likelihood of sexual intercourse (2020). Previous Demographic and Health Surveys (DHS) research in the Pacific Islands, Brunei Darussalam, and Namibia (Seidu et al., 2019) found similar results. The majority of youths who reported early sexual behaviour said they had used alcohol before having sexual intercourse (Ritchwood et al., 2015). Alcohol has been shown to boost the desire for sex, as well as the ability to initiate or participate in sex (Ritchwood et al., 2015). Juárez-Portilla et al. (2018) also found that using alcohol increases cognitive inhibition as well as bad decision-making. In a similar study

Rizkianti et al. (2020) found that alcohol, among other substances, such as opium, can induce high emotions of pleasure, which may stimulate sexual desire and pleasure directly. Teenagers who start consuming alcohol at a younger age have been found to be more likely to engage in unprotected sex, which further increases their chances of experiencing teenage pregnancy (Furlanetto et al., 2019). A study by Summers et al (2017) found a positive association between alcohol abuse and teenage pregnancy. It is interesting to note that a study by Ochen et al. (2019) revealed contradicting findings. Their results found no association between teenage pregnancy and alcohol abuse, regardless of the fact that higher cases were observed in those who consumed alcohol more compared to those who did not.

### **2.2.7 Multiple sexual partners**

Having multiple sexual partners has been identified as a predictor of teenage pregnancy. Teenagers who have several sexual partners have been found to have a higher rate of pregnancy (Ochen et al., 2019). This view is supported by Shayo and Kalomo (2019) whose study revealed that multiple sexual partners' relational practices form a network that contributes to teenage pregnancy. According to a study by Kyilleh et al. (2018), having multiple sexual partners is a widespread behaviour among teenagers in Ghanaian communities, and it is largely accepted. Their findings also highlighted that both young men and women regarded having several sexual partners as a source of pride. This was done among teenagers to comply to peer norms and to demonstrate that they have what it takes to be a woman or man. Young men were thus having multiple sexual partners as a way of demonstrating their masculine status (Krug et al., 2018). It was also shown that whereas the majority of teenage males dated multiple sexual partners of the same age, the majority of their female counterparts dated multiple sexual partners who were older than them, which further increased the prevalence of teenage pregnancy (Kassa et al., 2018).

### **2.2.8 Sexual abuse**

Sexual abuse is common, especially among young women where approximately 20% are victims worldwide (Franjic, 2018). According to UNICEF (2017) many young women who are sexually abused are less likely to have the option or choice to take contraceptives, which leads to undesired pregnancy. According to the data, young women are most vulnerable to sexual

abuse in close connections such as those with family, friends, and intimate partners in many countries. Young women who had been subjected to at least one report of abuse had a 66% higher chance of being in the early pregnancy group (Indongo, 2020). Rape has been found to be responsible for approximately 5 % of all teenage pregnancies and births, and according to studies, between 11% and 20% of teenage pregnancies are the result of rape, and over 60% of teenage mothers had unwanted sexual experiences prior to their pregnancy (Alabi and Oluwafemi, 2017). Also 20 % of teenage fathers admitted to coercing their female partners into having sex with them (Alabi and Oluwafemi, 2017). Also young women who were exposed to sexual abuse as children are also more likely to become pregnant as teenagers, and the chance of being pregnant as a teenager rises as the number of bad childhood experiences rises (Alabi and Oluwafemi, 2017). These results are complemented by a similar study by Ochen et al. (2019), which observed that teenage pregnancy cases were higher among young women who had experienced sexual abuse and had no bargaining power to negotiate safe sex with their partners.

The effect of sexual abuse is that it mostly results in contraception being abandoned, cases of sexual abuse not being reported and addressed, and ultimately teenage pregnancy (Ajayi and Ezebe, 2020). Perpetrators of sexual abuse, especially rape and sexual coercion rarely use condoms, which exposes the young women to teenage pregnancy (Ajayi et al., 2017). Furthermore cases of teenage pregnancy are increased by the fact in most instances cases of sexual abuse and violence are not reported, and teenagers do not know how to deal with the situations they find themselves in after the abuse (Ajayi and Ezebe, 2020). The challenge of not reporting cases of sexual abuse is that the victim will miss out on any chance of receiving help that they need with their situation.

A study by McNiss et al. (2021) found that teenage girls who were sexually abused when they were young had higher odds of falling pregnant. They also established that risky sexual behaviour was also high among teenagers who were sexually abused in their childhood. This behaviour eventually results in cases of teenage pregnancy.

### **2.2.9 Marital status**

Marital status has also been identified as a variable that influences teenage pregnancy. A study by Maswikwa et al. (2015) revealed that teenage pregnancy was five times more likely to occur among young women age 15-19 years who were married compared to those who were not. Pregnancy and childbirth are planned and desired for some teenagers, but in particular situations, young women may suffer social pressure to marry early and once married, to have children (Franjic, 2018). Many children cannot give or withdraw consent thus, early marriages can lead to sexual abuse and teenage pregnancy, and the consequences are dangerous for young women (World Vision, 2019).

Early marriage is any official or informal marital union between a child under the age of 18 and an adult or another child, and is frequently the outcome of established gender inequity, affecting young women disproportionately with a prevalence rate of one-sixth as common among young men as it is among young women over the world (UNICEF, 2021). According to UNICEF (2021) between 2014 and 2020 approximately 5% of young women were married by the age of 15 years and 34 % by the age of 18 years, and in Sub-Sahara Africa 11% were married by the age of 15 years and 34% by the age of 18. The large age gap between the girl and her husband, where the male is frequently much older than his wife, is a prevalent feature of early marriages. As a result, the young woman is more prone to lose power, which can lead to an increase in unintended pregnancies (Kurebwa and Kurebwa, 2018).

Other studies (Gideon, 2013; Ayele et al., 2018) found that when young women aged 15-19 years are married, the rate of teenage pregnancy is high. One of the disadvantages of early marriage for teenage girls is that it disrupts their education, which has a negative impact on their future employment and financial prospects. According to some studies (Yakubu and Salisu, 2018), young women who marry early miss out on opportunities to improve their lives, trapping them in a poverty cycle (Phillips and Mbizvo, 2016). Sexual abuse, violence, and gender inequity in marital unions are also factors that influence teen pregnancy, as young women are often left with no power to negotiate abstinence or contraception (Indongo, 2020).

Several communities in rural African communities are of the view and belief that early marriage holds a lot of economic value as it adds more labour for the family's fields and livestock (Sychaerun et al., 2018). Early marriage and conventional gender roles are key

determinants in the rate of teenage pregnancy in various civilizations, and early pregnancy, for example, is generally regarded as a blessing in some Sub-Saharan African cultures since it indicates a young woman's fertility (Alabi and Oluwafemi, 2017). Early marriage reflects social practices that promote discrimination against girls and is a symptom of gender imbalance in society (Kurebwa and Kurebwa, 2018). Thus the practice of early marriages is also supported by gender norms and stereotypes, as well as the socio-economic danger of pregnancy outside of marriage (UNICEF, 2021).

Research findings reveal that married teenagers have a higher chance of becoming early mothers, with teenagers in marital unions five times more likely to become pregnant compared to teenagers not in marital unions (Indongo, 2020). Child brides are more likely to become pregnant during their teenage years, when the risk of difficulties during pregnancy and childbirth – for both themselves and their children is higher (UNICEF, 2021). This practice can also alienate young women from their families and friends, as well as keep them from engaging in their communities, putting a strain on their physical and mental health (UNICEF, 2021).

Despite national and international efforts to discourage early marriages, the practice continues in some countries in SSA (Yaya et al., 2019). Poverty, the belief that marriage will provide 'protection,' family honour, social norms, customary or religious laws that condone the practice, an inadequate legislative framework, and the state of a country's civil registration system are all factors that put a young girl at the risk of early marriage. While the practice is more common among young women than men, it is a violation of rights regardless of gender (UNICEF, 2021).

Young women in early marriages are exposed to frequent and unprotected sexual activity during early marriage, which commonly lead to an early and dangerous first delivery (Mezmur et al., 2021). In many African communities, young women are pressured to marry and carry children as soon as they reach mernache, making it impossible for them to resist sex (Ghose et al., 2017). Due to the high assumption that fertility is proven by conceiving within a year of marriage, a study by Mezmur et al. (2021) identified early marriages as a high risk for teenage pregnancy.

Teenage pregnancy has also been connected to child marriages in Zimbabwe, with religion playing a key part (Bengesai et al., 2021). While girl child marriages are not unique to any religious group, Chamisa et al. (2019) indicate that they are more common among adherents

of the apostolic religion, particularly the Johane Marange and Johane Masowe groupings. These religious groups exploit young women through their religious doctrines and practices, with young women frequently being compelled to marry older men under the guise that church leaders have been guided by the 'holy spirit' (Hallfors et al., 2016). Those who do not follow these 'prophecies' are threatened and cursed, causing them to do things they do not want to do (Bengesai et al., 2021). It is interesting to note that a study by Ochen et al. (2019) identified marital status as one of the variables mostly associated with teenage pregnancy. They posited that in comparison to all other predictors of teenage pregnancy, marital status was strongly associated with teenage and it acted as a modifier for all the predictors, where it served to strengthen their effect.

### **2.2.10 Religion**

Religious beliefs are some of the determinants of teenage pregnancy as religious leaders have been mentioned as having a significant role to play in the problem of teenage pregnancy. These leaders have a lot of power in their communities and play a big part in maintaining social and gender standards since their acceptance or disapproval carries a lot of weight (Castillejo et al., 2021). Religious leaders often tell the community that it is unethical to talk to young women about sex, according to the Concern root cause study (Newbury, 2020). Meanwhile, according to research conducted by Save the Children's youth participants, Islamic religious leaders emphasize the importance of marrying girls young in order to avoid pregnancy outside of marriage, whereas Christian religious authorities tell community members that it is against God's will for girls to use contraception (Castillejo et al., 2021). Thus religion may dictate what should be taught to teenagers about sexuality and the prevention of teenage pregnancy, with a concentration on abstinence before marriage and the exclusion of contraception education (Pot, 2019). This may lead to teenagers using contraception incorrectly and inconsistently, resulting in unwanted pregnancies.

The effect of religion on teenage pregnancy has been found to be mixed in various studies. Whilst some studies have found a negative association between religion and teenage pregnancy, others have found a positive relationship. Teenage pregnancy was found to be significantly associated with being a Muslim, even the odds of childbearing were reduced

(Maswika et al., 2015). Another study by Neal et al. (2015) found a positive association between teenage pregnancy, childbearing and being a Muslim.

In Malawi, initiation rites have been noted as traditional religious practice that exposes teenagers to pregnancy as they involve practices that stimulate sexual desire among teenagers (Chimatiro et al., 2020). As a result of the cultural behaviours that heighten their desire for sex, young men and women engage in sexual intercourse because they believe they are now fully developed and can sleep with anyone, regardless of their age (Chimatiro et al., 2020). Masosoto (pulling of labium minora to grow using an aphrodisiac natural herb oil made from Nsatsi) was mentioned by the majority of traditional religious leaders in Malawi, particularly women, as one of the practices that provoke early sexual intercourse among young women (Chimatiro et al., 2020).

