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# ADOLESCENT'S UTILISATION OF ANTENATAL SERVICES IN CHITUNGWIZA, ZIMBABWE

BY

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## Abstract

The study sought to evaluate the factors which influence the utilization of antenatal services by adolescent mothers in Chitungwiza. Utilization of antenatal services was measured using the number of visits made to the antenatal clinic. The data was collected using a structured questionnaire from a valid