#### **2.2.11 Gender-based violence (GBV)**

Gender-based violence (GBV) alludes to sexual or physical abuse of people who have been confined to a lower social standing or power due to their gender or gender roles (McCloskey, 2016). GBV has long been known to have a negative impact on women's sexual health outcomes. GBV rates among young women aged 15-19 years were found to be higher than 20% in seven African countries, including Zimbabwe, according to surveys (WHO, 2020). According to Chacham et al. (2016), GBV can lead to teenage pregnancy and adverse reproductive health outcomes. Non-use of contraception, underreporting of sexual assault, and a lack of needed care to address the possible repercussions of GBV, including teenage pregnancy, are all pathways through which GBV can lead to teenage pregnancy among young women (Ajayi and Ezegebe, 2020).

Young women aged 15-19 years who are GBV victims are also less likely to use condoms, and have low negotiating power in sexual relationships (Ajayi et al., 2017). As a result, the probability of an unwanted pregnancy is considerably high. Furthermore, because victims of GBV seldom come forward, the danger of an unplanned pregnancy is significant, as young people are rarely taught how to avoid pregnancy after being subjected to GBV (Ajayi and Ezegebe, 2020). Also when victims of GBV do not report incidents they may not receive the assistance they require (Ajayi and Ezegebe, 2020). This suggests that most GBV incidences



among young women aged 15-19 years are not reported, which further increases the female teenagers risk of experiencing unplanned pregnancies. Furthermore, it is generally known that most perpetrators of GBV are close relationships, friends or partners of the victims, making the occurrences more often and the consequences more severe (Krebs et al., 2016).

### **2.2.12 Socio-economic status (SES)**

Teenage pregnancies are a global issue that affects countries of all income levels, and they are more common in marginalized populations around the world, owing to poverty, a lack of education, and a lack of economic possibilities (Franjic, 2018). According to research, low SES appears to be one of the leading causes of teenage pregnancy. Low SES, which leads to transactional sex, a lack of access to sexual and reproductive health care, and an increase in sexual violence, has been connected to the major increase in teenage pregnancy in Africa (Human Rights Watch, 2021). Women who were born in households with low SES had a history of poverty in later childhood and were found to be more than 40% more likely to have an early pregnancy (Indongo, 2020). (National Aids Convention of South Africa, 2018) reveals that the locations in South Africa with the highest teenage pregnancy rates are also the ones with the lowest SES. Thus SES has been proven to be one of the determinants of teenage pregnancy (Zhang et al., 2020).

The prevalence of low SES in the community, and periods of family economic maintenance during childhood have all been linked to an elevated risk of later early pregnancy (Indongo, 2020). Young women from households with low SES see little need to put off having children because they have less to lose by having a baby early than their more privileged peers (Sawhill and Guyot, 2019). Also, when compared to individuals with the lowest monthly income, young women with high monthly income have been found to have the lowest probability of becoming pregnant during teenage years, compared to those who are economically challenged (Ayele et al., 2018; Nkhoma et al., 2020).

Low SES, particularly in low- and lower-middle-income nations, is a serious problem that has a cyclical and compounding effect on the rate of teenage pregnancy (Mohr et al., 2019). According to the World Bank (2019), the majority of the world's impoverished are under-18-year-old rural young women who lack opportunity and rely on agricultural labour. Low SES

restricts one's freedom, options, and resources while also fostering powerlessness, marginalization, and vulnerability (Mohr et al., 2019). Such flaws can exacerbate the situations that lead to teenage pregnancy. Low SES has also been found to lead to early marriage and school dropouts among teenagers (Mohr et al., 2019).

The integration of having a low SES and living in an uneven and less mobile society contributes to a low expectation of success, leading to decisions that favour short term satisfaction, such as early pregnancy and having a child when one is young (Narita and Diaz, 2016). In a study conducted in Tambien District, Northern Ethiopia, family income was found to be predictive of teenage pregnancy, with results revealing that young women from families with the highest monthly income had the lowest probability of being pregnant in their teenage years compared to those from families with the lowest monthly income level (Ayele et al., 2018). Only teenagers from the households with high SES are much less likely to be pregnant, supporting findings from a lot of research that SES is a contributing factor to teenage pregnancy and child bearing (Indongo, 2020). Poverty in the home and in the community both raise the likelihood of teenage pregnancy, due to its linkage to lower levels of education, lesser access to contraception, fewer opportunities for protective activities (sport, curricular activities, interests, hobbies), and higher levels of social ills, among other factors (Mkwanzani, 2015).

Evidence also suggests that differences in teenage birth rates between countries are linked to the level of national wealth, the pace of economic development, and the magnitude of income inequality within countries (Sedgh et al., 2015). In their study Wado et al. (2019) found that SES was one of the primary characteristics related with teenage pregnancy in Kenya, Malawi, Uganda, Tanzania, and Zambia. The paucity of policies and programs that prioritize the most marginalized groups and address inequality in access to sexual and reproductive health services and information for teenagers is reflected in the consistency of this socio-economic pattern across all countries. Low socio-economic position is one of the predisposing factors consistently associated with teenage pregnancy, according to systematic assessments of the causes of teenage pregnancy in Sub-Saharan Africa and European countries (Yakubu and Salisu, 2018).

Low SES has also been identified as a driver of teenage pregnancy due to its role as an underlying motivator for girls who engage in transactional sex. Without other options, girls are encouraged to engage in sexual activity in order to escape poverty (Denney et al., 2016). This

could also explain why, as has been widely suggested (UNFPA, 2015), teenage pregnancy rates increased during the Ebola epidemic, as deprivation was more acute during that period due to limitations on travel, companies, and markets. During the Ebola epidemic, teenage pregnancy increased in all of the areas visited during the investigation (Denney et al., 2016). This finding is consistent with other studies that show women and girls participate in transactional sex "in the face of relocation, weak social structures, low SES, and limited livelihood prospects," which are frequently connected with humanitarian crises (Formson and Hilhorst, 2016). A study of the Maasai young women in Kenya by Olenja et al. (2020) also revealed interesting findings regarding the effect of SES on teenage pregnancy. They found that parents of most Maasai teenage girls encouraged them to enter into relationships with wealthy older men so that they could reap some material benefits to help with their low SES.

In a study conducted in Rwanda by Uwizeye et al. (2020) the number of bedrooms in a home were found to have an inverse relationship with teenage pregnancy. When the number of bedrooms increased, the incidence of teenage pregnancy cases decreased. Researchers discovered negative effects on the behaviour of children reared in small and congested dwellings (Foye, 2017). A study by Muche et al. (2017) found that young boys and girls may be exposed to their parents' sexual behaviours prematurely in a tiny domestic milieu, which later induces their sexual curiosity and behaviour. They also found that teenage pregnancy was 66% common in households with 1 to 2 bedrooms, nearly 30% common in households with 3 to 4 bedrooms, and just 4% common in households with 5 bedrooms. Furthermore, their findings revealed that the number of teenage pregnancies fluctuates as the SES index rises. The percentage was 22 among the poorest households and nearly 23% among the richest, while it was 20% among the poor, 19% among the middle wealth, and 16% among the richer. Similarly, households without a bank account had nearly double the number of teenage pregnancies (60%) compared to households with a bank account (40%) (Uwizeye et al., 2020). A family with at least one adult member who has a bank account appeared to be protected against teenage pregnancy, where parental use of a bank account worked as a proxy for money or a higher career, both of which lessen the likelihood of sugar-daddy predation for teenage girls (Uwizeye et al., 2020).

Teenage girls under the care of household heads who have the financial means and maturity to support them financially are likely to have fewer sexual partners and be less exposed to "toxic" digital information that can make them more inclined to engage in sex and become pregnant

(Uwiyeze et al., 2020). Thus many studies have indicated a positive correlation between SES and teenage pregnancy. Another factor of SES that was found to influence early pregnancy was income inequality (Chiavegatto et al., 2015). A study by Ochen et al. (2019) in Uganda found low SES to be significantly associated with teenage pregnancy. Poverty and lack are factors that expose young women to teenage pregnancy, as they seek to create better life opportunities for themselves (Harner, 2016). Thus low SES can result in young women entering into sexual relationships with men who are older so that they can take care of their financial and material needs.

### **2.2.12 Employment status**

Employment status has been identified as one of the determinants of teenage pregnancy. Results from a study conducted by Petroni et al. (2017) in Sub-Saharan Africa revealed unemployment as one of the determinants of teenage pregnancies. These results are completed by findings from a study by UNFPA (2015), which reported that in Sub Saharan Africa (SSA) a large percentage of teenage pregnancies were as a result of unemployment. Yakubu and Salisu (2018) also obtained similar results in their study. Thus being employed is a protective factor against teenage pregnancy for young women aged 15-19 years. It is interesting to note that Odimegwu and Mkwanzan (2016) obtained contrasting results. Their study on teenage pregnancy in Sub-Saharan Africa found that being employed actually increased young women's exposure to the risk of teenage pregnancy. Their study found that employed young women were more exposed to risky sexual behaviours at workplaces, which increased their odds of falling pregnant. Similar results were obtained by Nyarko (2018), whose study established that employed young women were more likely to experience teenage pregnancy in comparison to their counterparts who were not employed.

## **2.3 Summary**

This chapter offered a literature review that highlighted the factors that contribute teenage pregnancy, both in the global and national context. Teenagers' knowledge, attitudes, and behaviours regarding the factors that contribute to teenage pregnancy were also highlighted and reviewed. It should be noted that these interact with one another based on the context and

setting. The factors reviewed and highlighted as contributing to teenage pregnancy were knowledge of contraceptives, knowledge of ovulatory cycle, education, age at first sex, alcohol abuse, marital status, SES, sexual abuse, place of residence, gender-based violence, employment status, religion and multiple sexual partners. The next chapter focuses on the study's methodology in detail.

## **Chapter Three: Methodology**

### **3.1 Introduction**

The overall objective of the study is to shed insights into teenage pregnancy in Zimbabwe using the ZDHS (2015). Specifically, the study seeks to establish the extent of teenage pregnancies in Zimbabwe, to identify the socio-economic and demographic determinants of teenage pregnancy in Zimbabwe and to establish risk factors linked to teenage pregnancies. Quantitative research methodology is used in this study. The statistical power given by the quantitative approach allows the results to be generalized and replicated, which is a critical feature for policy and program intervention. The chapter begins with a discussion of the study context, which provides a detailed account of Zimbabwe and its demographic and geographic characteristics. This is then followed by a discussion on the research design, which involves the quantitative research method and its advantages and disadvantages. The chapter also explores the major source of the data for the study, the ZDHS, providing a detailed discussion of its suitability for the study and its limitations. The overall sample and research instruments used in the DHS, the study sample and weights are also discussed in detail. The key dependent and independent variables utilized in the study are also summarized in this chapter, together with the data analysis procedures used to test it. The chapter concludes with a review of the study's limitations and ethical considerations.

### **3.2 Study Context**

Zimbabwe is a landlocked nation in Southern Africa with an area of 390,580 square kilometres and a population of about 15 million people, of which 38.4% live in urban areas (Worldometer, 2021). Since 2010 the population has been growing at an average of 1.5% every year. Zimbabwe is a very young country, with 62 % of the population under 25 years old (UNFPA, 2020). Other countries surround the country on all sides. Zambia is bordered to the northwest by the Zambezi River and the Victoria Falls. Mozambique is located to the northeast, with the Eastern Highlands forming its boundary. Botswana is to the southwest, while South Africa is to the south, with the Limpopo River forming the boundary (Mamvura et al., 2017). The

majority of Zimbabweans are of African heritage, and the prominent languages are Shona and Ndebele. Shona, Ndebele, Kalanga, English, Xhosa, South Sotho, Tswana, Venda, Chewa, Tsonga, Tonga, Nambya, Ndaou, Koisan, and Chibarwe are the 15 ethnic groups of Zimbabwe (Ndagurwa, 2020). Fig 3.1 below shows map of Zimbabwe.

**Figure 3.1: Map of Zimbabwe**



Source: World Atlas (2021)

High unemployment and a disproportionate representation of the economically active age group in the informal economy characterize the Zimbabwe's socio-economic backdrop. Zimbabwe's economy was diverse in the two decades after independence, with reasonably productive agricultural, industrial, commercial, and mining sectors. Manufacturing and agriculture have remained the primary producers of goods for export and home use (FAO, 2016). On the other hand, Zimbabwe's total fertility rate (TFR) has been declining post 1980 independence and currently stands at 3.6 (Worldometer, 2021).

### **3.3 Research Design**

#### **3.3.1 Quantitative research methods**

Quantitative research methods use quantitative data to detect patterns and interactions between variables, with the primary goal of testing hypotheses, investigating cause and effect, and establishing expectations (Abuhamda et al., 2021). Quantitative research is focused on determining how and why things change. In quantitative research, inferential statistics such as statistical significance tests are commonly used to extrapolate results from a sample to the entire population. There are several advantages of using quantitative research methodologies. The fundamental advantage of quantitative research methods is that they employ statistical data, which saves time and money. Secondly, due to the application of scientific methodologies for data collecting and evaluation generalization of results is possible. Replicability is another benefit of using quantitative research methods (Kedron et al., 2021). Given comparable aims, objectives, and hypotheses, the research study can be replicated. Another advantage is that the methods has less bias. The research is isolated from the data and aims for impartiality, to ensure that the results and analysis are free of prejudice. The study questions have been clearly established, and objective solutions are sought. The use of quantitative research methodologies also has several disadvantages. To begin with, the researcher is kept isolated from the participants and is only an "observer" or "an outsider looking in." This makes it impossible for the researcher to conduct an in-depth examination of the event in its natural environment. Due to the nature of quantitative research, there is no place for participants to contribute to the analysis (Eyisi, 2016). As a result of adopting established working techniques, the method's linear and non-flexible nature does not engage or support inventive, analytical, or creative thinking (Almeida et al., 2017). The quantitative research approach is best suited for this study since it works well with bigger samples that are representative of the entire population. Given that this study involves data from a nationally representative survey, quantitative research methods are most appropriate. The quantitative methodology was also chosen based on the requirements of each research question and its related objective.



### **3.4 Data Sources**

#### **3.4.1 Secondary data**

Due to the fact that this study relies on quantitative analysis of secondary data, it is vital to understand the advantages and disadvantages of employing secondary analysis. Existing data generated by large government institutions, healthcare facilities, and other organizations as part of organizational record keeping is referred to as secondary data (Wagh, 2021). Using secondary data has its advantages over using primary data. Time and effort are particularly expensive when collecting original or primary data (Queirós, Faria, and Almeida, 2017). As a result, original or primary data collecting samples are frequently small, making them vulnerable to biases from non-representative sampling and incomplete data (Cave and Stumm, 2020). They rely on large samples that have been comprehensively appraised using state-of-the-art measures, secondary data analyses of population cohort studies transcend these limitations. Even though they are often affected by attrition, which can cause sampling biases, population cohort studies facilitate well-powered research of high scientific rigor and validity, whose outcomes generalize widely (Davis-Kean et al., 2015). The scientific power of secondary data analyses can be further enhanced when investigators collaborate in cross-cohort partnerships, harmonize data across samples, and conduct data linkage across data repositories (Jay et al., 2019). Obtaining finances for original or primary data collection, which includes participant recruiting, assessment, and reimbursement, as well as coding, cleaning, and archiving data for analysis, can take many years (Cave and Stumm, 2020). By contrast, population cohort studies are significantly less expensive to use, and the majority of them can be accessed promptly and for free. Even when access fees are required, they are a fraction of the expenses of primary or original data collecting (Cave and Stumm, 2020). As a result, secondary data analysis of cohort studies are very cost-effective (Johnston, 2017). However, secondary data analysis has its own set of restrictions. While secondary data can be utilized as a reference, it may not always be appropriate for the study's goals, therefore it must be used with caution (Somarajan, 2020). Furthermore, because some secondary data is unpublished literature, it cannot always be validated because it has not been peer reviewed, and also bias may have been involved during the data collection process, which the researcher utilizing it may be unaware of resulting in the study being unwittingly harmed (Somarajan, 2020).

### **3.4.2 The Zimbabwe Demographic and Health Survey (ZDHS)**

The Zimbabwe Demographic and Health Survey (ZDHS, 2015) is a nationwide survey conducted in 2015 which presents findings from a study of more than 11,000 homes. From July to December 2015, the Zimbabwe National Statistics Agency (ZIMSTAT) conducted the ZDHS in partnership with the Ministry of Health and Child Care (MoHCC) and the UNFPA. The 2015 ZDHS is the sixth such survey to be conducted in Zimbabwe, and it includes basic demographic and health data (ZIMSTAT, 2015). Previous surveys were undertaken in 1988, 1994, 1999, 2005-06, and 2010-11.

The 2015 ZDHS survey's main goal is to offer policymakers, planners, academics, and program managers with up-to-date demographic and health data. Respondents demographic characteristics, reproductive and contraceptive history, fertility preferences, family planning methods, infant and child mortality, knowledge and attitudes about sexually transmitted infections, maternal health, breastfeeding and complementary feeding, anaemia prevalence in children and women, mosquito net ownership, knowledge of HIV prevention methods, comprehensive knowledge of HIV prevention, and ownership of mosquito nets are some of the specific topics covered in the survey (ZIMSTAT, 2015).

#### **3.4.2.1 Sample Design**

The 2015 ZDHS sample was designed to produce representative data for the country as a whole, urban and rural areas, and each of Zimbabwe's ten provinces: Manicaland, Mashonaland Central, Mashonaland East, Mashonaland West, Matabeleland North, Matabeleland South, Midlands, Masvingo, Harare, and Bulawayo (ZIMSTAT, 2016). For the 2015 ZDHS, the sampling frame from the 2012 Zimbabwe Population Census was used. Each province in Zimbabwe is divided into districts, and each district is further subdivided into smaller administrative units known as wards. During the 2012 Zimbabwe Population Census, each ward was divided into manageable regions known as census enumeration areas (EAs). The 2015 ZDHS sample was drawn from a stratified, two-stage cluster design, with EAs serving as sampling units in the first stage. The 2015 ZDHS sample consisted of 400 EAs, with 166 in urban regions and 234 in rural areas (ZIMSTAT, 2016).

The second step of sampling consisted of households. In March 2016, a complete list of households was completed in each of the 400 designated EAs (ZIMSTAT, 2016), and each cluster was represented by a map, and all private households were listed. Institutional living situations were not included in the list (e.g., army barracks, hospitals, police camps, and boarding schools). For the 2015 ZDHS, a representative sample of 11,196 households was chosen (ZIMSTAT, 2015). All women between the ages of 15 and 49 and all men between the ages of 15 and 54 who were either permanent residents of the selected houses or guests who stayed the night before the survey were eligible to be questioned. Anaemia testing was carried out in each home among eligible women aged 15-49 and men aged 15-54 who agreed to be tested (ZIMSTAT, 2016).

For the 2015 ZDHS, four questionnaires were used: the Household Questionnaire, the Woman's Questionnaire, the Man's Questionnaire, and the Biomarker Questionnaire. These questionnaires were adapted from model survey instruments created for the DHS program to represent Zimbabwe's demographic and health challenges (ZIMSTAT, 2015). The questionnaires were translated into two main languages, Shona and Ndebele, in addition to English, and all four surveys were programmed into tablet computers to allow for computer aided personal interviewing (CAPI) for data collecting purposes, with the option to select English, Shona, or Ndebele for each questionnaire (ZIMSTAT, 2016). The four questionnaires are standardized to allow for comparisons across time, and are simply tweaked to represent the country's demographic and socio-economic situation. The Household Questionnaire gathers information on household features (cooking fuel, assets, toilet and water facilities), as well as household schedules (age, sex, relationship to household head, residence, parental survivorship, birth registration and education). The Women's questionnaire was of particular importance in this study. The Woman's Questionnaire collects information on contraception, reproductive behaviour and intentions, women's and their partners' socio-economic situation, and prenatal, delivery, and post-natal care.

Data editing, weighting, cleaning, and tabulation were conducted with the Census and Survey Processing System (CSPro). Data received from the supervisor's tablets was registered and checked for inconsistencies and outliers in ZIMSTAT's central office (ZIMSTAT, 2015). Data editing and cleaning included structure and internal consistency checks to ensure the accuracy of fieldwork. Any anomalies were reported to the appropriate team via the technical team and the team supervisor (ZIMSTAT, 2016). After that, the corrected results were re-sent to the

central office. The ZDHS sample of females aged 15 to 19 years was 2199 at the time of enumeration, and this will serve as the study sample. Furthermore, the characteristics of a person's socio-economic and demographic situation change over time. As a result, focusing on all women in their reproductive years would be ineffective in identifying determinants of teenage pregnancy.

### **3.6.1 Dependent variable**

The outcome variable for this study, identified as v219 in the ZDHS 2015 Stata dataset, is the total number of living children including current pregnancy and is calculated by adding "1" if the respondent is pregnant. These responses were recoded as numerical outcomes, with response outcomes as "0 - no children and not currently pregnant, "1 or more children and currently pregnant".

### **3.6.2 Independent variables**

Among other things, this study seeks to determine whether there is a link between the factors identified and teenage pregnancy in Zimbabwe. To determine their impact on the dependent variable, the independent factors/variables are evaluated. When deciphering the independent variables, caution is maintained that teenage pregnancy is a context-dependent issue, and so its determinants will differ depending on the situation. The independent variables were investigated as potential predictors of teenage pregnancy among Zimbabwean teenagers. The evaluated literature yielded a total of 13 independent variables, all of which revealed diverse ways in which proximate and background influences influence teenage pregnancy. The variables are presented in Table 3.1 below and they are residence, education, and knowledge of ovulatory cycle, age at first sex, knowledge of contraceptives, alcohol abuse, multiple sexual partners, sexual abuse, marital status, religion, gender-based violence, employment status and socio-economic status. Grouped responses represent the outcomes used in the study's dataset, the ZDHS (2015). For analysis purposes response codes were created from the grouped responses, where variables with multiple response categories such as knowledge of ovulatory cycle, age at first sex, marital status, religion and socio-economic status were combined into fewer categories. The response codes are used for analysis in chapter four.

Place of residence was considered due to the fact that access to sexual and reproductive health resources and information is influenced by where one resides, and this is a significant independent variable. Teenage pregnancy has been found to disproportionately impact young women who are already marginalized, according to UNFPA (2020). Also, one of the factors that impact teenage pregnancy is lack of education. Teenagers frequently lack the knowledge necessary to make educated and responsible decisions about whether or not to engage in potentially life-altering sexual behaviour (Alabi and Oluwafemi, 2017). According to Mezmur et al. (2021) not being in school and a lack of formal education are some of the major causes of pregnancy among teenagers.

Knowledge of the ovulatory cycle is another key variable under investigation. Women who were aware of their ovulatory cycle were 75% more likely to use contraceptives than their counterparts who were oblivious of their ovulatory cycle, according to research conducted in Malawi and Ghana (Geda, 2019). Marital status is another variable under investigation due to the fact it has been found to be a key determinant in the rate of teenage pregnancy in most Sub-Saharan African cultures since it indicates a young woman's fertility (Alabi and Oluwafemi, 2017). Early marriage is a critical component in understanding the factors of pregnancy among teenagers, particularly in Zimbabwe. Due to the sample's youthful age, the number of females who have been divorced or widowed is small. As a result, the not currently married category is created by combining the divorced and widowed responses with the never married response choice. Females who are married or cohabiting are grouped together in one category. This is appropriate given Zimbabwe's current situation of postponed marriage and increased cohabitation.

Sexual abuse is another independent variable under investigation in this study. In the context of this study, sexual abuse refers to sexual violence by the husband or partner (ZDHS, 2015). Sexual violence is defined by rape and sexual coercion, and is mostly perpetrated by men against women, even though in some cases men are the victims (Bagwell-Gray et al., 2015). According to Alabi and Oluwafemi (2017), the odds of falling pregnant during teenage years are higher for young women who were exposed to sexual abuse as children compared to those who were not. The responses for sexual abuse in this study are "no" for those who did not experience it and "yes" for those who have. The association between gender-based violence and teenage pregnancy is explored in this study. In context of this study, gender-based violence refers to physical violence by a husband or partner (ZDHS, 2015). Gender-based violence has

been found to lead to teenage pregnancy and adverse reproductive health outcomes (Chacham et al., 2016). As shown in Table 3.1 below, the responses of gender-based violence in this study are “no” for those who did not experience it and “yes” for those who have.

One of the goals of this research is to discover potential household characteristics that influence teenage pregnancy. As a result, the study requires a variable that measures the SES. A relative index that measures wealth is used to assess the impact of SES on teenage pregnancy. Due to the fact that the majority of females aged 15 to 19 years in Zimbabwe are unemployed, unmarried, and live with their parents or grandparents, this measure is appropriate. ZDHS compiles a complete household asset inventory that includes the possible ownership of 18 household items from a television to a bicycle or a car, as well as dwelling characteristics like water source, toilet facilities, and electricity. This was used to construct a wealth variable called SES variable, which was calculated by assigning a household score to each regular (de jure) household member, rating each individual in the household population based on their score, and then dividing the distribution into five equal groups, each containing 20% of the population.

The SES variable for the study is created by adding the total value of the household's assets. The K-median clustering method is then used to establish asset ownership ranges. The ranges were calculated using the STATA command `cluster kmedian numassets, k. (5)`. The asset ranges are identified using k-median clustering, as previously stated. A household with 0-3 assets is assigned low SES. In the same way, households with 4-6 assets are assigned middle SES whilst households with 7 or more assets are assigned high SES. The examination of teenage pregnancy by wealth levels is possible because of this linear and flexible approach of assessing SES.

Religion is a key variable in people's lives. Many people consider religion to be significant in their lives because it gives protection from social difficulties. Religion also provides a framework for understanding, moralizing, and categorizing events and behaviours as good or bad in simple terms. Understanding the social conditions in which people develop necessitates determining the percentage of the sample that belongs to a particular denomination. Table 3.1 below shows the independent variables and their codes.

**Table 3. 1: Independent variables.**

<b>Variable name</b>	<b>Recode of variable</b>
Residence	0=rural 1=urban
Education	0=primary 1=secondary and higher
Knowledge of ovulatory cycle	0=before period 1=during period 2=after periods
Marital status	0=not married 1=married
Age at first sex	0=8-12 years 1=13-15 years 2=16-19 years
Knowledge of contraceptives	0=knows no method 1=knows modern method
Alcohol abuse	0=no 1=yes
Multiple sexual partners	0=0 1= 1 and above
Sexual abuse	0=no 1=yes
Gender-based violence	0=no 1=yes
Employment status	0=unemployed 1=employed
Socio-economic status (SES)	0=low 1=middle 2=high
Religion	0=not part of a religion 1=part of a religion

### 3.7 Analysis Techniques

The ZDHS dataset is subjected to secondary analysis in this study. The goal of this study is to determine the determinants of teenage pregnancy among young people in Zimbabwe. Understanding the setting in which early pregnancy occurs is critical to establishing its causes. Furthermore, because of society's fluid and ever-changing nature, there is not only one single identified determinant of teenage pregnancy. This study will use the descriptive quantitative analysis approach, which will effectively identify drivers of teenage pregnancy. This will include examining the independent variables' differential impact on the dependent variable. Descriptive analysis describes the world or a phenomena by addressing who, what, where, when, and to what extent it exists (Leob et al., 2017). Whether the goal is to discover and describe trends and variation in populations, develop novel measures of essential phenomena, or characterize samples in studies aimed at finding causal effects, description is an important aspect of the scientific process in general. Descriptive analysis is the ideal analytical approach for this study for two reasons: first, it allows for fact analysis and aids in the development of a thorough grasp of the research subject. Second, it allows one to predict people's behaviour in a natural environment (Chen and Cheng, 2021).

The quantitative software package STATA version 17, created by StataCorp in 1985, is used for data analysis. The analysis is broken down into three sections. The sample characteristics are investigated using descriptive statistics in the first part. The bivariate analysis section is the second part. Chi-square tests are used to see if there is a statistically significant link between females aged 15 to 19 years who have experienced teenage pregnancy and the independent variables. The third section of the study focuses on regression analysis to further ascertain the existence of an association between teenage pregnancy and the predictor variables. Due to the fact that the dependent variable is a discrete variable with a binary response option – yes or no logistic regression analysis was chosen as the method of analysis. This is consistent with Fernandes et al. (2020), who stated that logistic regression is the best tool for dealing with dichotomous dependent variables, or variables that can only be classified as yes or no. Thanda (2021) also believes that in logistic regression, there ought to be zero or very little correlation between the predictor variables, in other words, the predictor variables (independent variables) must be independent of one another. The unadjusted odds of becoming pregnant for young women aged 15 to 19 years are discussed using bivariate logistic regression analysis. After that, the adjusted odds of experiencing teenage pregnancy are investigated using multivariate



logistic regression analysis. To perform the required logistic regression analysis in STATA, the `svy: logit` command is used. All tests will be conducted at the 95% confidence level ( $p < 0.05$ ), as is standard in social science research (Tenny and Abdelgawad, 2021).

### **3.7.1 Data Weights**

A "weight" is merely a number we assign to a responder that affects how much their individual responses affect the overall result (Wicker, 2020). Researchers employ weighting as a corrective strategy in surveys. It refers to statistical modifications made to survey data after it has been gathered in order to increase the survey estimates' accuracy. There are two primary reasons why survey researchers weight their findings. One is to account for uneven selection probabilities, which are common during sampling. The other is to try to adjust for non-response to surveys. We can simulate real-world populations by weighting data. We must ensure that any claims or conclusions we make about a group as a whole represent everyone in that group. We use survey weights to evaluate the data in this study because it is based on a survey. The population size is equal to the sum of the survey weights. We can draw accurate judgments about the finite population represented by the survey by using survey weights.

### **3.7.2 Logistic regression**

The conditions for the logistic regression are that first, the dependent variable must be binary. Secondly, the variables must be independent of one another in order to use logistic regression. We must supply the value of the liner equation by logit to obtain the formula for logistic regression, and since it operates on a probability model, we must offer the value of the liner equation by logit (log odd).

The linear model is given by:

$$Y = \beta_0 + \beta_1 X$$

and logit:

$$\ln(P) = \ln(p/1-p)$$

Giving us the logistic regression formula:

$$\ln(p/1-p) = \beta_0 + \beta_1 X$$

$$P = e^{\beta_0 + \beta_1 X} / (1 + e^{\beta_0 + \beta_1 X})$$

Where; odds =  $p/1-p$

Odds here is representing success or failure.

Thus the logistic regression equation:  $\ln(\text{odds}) = b_0 + b_1 x + e$

Where;

- Y is the dummy dependent variable, =1 if event occurs, =0 if event does not occur,
- $\beta_0$  is the constant term's coefficient,
- $\beta_1$  represents the independent variable(s) coefficient(s),
- X represents the independent variable(s), and
- e is the error term.
- ln is the natural logarithm,  $\log_{\exp}$ , where  $\exp=2.71828\dots$
- p is the probability that the event Y occurs,  $p(Y=1)$
- $p/(1-p)$  is the "odds ratio"
- $\ln[p/(1-p)]$  is the log odds ratio, or "logit"
- all other components of the model are the same.

### **3.8 Ethical considerations**

The main concerns surrounding secondary data usage focus around the risk of damage to individuals and the question of return for consent. The quantity of personally identifiable information in secondary data varies. If the data does not contain personal information, or is suitably coded such that the researcher does not have access to the codes, the ethical board does

not need to conduct a comprehensive evaluation (Tripathy, 2013). Permission for future use and analysis is implied if the data is widely available on the Internet, in publications, or in other public venues. Due to the fact that the study was based on secondary data, an application was made for ethics exemption at the UKZN Research Ethics Committee, and it was granted. The protocol number is 00015365. Also, when the DHS was gathered, the DHS implementing agency maintained participant identity, confidentiality, and permission. The information was gathered through the USAID DHS web repository, which is dedicated to storing public-use data. To gain access to this data, the prospective researcher creates a profile to register, and completes the online application form, which includes a suggested research subject and a succinct explanation of the scope of the study. This researcher followed these procedures and submitted the application, which was approved after DHS successfully vetted it.

### **3.9 Limitations of the study**

Young people's pregnancy is a social issue with context-dependent determinants. As a result, there is never a clear cause and effect, as there is with other social issues studied. Similarly, this study does not point to a single determinant as the cause of pregnancy among young people, but rather suggests a number of potential factors. One of the drawbacks of analysing secondary data, as previously mentioned, is that the survey was not created to answer specific questions posed by the researcher. Similarly, the study's questions prevent it from addressing important issues like transactional and coerced sex. This does not, however, negate the significance of these social issues. Consequently, despite the fact that ZDHS does not allow for the analysis of transactional and coerced sex, this study highlights the negative consequences of these behaviours and suggests that more attention should be paid to these issues. Aside from the empirical nature of the method of analysis used in this study, studies reviewed in the literature review substantiate the findings and conclusions reached. This is used to validate the results and make population inferences.

### **3.10 Summary**

The aim of this chapter was to provide an overview of the study's analysis methods. Descriptive and inferential statistical analyses are used in quantitative research methods. This enables inferences about the population to be made. The ZDHS is analysed to determine the prevalence and determinants of pregnancy among young people. This chapter also covered the study sample and design, as well as the independent variables and dependent variable under investigation. The study's findings are presented in the following chapter. It's critical to understand the study's limitations, as well as the advantages and disadvantages of using secondary data, when interpreting and discussing the findings.

## Chapter Four: Results

### 4.1 Introduction

The aim of the study is to determine the prevalence and determinants of teenage pregnancy among Zimbabwean women age 15 to 19 years. The first section of this chapter describes the socio-demographic characteristics of all females in the sample age 15 to 19 years. Bivariate analysis is used in the second section to evaluate the link between teenage pregnancy and determinants among women age 15-19 years. Then in the third section, all determinants with a significance level of  $p < 0.05$  in the bivariate analysis, are used in the multivariate analysis. Thus, bivariate analysis reveals the determinants associated with teenage pregnancy, which are used in the multivariate logistic regression model to establish their significance concurrently. The outcomes of the multivariate logistic regression analysis are presented as odds ratios (OR) with 95% confidence intervals.

### 4.2 Study sample characteristics

Table 4.1 below shows the age distribution of women in Zimbabwe age 15-19 and 20-49 years. The results show that 22.09% (2199) of women in Zimbabwe are age 15-19 years and 77.91% (7756) are age 20-49 years. This has implications for the rate of teenage pregnancy in Zimbabwe, as the majority of women fall into the reproductive age category. Fertility is highest among women age 20-25 years and begins to decline around the age of 30 years (Vander Borgh and Wyns, 2018).

**Table 4. 1: Percentage distribution of women in Zimbabwe.**

Age	N	%
15-19	2199	22.09
20-49	7756	77.91
<b>Total</b>	<b>9955</b>	<b>100</b>

Source: ZDHS (2015)

The percentage distribution of women in Zimbabwe age 15-49 years by pregnancy outcomes is shown in Table 4.2 below. The results show that among women age 15-19 years, 21.03% (N=463) have experienced pregnancy whilst 78.97% (N=1736) have not experienced pregnancy. Among women age 20-49 years, 89.9% (N=6972) have experienced pregnancy and 10.1% (N=784) have not experienced pregnancy. In comparison to women age 20-49 years, women age 15-19 years have a lower percentage of those who have experienced pregnancy compared to those who have not. This is expected given that Zimbabwe has a high median age at first birth. The average median age at first birth in Zimbabwe increased by 0.87% from 27.96 years in 2015 to 28.2 years in 2020 (World Data Atlas, 2021). Women are delaying pregnancy to a later age for a variety of reasons, including pursuing higher education, focusing on their professional careers, experiencing housing and economic insecurity, engaging in premarital cohabitation, and delaying marriage (Roustaei et al., 2019). Men also have a significant role in postponing pregnancy due to a lack of understanding about the reproductive lifespan and a desire to avoid creating partnerships and parenting with women (Hammarberg et al., 2017).

**Table 4.2: Distribution of women age 15-49 years in Zimbabwe by pregnancy outcomes.**

	Pregnancy				Total	
	No		Yes			
Age	N	%	N	%	N	%
15-19	1736	78.97	463	21.03	2199 <sup>a</sup>	100 <sup>a</sup>
20-49	784	10.1	6972	89.9	7756 <sup>a</sup>	100 <sup>a</sup>

Source: ZDHS (2015)

<sup>a</sup>Row totals

Table 4.3 below shows the distribution of teenage pregnancy among Zimbabwean women age 15 to 19 years by exact age. The results show how teenage pregnancy increases with age among Zimbabwean women age 15 to 19 years. According to the findings, most women age between 17 and 19 years reported that they had experienced pregnancy. For instance, the percentage of women experiencing pregnancy at the age of 17 years is 19.64%, 30.65% at the age of 18 years, and 47.33% at the age of 19 years. This means that in Zimbabwe, nearly 80% of teenage pregnancies occur after the age of 17 years. Given their low levels of fecundity, the low pregnancy percentages among women age 15 and 16 years are to be expected.

**Table 4. 3: Distribution of women age 15-19 years in Zimbabwe by teenage pregnancy outcomes.**

	Pregnancy				Total	
	No		Yes			
Age	N	%	N	%	N	%
15	471	96.8	16	3.2	487 <sup>a</sup>	100 <sup>a</sup>
16	428	90.64	44	9.36	472 <sup>a</sup>	100 <sup>a</sup>
17	349	80.36	86	19.64	435 <sup>a</sup>	100 <sup>a</sup>
18	266	69.35	118	30.65	384 <sup>a</sup>	100 <sup>a</sup>
19	222	52.67	199	47.33	421 <sup>a</sup>	100 <sup>a</sup>
Total	1736	78.97	463	21.03	2199 <sup>a</sup>	100 <sup>a</sup>

<sup>a</sup>Row totals

Source: ZDHS (2015)

The results presented in Table 4.4 below show the distribution of women age 15-19 years in Zimbabwe by background characteristics. The findings in this study show that the highest percentage (96.6%) of women age 15-19 years are part of a religion, and only 3.4% are not part of a religion. According to ZDHS (2015), religious denominations in Zimbabwe include the Apostolic Church, the Roman Catholic Church, the Protestant church, the Pentecostal church, and the traditional and the Muslim religion. Furthermore, the ZDHS (2015) reports that approximately 42% of women age 15-19 years are part of the Apostolic Church, 25.2% are part of the Pentecostal Church, 15.7% are part of the Protestant Church, 6.7% are part of the Roman Catholic Church, less than 1% are part of the Traditional religion, less than 1% are part of the Muslim religion and less than 4% are not part of any religion.

The results in Table 4.4 also show that 22.01% of women age 15-19 years had primary education whilst 77.9 % had secondary education. Primary education in Zimbabwe extends from first grade to seventh grade, and secondary education extends from form 1 to form 6. Tertiary education, which includes national certifications, diplomas, and university degrees, follows secondary education. Looking at social economic status (SES), the results show that 34.47% of women age 15-19 years reported living in households with a lower SES, with

21.78% coming from households with middle SES, and 43.75 % coming from households with a high SES. It is interesting to note that the majority of young women age 15 to 19 years in Zimbabwe come from households with a high SES, despite the high poverty levels. Poverty in Zimbabwe remains high, despite a marginal decrease in the proportion of people living in poverty to 70.5% in 2017 from 75.6% in 1995 (UN, 2021). As of 2020, 76.3% of Zimbabwean children in rural areas are impoverished; approximately 74% of the population lives on less than \$5.50 per day, with a monthly wage of \$253 and half of Zimbabwe's 13.5 million people are food insecure, with 3.5 million children suffering from chronic malnutrition (Port Louis, 2021). Also, the results of place of residence show that 32.93% of young women age 15-19 years reside in urban areas whilst 67.07% reside in the rural areas.

Marital status is classified according to females who are married/live with a spouse and those who are not currently married. Women age 15-19 years who are widowed, divorced, or have never married fall under the category of not currently married. According to the findings of this study, 80.35% of women age 15-19 years are not married, whilst 19.65% are married. These findings suggest that early marriages are common in Zimbabwe. According to Dzimiriri et al. (2017), despite recent awareness campaigns, Zimbabwe has a high prevalence of early marriages across its ten provinces. Given that the sample of those who are married is young and small, the percentage of widowed and separated/divorced people is expected to be low. This is because most teenagers will be in school, thereby reducing the number of early marriages.



**Table 4. 4: Descriptive characteristics of women age 15-19 years in Zimbabwe**

<b>Background</b>	<b>Characteristics</b>	
<b>Religion</b>	<b>N</b>	<b>%</b>
Part of a religion	75	3.4
Not part of a religion	2124	96.6
<b>Total</b>	<b>2199</b>	<b>100</b>
<b>Education</b>		
Primary	484	22.01
Secondary	1715	77.99
<b>Total</b>	<b>2199</b>	<b>100</b>
<b>SES</b>		
low	758	34.47
Middle	479	21.78
High	962	43.75
<b>Total</b>	<b>2199</b>	<b>100</b>
<b>Residence</b>		
Urban	724	32.93
Rural	1475	67.07
<b>Total</b>	<b>2199</b>	<b>100</b>
<b>Marital Status</b>		
Not married	1767	80.35
Married	432	19.65
<b>Total</b>	<b>2199</b>	<b>100</b>

Source: ZDHS (2015).

Looking at age at first sex (early sexual debut), Table 4.5 shows that less than 1% reported age at first sex at ages 8-12 years, 32.2 % at ages 13-15 years and 66.8% at ages 16-19 years. In the evolution or transition from childhood to maturity, the first sexual encounter is often the result of curiosity and experimentation, and it is impacted by the social and family environment and culture in which young people develop. The results show that the majority of women age 15-19 years in Zimbabwe reported age at first sex between the ages of 16-19 years. Sexual activity begins during adolescence, which is a normal developmental milestone. By the age of

19 years, the majority of both males and females have had sexual intercourse at least once (Martinez and Abma, 2015). However, sexual debut at a younger age (generally under 15 years) is linked to risky sexual conduct throughout adolescence and adulthood (Magnusson et al., 2019). Table 4.5 also shows the employment status distribution of women age 15-19 years. According to the findings, 84.63% are not employed, while only 15.37% are employed. This is to be expected given that the majority of women age 15-19 years are enrolled in school.

**Table 4. 5: Distribution of age at first sex and employment status of women age 15-19 years in Zimbabwe**

<b>Background</b>		<b>Characteristics</b>	
<b>Age at first sex</b>		<b>N</b>	<b>%</b>
8-12		7 <sup>a</sup>	1 <sup>a</sup>
13-15		228	32.2
16-19		472	66.8
<b>Total</b>		<b>707</b>	<b>100</b>
<b>Employment</b>		<b>status</b>	
Not	currently	1861	84.63
working			
Currently working		338	15.37
<b>Total</b>		<b>2199</b>	<b>100</b>

Source: ZDHS (2015).

<sup>a</sup>Categories have very few cases and should be interpreted with caution. Data are weighted.

Findings regarding knowledge of ovulatory cycle are shown in Table 4.6 below. Approximately 8.41% of the young women had knowledge of their ovulatory cycle before they had their period. Approximately 14.64% knew of their ovulatory cycle during their period, 23.83% knew after they had a period and 53.12% did not have any knowledge regarding their menstrual cycle at all. It is worth noting that the majority of women between the ages of 15 and 19 years were completely unaware of their ovulatory cycle. This has implications regarding their exposure to the risk of teenage pregnancy.

Table 4.6 also shows the percentage of women age 15-19 years by selected characteristics. According to the findings on awareness of contraceptive techniques, 96.38% of women age 15-19 years did not know any method, while only 3.62% did. These results suggest that in Zimbabwe sex education is low among women age 15-19 years. These findings are notable given the importance of contraceptive education in minimizing teenage pregnancy. Exposure to sex education has been found to increase the likelihood of safe sex and condom use among teenagers, thereby reducing incidences of teenage pregnancy (Odii et al., 2020). The fact that sex education is low among women age 15 to 19 years has an impact on the risk and occurrence of teenage pregnancy. Table 4.6 also shows that 8.32% of women aged 15-19 years had multiple sexual partners. In terms of young women in sexual relationships, 32.84% said they had experienced gender-based violence, while 67.16% said they had not. Furthermore, 16.86% reported having experienced sexual violence, while 83.14% indicated they did not. In terms of alcohol abuse, 8.26% of the sample reported having used alcohol the last time they had sex, while 91.74% said they had not.

**Table 4.6: Percentage of females age 15-19 years by selected characteristics.**

<b>Characteristic</b>	<b>N</b>	<b>%</b>
<b>Knowledge of</b>	<b>ovulatory</b>	<b>cycle</b>
Before period	185	8.41
During period	322	14.64
After period	524	23.83
Don't know	1168	53.12
<b>Total</b>	<b>2199</b>	<b>100</b>
<b>Knowledge of</b>	<b>contraceptives</b>	
Knows no method	80	3.62
Knows method	2119	96.38
<b>Total</b>	<b>2199</b>	<b>100</b>
<b>Multiple sexual</b>	<b>Partners</b>	<b>(excluding spouse)</b>
0	2016	91.68
1 and above	183	8.32
<b>Total</b>	<b>2199</b>	<b>100</b>
<b>Gender</b>	<b>Based</b>	<b>Violence</b>
No	227	67.16
Yes	111	32.84
<b>Total</b>	<b>338</b>	<b>100</b>
<b>Sexual</b>	<b>abuse</b>	
No	281	83.14
Yes	57	16.86
<b>Total</b>	<b>338</b>	<b>100</b>
<b>Alcohol</b>	<b>abuse</b>	
No	589	91.74
Yes	53	8.26
<b>Total</b>	<b>642</b>	<b>100</b>

Source: ZDHS (2015)

### 4.3 Bivariate Analysis

Table 4.7 below shows the results of the bivariate analysis for women age 15-19 years in Zimbabwe by pregnancy and predictor variables. The results show that the majority of women age 15-19 years who have experienced teenage pregnancy (92.9%) are part of a religion and only 7.1% of them have no religion. Thus, religion is shown to be significantly associated with pregnancy among teenage women in Zimbabwe.

The percentage of women age 15-19 years who have experienced teenage pregnancy and were enrolled in an educational institution (either primary or secondary) at the time of enumeration is also shown in Table 4.7. The results show that 37.4% had primary education and 62.6% had secondary education. These findings show that in comparison to women with a primary education, teenage pregnancy is higher among women with secondary education. This is expected, since young women in secondary school are more likely to be in the age categories where they can become pregnant. Teenagers frequently lack the knowledge required to make informed and responsible decisions about whether or not to engage in potentially life-changing sexual behaviour. When they have better access to education, their chances of avoiding teenage pregnancies improve considerably because they have more information, which allows them to postpone sexual encounters, and marry later (Wado et al., 2019). The results in Table 4.7 show that education is significantly associated with teenage pregnancy among women age 15-19 years.

The socio-economic status of all women age 15 to 19 years in Zimbabwe who have experienced teenage pregnancy is another variable explored in Table 4.7. The SES variable attempts to reflect the respondent's socio-economic position in a broad sense. It is calculated by classifying the number of assets in a household and does not reflect individual economic position but rather household socio-economic position. The results show that among young women age 15-19 years in Zimbabwe who have experienced pregnancy, 47.6% came from households with a low SES, 26.4% came from families with middle SES and 26% came from high SES households. It is interesting to note that the majority of women who experienced teenage pregnancy came from low SES households. The findings also suggest that women age 15-19 years from high SES families are substantially less likely to experience teenage pregnancy. The findings also imply that poverty, in the home and in the community, both increase the likelihood of teenage

pregnancy. Thus, SES has been found to be significantly associated with pregnancy among women age 15-19 years in Zimbabwe.

Table 4.7 also shows the geographical distribution of women age 15-19 years who have experienced teenage pregnancy. The results show that 15.8% of women age 15-19 years who have experienced teenage pregnancy reside in urban areas whilst 84.2% reside in rural areas. These findings are consistent with the findings of Obasohan (2015), who discovered that teenagers in rural areas are more vulnerable to the risk of unwanted pregnancies due to a lack of access to contraceptive information and services that are appropriate and sufficient for their sexual and reproductive health needs. Teenagers in rural areas have limited access to suitable and sufficient contraception information and services for their sexual and reproductive health needs.

The marital status of women age 15 to 19 years who have experienced pregnancy is also shown in Table 4.7. According to the findings, among young women who have given birth, 70.56% of them are married whilst 29.44% are not. According to research, married teenagers are five times more likely to pregnancy at a young age, than unmarried teenagers (Indongo, 2020). This is consistent with the findings of a study by Wodon et al. (2017), who proposed that marriage, particularly at a young age, is likely to be the cause of more than half of teenage girls experiencing pregnancy before the age of 18, and that ending child marriage could reduce early pregnancies for women age 15-19 years by half. Thus early marriage suggests that young women will be married for a longer period of time, increasing their chances of becoming pregnant.

**Table 4. 7 Bivariate analysis of women age 15–19 years by pregnancy outcomes and predictor variables, ZDHS 2015.**

<b>Predictor variables</b>		<b>Pregnancy</b>		<b>P -value</b>
		<b>N</b>	<b>%</b>	
<b>Religion</b>				0.000*
Not part of a	Religion	33	7.1	
Part of a	Religion	429	92.9	
<b>Total</b>		<b>462</b>	<b>100</b>	
<b>Education</b>				0.000*
Primary		173	37.4	
Secondary		289	62.6	
<b>Total</b>		<b>462</b>	<b>100</b>	
<b>SES</b>				0.000*
Poor		220	47.6	
Middle		122	26.4	
Rich		120	26.0	
<b>Total</b>		<b>462</b>	<b>100</b>	
<b>Residence</b>				0.000*
Urban		73	15.80	
Rural		389	84.20	
<b>Total</b>		<b>462</b>	<b>100</b>	
<b>Marital</b>	<b>status</b>			0.000*
Not married		136	29.44	
Married		326	70.56	
<b>Total</b>		<b>462</b>	<b>100</b>	

Source: ZDHS (2015)

The analysis reported in Table 4.8 below explores the impact of age at first sex (early sexual debut) on teenage pregnancy in Zimbabwe. The findings show that less than 2% of women age 15-19 years who have experienced pregnancy had commenced having sexual intercourse between the ages of 8-12 years. Approximately 42.06% commenced between the ages of 13-15 years, and 57.10% between the ages of 16-19 years. Most young and vibrant teenagers who

engage in sexual activities for the first time do not use any form of contraceptive and are even ignorant of the possible outcomes in the indulgence, leaving them open to unintended pregnancy and unplanned parenthood (Birhanu et al., 2019). The age at which a woman has her first sexual experience is thus an important demographic feature with health implications for females age 15 to 19 years.

The employment status of women between the ages of 15 and 19 years who have experienced pregnancy is also shown in Table 4.8. According to the results, only 21.2% of young women age 15-19 years who have experienced teenage pregnancy are employed, while the remaining 78.8% are unemployed. Young women who are unemployed could be females age 15 to 19 years who were enrolled in a school at the time of enumeration and had experienced teenage pregnancy. Their chances of breaking free from the cycle of poverty and establishing a better life for themselves are reduced by being unemployed.

The bivariate analysis results in Table 4.7 and Table 4.8 also show p-values for each variable which are used to determine significance in bivariate analysis. The results show that out of the 7 predictor variables that were analysed in Table 4.8, (religion, education, place of residence, marital status, age at first sex, SES and employment status), only two variables (age at first sex and employment status) were found not to be significantly associated with teenage pregnancy in Zimbabwe. The significant variables are further used in multivariate analysis to determine their influence on teenage pregnancy concurrently.



**Table 4. 8 Bivariate analysis of women age 15–19 years by pregnancy outcomes and predictor variables, ZDHS 2015.**

Predictor variables		Pregnancy		P -value
		N	%	
<b>Age at first</b>	<b>Sex</b>			0.0549
8-12		5 <sup>a</sup>	1.08 <sup>a</sup>	
13-15		172	42.06	
16-19		285	57.10	
<b>Total</b>		<b>462</b>	<b>100</b>	
<b>Employment</b>	<b>status</b>			0.060
Not currently	working	364	78.8	
Currently	working	98	20	
<b>Total</b>		<b>462</b>	<b>100</b>	

Source: ZDHS (2015)

<sup>a</sup>Categories have very few cases and should be interpreted with caution.

\*significant at  $p < 0.05$

The bivariate analysis of women age 15–19 years by teenage pregnancy outcomes and selected characteristics is shown in Table 4.9 below. According to the findings, only 9.09% of women age 15 to 19 years who experienced pregnancy knew about their ovulatory cycle before they had their first period, 11.69% got to know in the middle of their period and 79.22% only got to know after they had their period. It is interesting to note that only a small percentage of women age 15 to 19 years who experienced teenage pregnancy have knowledge of their ovulatory cycle. Knowledge of the ovulatory cycle among women age 15 to 19 years is critical since it reduces their exposure to the risk of teenage pregnancy, especially in circumstances where access to contraception is lower (Geda, 2019). The results from the bivariate analysis show that knowledge of ovulatory cycle is significantly associated with teenage pregnancy in Zimbabwe. Knowledge of ovulatory cycle will therefore be included in multivariate analysis. Table 4.9 also includes findings on contraceptive knowledge for women age 15 to 19 years who have experienced teenage pregnancy. The findings are noteworthy in that they show that all (100%) of the women age 15-19 years who have experienced teenage pregnancy are aware of modern contraceptive methods. Given that knowledge of contraception options is widespread among

women age 15 to 19, we should expect very few cases of teenage pregnancy. The results from Table 4.9 also show that knowledge of contraceptives is significantly associated with teenage pregnancy in Zimbabwe. Knowledge of contraceptives will thus be included in multivariate analysis.

The analysis in Table 4.9 also shows the teenage pregnancy outcomes for young women age 15-19 years regarding multiple sexual partners. The results show that among women in sexual relationships, 84.4% had only one partner/husband, whilst 15.6% had multiple sexual partners. The analysis of gender-based violence is also shown in Table 4.9. Approximately 68% of the sample reported that they did not experience gender-based violence from their partner/husband, whilst 32.84% reported that they did. The results in Table 4.9 show that multiple sexual partners and gender-based violence are significantly associated with teenage pregnancy. Regarding gender-based violence, the results in the analysis in Table 4.9 show that 67.17% of young women aged 15-19 years in sexual relationships did not experience gender-based violence, whilst 32.84 did. Furthermore, 83.14% reported that they had not experienced sexual abuse from their partners/husbands, whilst 16.86% reported that they had. A large percentage of the sample (91.74%) also reported that they had not been involved in alcohol abuse before engaging in sexual activity, while 8.26% reported that they had. In addition, the results show that sexual abuse and alcohol abuse are not significantly associated with teenage pregnancy.

**Table 4. 9 Bivariate analysis of women age 15–19 years by teenage pregnancy outcomes and selected characteristics, ZDHS 2015.**

<b>Predictor variable</b>	<b>N</b>	<b>Pregnancy %</b>	<b>p-value</b>
<b>Knowledge of Ovulatory cycle</b>			0.000*
Before period	42	9.09	
During period	54	11.69	
After period	366	79.22	
<b>Total</b>	<b>462</b>	<b>100</b>	
<b>Knowledge of contraceptives</b>			0.000*
Knows no method	0 <sup>a</sup>	0 <sup>a</sup>	
Knows modern method	462	100	
<b>Total</b>	<b>462</b>	<b>100</b>	
<b>Multiple sexual partners</b>			0.000*
0	390	84.4	
1 and above	72	15.6	
<b>Total</b>	<b>462</b>	<b>100</b>	
<b>Gender-based violence</b>			0.0161*
No	227	67.16	
Yes	111	32.84	
<b>Total</b>	<b>338</b>	<b>100</b>	
<b>Sexual abuse</b>			0.3874
No	281	83.14	
Yes	57	16.86	
<b>Total</b>	<b>338</b>	<b>100</b>	
<b>Alcohol abuse</b>			0.4601
No	589	91.74	
Yes	53	8.26	
<b>Total</b>	<b>642</b>	<b>100</b>	

Source: ZDHS (2015), \*significant at  $p < 0.05$ ,

Note: Data are weighted

#### **4.4 Logistic regression analysis**

Logistic regression is used to more thoroughly study the predictors of teenage pregnancy among women age 15-19 years. Multivariate analysis is performed, and both the unadjusted and adjusted models are run. The multivariate analysis shows the effects of each independent variable on the odds of teenage pregnancy for women age 15-19 years before and after controlling for other factors. The 95% confidence levels are also provided.

##### **4.4.1 Multivariate analysis**

Multivariate logistic regression models are fitted to investigate the factors that contribute to teenage pregnancy in Zimbabwe. The odds ratios (OR) with 95% confidence intervals from the multivariate analysis are presented. The predictor variables that were found to be statistically significant by the Pearson Chi-Square p-values in the bivariate analysis were selected to be used in this model. The adjusted model shows a statistically significant association between teenage pregnancy and all determinant variables except for two (multiple sexual partners and place of residence), whose p-values indicated that they do not influence pregnancy among teenage women in Zimbabwe.

Looking at the influence of religion, the results in Table 4.10 show that women age 15-19 years who were part of a religion, had lower odds (AOR=0.59; 95% CI: 0.26-0.78) of experiencing teenage pregnancy, compared to those without a religion. The unadjusted odds for religion (OR=0.50, 95% CI: 0.19-0.69) show similar results. The unadjusted odds (OR=0.52, 95% CI: 0.36-0.68) and adjusted odds (AOR=0.48; 95% CI: 0.30-0.61) for education, show that young women with just a primary education are more likely to be exposed to the risk of teenage pregnancy than those with a secondary education. The odds of experiencing teenage pregnancy were also found to be significantly higher (OR=3.51, 95% CI: 2.60-4.24) and (AOR=3.23; 95% CI: 2.29-3.96) for teenagers who were married, compared to those who were not. The results show that married teenagers are three times more likely to become pregnant compared to those who are not. Regarding SES, the odds of becoming pregnant for women age 15-19 years were found to be high for those from low SES households than for those from middle SES households (OR=0.73, 95% CI: 0.41-0.91) and (AOR=0.68,

95% CI: 0.32-0.85), and high SES households (OR=0.41, 95% CI: 0.23-0.59) and (AOR=0.44, 95% CI: 0.27-0.64).

In comparison to young women who had knowledge of their ovulatory cycle before they had their period, the odds of experiencing teenage pregnancy were twice as high (OR=2.13; 95% CI: 1.87-2.39) and (AOR=2.18; 95% CI: 1.92-2.51) for young women who got to know about their ovulatory cycle during their period, and almost three times as high (OR=2.87 95% CI: 2.63-3.04) and (AOR=2.94, 95% CI: 2.77-3.18) for those who only got to know about their ovulatory cycle after they had their period. The unadjusted odds (OR=0.43, 95% CI: 0.37-0.49) and the adjusted odds (AOR=0.47, 95% CI: 0.41-0.54) for knowledge of contraceptives, show that the chances of experiencing teenage pregnancy for young women who did not have knowledge of contraceptives are two times of those who had knowledge of contraceptives. The multivariate analysis results also show that the odds of experiencing teenage pregnancy for young women who had experienced gender-based violence in their sexual relationships was two times higher (OR=2.40; 95% CI: 1.16-4.95) and (AOR=2.37; 95% CI: 1.13-4.98) than for those who did not. After controlling for all variables in the adjusted model, no statistically significant relationship was found between place of residence and multiple sexual partners.

**Table 4. 10: Multivariate analysis of predictor variables associated with teenage pregnancy in Zimbabwe.**

<b>Variable</b>	<b>OR</b>	<b>(95%CI)</b>	<b>p-value</b>	<b>AOR</b>	<b>(95%CI)</b>	<b>p-value</b>
<b>Religion</b>						
Not part of a religion	1			1		
Part of a religion	0.50***	0.19-0.69	0.000	0.59**	0.26-0.78	0.004
<b>Education</b>						
Primary	1					
Secondary	0.52	0.36-0.68	0.358	0.48***	0.30-0.61	0.000
<b>Marital Status</b>						
Not married	1			1		
Married	3.51*	2.60-4.24	0.044	3.23*	2.29-3.96	0.012
<b>SES</b>						
Low	1			1		
Middle	0.73	0.41-0.91	0.121	0.68**	0.32-0.85	0.004
High	0.41**	0.23-0.59	0.003	0.44***	0.27-0.64	0.000
<b>Residence</b>						
Urban	1			1		
Rural	3.2*	2.27-4.5	0.000	1.22	0.53-2.79	0.633
<b>Knowledge of ovulatory cycle</b>						
Before period	1			1		
During period	2.13***	1.87-239	0.000	2.18**	1.92-2.51	0.006
After period	2.87	2.63-3.04	0.174	2.94***	2.77-3.18	0.000
<b>Knowledge of contraceptives</b>						
Knows no method	1			1		
Knows modern method	0.43*	0.37-0.49	0.043	0.47**	0.41-0.54	0.004
<b>Multiple sexual partners</b>						
0	1			1		
1 and above	2.78*	1.97-3.92	0.000	1.08	0.20-5.72	0.931
<b>Gender-based violence</b>						
No	1			1		
Yes	2.40*	1.16-4.95	0.018	2.37*	1.13-4.98	0.023

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001. OR: odds ratio, AOR: adjusted odds ratio.

## 4.5 Summary

The findings of the statistical study focusing on teenage pregnancy among Zimbabwean women age 15 to 19 years were provided in this chapter. The first half of this chapter described the socio-demographic characteristics of all females age 15 to 19 years in the sample. After that, bivariate analysis was done to examine the relationship between teenage pregnancy among women age 15 to 19 years and predictor variables. In the multivariate analysis, all variables identified to be substantially linked with teenage pregnancy in the bivariate analysis were utilized. Odds ratios were used to represent the results of the multivariate logistic regression study. Population weights were utilized in the analysis of the Zimbabwe Demographic and Health Survey that was conducted in 2015. The research looked at how a variety of independent variables influenced teenage pregnancy among women aged 15 to 19 years. Young women aged 15-19 years with a religious affiliation were found to have the lowest odds of experiencing pregnancy, compared to their counterparts who were not. Having primary education alone was found to increase the risk of teenage pregnancy among women aged 15-19 years compared to having secondary education. Knowledge of the ovulatory cycle and knowledge of contraceptives were also found to be significantly associated with teenage pregnancy in Zimbabwe. The following chapter will present the conclusion of the study.

## **Chapter Five: Discussion, Recommendations, and Conclusion**

### **5.1 Introduction**

Early pregnancy among teenagers has been recognized as a worldwide problem. Teenage pregnancy rates among young people have been decreasing but at a slower pace. Understanding the social background that drives young people's decisions is key to accelerating the rate of decline. Teenage pregnancy is a major problem in Zimbabwe, as in many other third world countries, with the majority of cases occurring in rural and marginalized areas (Mutanana and Mutara, 2015). This is due to the fact that teenagers in Zimbabwe are constantly inundated by a variety of factors that make it difficult for them to avoid both teenage pregnancy and HIV infection (Remez et al., 2014). Teenagers in Zimbabwe choose to participate in unprotected sexual activity despite possessing some knowledge about HIV/AIDS and pregnancy.

Despite policy initiatives and intervention mechanisms, the challenge of teenage pregnancy has persisted in Zimbabwe due to the interaction of proximate and indirect determinants. Teenage pregnancy has been shown to have a negative impact on humanity's well-being (WHO, 2020). Many societies continue to suffer as a result of high rates of teenage pregnancy, which prevents teenagers from contributing meaningfully to society and participating actively in local economic development programs. The aim of the study was to establish the determinants of teenage pregnancy in Zimbabwe. Drawing on the findings of the study, this chapter presents the discussion, recommendations and conclusion. The chapter begins by providing a summary of the findings in relation to literature on teenage pregnancy. It also draws on the theoretical framework which guides the study. Finally, it ends with recommendations based on the findings of the study.

### **5.2 Discussion**

The results from the study showed that in Zimbabwe the population of women aged 15-19 years is approximately one third that of women aged 20-49 years. The study also showed that in comparison to women aged 20-49 years, women aged 15-19 years have a lower percentage



of those who have experienced pregnancy compared to those who have not. In addition, the results from the study show that in comparison to those aged 15-17 years, a higher percentage of young women aged 18-19 years have had early teenage pregnancy experiences.

The influence of religion on teenage pregnancy can be explained by its influence on various aspects of an individual's natural life as well as fertility behaviour (Sarder et al., 2020). This study found that religion is significantly associated with teenage pregnancy in Zimbabwe. This study also established that when correctly practiced, religion can safeguard teenagers from unwanted pregnancy, a finding consistent with another study (Phillips, 2018). The findings of this study concerning religion are consistent with the theoretical framework developed by Eaton et al. (2003) that cultural and structural factors influence risky sexual behaviour. Cultural factors include how patriarchal many societies are, where it is believed that a male partner in a romantic relationship has the right to demand sex from the female partner whenever he desires it. Furthermore, culture and some religious norms allow males to avoid monogamy because some religions allow polygamy. As a result, adolescent males have used this as an incentive to have multiple sexual partners, putting themselves and their partners at risk of HIV/AIDS and unintended pregnancy.

Similar to the influence of religion, marital status was found to be significantly associated with teenage pregnancy in Zimbabwe. Marriage in Zimbabwe is a key factor of fertility and as is customary, marks the beginning of a woman's exposure to the risk of pregnancy (Marisa and Marisa, 2018). In some Sub-Saharan African cultures, for example, early marriages are promoted because they result in early pregnancy, which is seen as a blessing because it indicates a young woman's fertility (Alabi and Oluwafemi, 2017). According to the findings from this study, young women aged 15-19 years who were not married at the time of survey had a lower chance of experiencing teenage pregnancy than those who were married or living with a partner. When controls were applied, the unadjusted odds of experiencing early teenage pregnancy reduced from 3.51 to 3.23. However the odds of experiencing teenage pregnancy remain lower for young women who are not married compared to those who are married or living with a partner. Past research has also shown similar results. Indongo (2020) discovered that married teenagers are five times more exposed to the risk of teenage pregnancy, compared to their counterparts who are not in a marital union. In relation to the theoretical framework by Eaton et al. (2003) marital status is a cultural factor that influences and determines sexual

behaviour of teenage women, which increases their chances of experiencing teenage pregnancy.

The study also found that place of residence was not significantly associated with teenage pregnancy in Zimbabwe, even though the proportion of teenage females living in rural regions is nearly double that of those living in urban areas. It is interesting to note that these results are in contrast to the results obtained in past research. Kassa et al. (2018) discovered that adolescents who live in rural areas are more inclined to become pregnant than adolescents who live in urban areas in their study of teenage pregnancy in 24 African countries. A study by Mezmur et al. (2021) in Ethiopia revealed that young women aged between 15-19 years living in rural regions were found to be three times more likely to be involved in teenage pregnancy than their peers living in urban areas. In their study in Uganda, Nabugoomu et al. (2020) discovered that girls in rural communities lack life and social skills such as making positive decisions, self-esteem, patience, assertiveness, and negotiating power, all of which might help them better manage life's problems and avoid early sex and possibly early pregnancy. Thus, young women living in rural regions face challenges that their urban counterparts do not. Teenagers in rural regions have limited access to contraceptive information and services that are suitable and sufficient for their sexual and reproductive health needs (Obasohan, 2015). This argument may be explained more in terms of the framework by Eaton et al. (2003). The existence of and access to sexual and reproductive health care is influenced by structural variables such as area of residency. Unavailability of these services in remote locations, or the difficulty in obtaining these resources in some situations, has an impact on young people's capacity to utilize these critical resources. Thus lack of information influences their choice to participate in hazardous sexual behaviour, which increases their risk of exposure to teenage pregnancy.

The study further revealed that the majority of female teenagers in Zimbabwe have secondary education with only 20.3% having primary education. The study identified the level of education as one of the predictor variables of teenage pregnancy in Zimbabwe. Findings indicated that young women with just a primary education were more likely to be exposed to the risk of teenage pregnancy than those with secondary education. These results were complemented by findings from a study by Nabugoomu et al. (2020), who discovered that lack of education and lower levels of education were linked to high rates of teenage pregnancy among young women aged 15-19 years in Eastern Uganda. Similarly, Tabei et al. (2021) found

that greater education has a statistically negative relationship with teenage pregnancy compared to those who have little education. In his study, Billiard (2017) discovered that education is a significant protective factor against teenage pregnancy in Zimbabwe, with young women with more than a primary education having a lower risk of teenage pregnancy than those with only a primary education or no education at all. Research conducted in urban Kenya by Okigbo and Speizer (2015), also found that having a secondary education was linked to a delay in first sex and pregnancy. They discovered that individuals with secondary education (as opposed to those with only primary education) were less likely to experience early pregnancy. The study's findings, together with results from the literature, show that education functions as a protective mechanism against teenage pregnancy in adolescent girls.

Neal et al. (2015) discovered that teenage pregnancy rates were highest among young women with little or no education, particularly those under the age of 16. School interventions during primary and secondary school allow for sex education to take place before puberty and before many girls drop out of school (Mohr et al., 2019). Students spend a significant amount of time in school with trusted teachers in a structured and supportive learning environment, where HIV/AIDS transmission mechanisms and prevention are easily integrated into existing curriculum structures, thus educating them on the consequences of risky sexual behaviour. According to Eaton et al. (2003), a lack of education among teenagers' results in them not fully understanding HIV and its interaction and relationship with AIDS in terms of knowledge and beliefs. Teenagers are at a high risk of unwanted pregnancy and HIV/AIDS due to their lack of education (Eaton et al., 2003). Also in a globally competitive labour market, having an education improves one's chances of securing employment and aids in preventing poverty (Wado et al., 2019). Young women who are educated, especially beyond secondary education, have higher chances of financial stability. Financial stability enables young women to be less reliant on male wage sources, which lessens their risk of teenage pregnancy (Amagir et al., 2017).

The study also indicated that the majority of female teenagers in Zimbabwe were from high SES, with those from low SES families accounting for the second largest percentage, and those from middle SES families accounting for the smallest. SES, like level of education, was found to be significantly associated with teenage pregnancy. Poor families in Zimbabwe are unable to provide their teenage children with adequate basic needs such as proper food, clothing, and shelter, putting them at risk of engaging in sexual relationships with older men, increasing their

chances of experiencing early pregnancy (Chimatiro et al., 2020). Similarly, Wamoyi et al. (2019) discovered that young women aged 15 to 19 years who come from low-income families are forced to engage in risky sexual relationships in order to meet basic needs like food and clothing, which increases their chances of becoming pregnant at an early age. This is consistent with the findings of other research (Denney et al., 2016; Stobeneau and Wamoyi, 2018; Kyilleh et al., 2018), which claim that women from low-income households engage in transactional sex in order to satisfy basic family needs, pay school fees, buy school uniforms, and buy airtime. Young women enter into these transactional sex relationships with financially capable older men, and due to the age disparity, adolescent females are more likely to be involved in coercive and violent sexual encounters. ). This relationship can be explained using the structural factors component of Eaton et al. (2003) theoretical framework. According to Eaton et al. (2003) one of the structural factors that influence unsafe sexual behaviour is poverty. Poverty may lead to sex commodification, with teenagers engaging in risky sexual behaviour in order to meet their financial needs, increasing the risk of unwanted pregnancies (Eaton et al., 2003). For teenage girls, having a male sexual partner can provide them with money, gifts, and status that their parents may not provide (Eaton et al., 2003). Furthermore, being in a position of reliance decreases young women's ability to negotiate a safer sexual relationship (Klinger and Asgary, 2017). Furthermore, in these situations, victims of coercive sex are less likely to utilize condoms, which further increases their exposure to teenage pregnancy (Ajayi et al., 2017).

Contrary to findings in literature, the study found no statistically significant association between age at first sex and teenage pregnancy in Zimbabwe. The initiation of sexual activity at a young age is common in Africa, with prevalence rates ranging from 8.6% in Tanzania, 16.3% in Kenya, 15% in Uganda, 14.5% in Nigeria, and 17.7% in Malawi (Jordan et al., 2020). As a result, teenagers are particularly vulnerable to poor sexual and reproductive health (SRH) outcomes (Santhya and Jejeebhoy, 2015). This is in line with findings from multiple research (Sychareun et al., 2018; Wado et al., 2019, Birhanu et al., 2019; Bengesai et al., 2021). These studies discovered a link between teenage pregnancy and age at first sex. They observed that young women who initiated having sexual intercourse before the age of 15 years had a greater likelihood of experiencing teenage pregnancy. On the other hand, those who started having sexual relations after the age of 15 had a reduced chance of early pregnancy. The interaction between age at first sex and teenage pregnancy is explained by the theoretical framework developed by Eaton et al. (2003), under the context of personal factors. Personal factors, according to Eaton et al. (2003), include emotions regarding sexual behaviour, and also feelings

concerning oneself, particularly self-worth. People with low self-esteem are more likely to seek external validation, which for teenagers may include initiating sexual activity at a young age in order to be welcomed into social groups or classes, which increases their risk of teenage pregnancy (Eaton et al., 2003).

In this study, employment status was found to be unrelated to teenage pregnancy in Zimbabwe. This contradicts the findings presented in literature, which indicate conflicting outcomes. In other parts of Sub Saharan Africa such as Eastern Ethiopia, 54% of teenage pregnancies were found to occur among unemployed teenagers. This could be because employed young women are more likely than their unemployed counterparts to utilize contraception, as their economic status provides them more power and control over key decisions (Islam et al., 2016). Onwubuariri and Kasso (2019) also observed similar results in their study in Southern Nigeria, where they discovered that unemployment contributed to low contraceptive uptake due to financial limitations, resulting in teenage pregnancy. In this study, the absence of a significant relationship between employment status and teenage pregnancy may be due to the fact that women in this study are still completing their education. According to the model by Eaton et al. (2003) knowledge of the ovulatory cycle is classified under personal factors. Also place of residence and multiple sexual partners were found to be not significantly associated with teenage pregnancy in Zimbabwe.

Knowledge of the ovulatory cycle was found to be significantly associated with teenage pregnancy in Zimbabwe. Adolescents in Zimbabwe engage in premarital sexual activity at rates ranging from 29% to 52% (Moyo and Rusinga, 2017). In similar studies conducted in Malawi and Ghana, women who were aware of their ovulatory cycle were 75% more likely to use contraceptives and avoid teenage pregnancy than those who were not (Geda, 2019). Personal factors, according to Eaton et al. (2003), include knowledge and perception of personal risk. According to Eaton et al. (2003), if teenagers are unaware of their ovulatory cycle, they are more likely to have a low risk perception of risky sexual behaviour, thereby potentially increasing their risk of teenage pregnancy.

Knowledge of contraceptives was also found to be significantly associated with teenage pregnancy in Zimbabwe. Findings from this study also revealed that knowledge of modern methods of contraception is common among young women aged 15-19 years in Zimbabwe. Moyo and Rusinga (2017) found similar results in their study on contraceptive knowledge in

Zimbabwe's rural district of Mhondoro-Ngezi District, where they discovered that knowledge of modern contraceptives is universal (96%) among adolescents, despite low use of 21%. It is worth noting that, despite widespread knowledge of contraceptives among Zimbabwean teenagers, contraceptive use is extremely limited. In their study of contraceptive use in 29 African countries, Ahinkorah et al. (2021) found that lack of contraceptive knowledge was linked to non-use, which increased the risk of teenage pregnancy. Knowledge about contraceptives, according to Eaton et al. (2003), can be classified as proximal factors. According to Eaton et al. (2003), teenagers' lack of knowledge about contraception and the risks associated with unprotected sex increases their odds of becoming pregnant at an early age. Teenagers who have knowledge about contraceptives have a better understanding sexual and reproductive health enables them to make decisions that reduce the risk of early pregnancy (Eaton et al., 2003).

Lastly, this study also found gender-based violence to be significantly associated with teenage pregnancy. Findings from the ZDHS (2015) indicate that 35% of women in Zimbabwe have been subjected to gender-based violence. According to the framework by Eaton et al (2003), violence and coercion is commonplace in many teenager's relationships with the male partner possessing more power to dictate the relationship.

### **5.3 Recommendations**

The study's findings merit a number of academic and policy recommendations. The identification of SES status as a significant driver of teenage pregnancy among young people in Zimbabwe necessitates greater research in this field. Low SES, in particular, produces conditions that promote teenage pregnancy. Young women's safe sex bargaining ability is limited in these settings. As a result, teenage females are more likely to have early sexual debut and compelled sex. Additional quantitative study on transactional sex and gender-based inequality as potential predictors of teenage pregnancy is necessary. Also the findings of this study regarding the influence of religion on teenage pregnancy highlight the need for the government to enact legislation that makes religious leaders who promote early child marriages subject to prosecution.

This study discovered evidence that finishing secondary education is important in minimizing teenage pregnancy. Other investigations, such as Nabugoomu et al. (2020) and Tabei et al. (2021), have shown similar results. The findings on the impact of education level have policy implications that cannot be overlooked, especially in light of the high rates of teenage pregnancy in Zimbabwe and many Sub Saharan African nations. Education must be fostered, with interventions to secure the enrolment of females in schools, particularly in rural regions, being prioritized by policymakers (Ali et al., 2022). Policymakers should make it possible for young women to remain enrolled in school by subsidizing or exempting school fees payment, especially for those who come from poor households. The government should also subsidize education and provide scholarships to young women who have children or who have become pregnant but want to return to school.

The study also proposes other recommendations for further research. Information on multiple sexual partners is lacking in the corpus of knowledge. As a result, additional data on the association between these characteristics and teenage pregnancy, service delivery, education access, and the HIV epidemic is needed. This is particularly significant in Zimbabwe, where rural development is slow. To have a better understanding of the issues, research focusing on adolescent pregnancy in Zimbabwe should be conducted throughout provincial regions. Also, this study used data from a national survey conducted in 2015. Studies utilizing recent and updated datasets are required in order to fully comprehend and create strategies targeted at lowering teenage pregnancy. Research utilizing other nationally conducted surveys such as the Zimbabwe Multiple Indicator Cluster Survey could also yield important findings that can help policymakers to curb teenage pregnancy.

Policy initiatives such as free contraception, condom distribution in schools, and health awareness campaigns on adolescent sexual and reproductive health must be strengthened and made available to all teenagers, particularly those living in marginalised rural areas. Counselling services and recreational activities must be made freely accessible to youth in order for them to become focused and refrain from engaging in unprotected and risky sexual behaviour.

## 5.4 Conclusion

The aim of the study was to shed insights into teenage pregnancy in Zimbabwe. The study established the extent of teenage pregnancies in Zimbabwe, identified the socio-economic and demographic determinants of teenage pregnancy in Zimbabwe and also established the risk factors linked to teenage pregnancies. The framework by Eaton et al. (2003) provided the platform that informed and facilitated analysis of the study's findings. The results from the study show that in comparison to those aged 15-17 years, a higher percentage of young women aged 18-19 years have had early teenage pregnancy experiences. Teenagers' knowledge, attitudes and behaviour regarding factors that contribute to pregnancy were found to be critical. Regarding the 13 variables that were analysed, 7 were found to be significantly associated with teenage pregnancy in Zimbabwe, and these are; religion, education, marital status, SES, knowledge of contraceptives, knowledge of the ovulatory cycle and gender-based violence. The remaining 6 variables were found not to be significantly associated with teenage pregnancy in Zimbabwe, and these are multiple sexual partners, place of residence, sexual abuse, alcohol abuse, age at first sex and employment status. Due to the fact that the ZDHS is a nationally representative dataset, the findings of this study have significance for all young people in Zimbabwe.



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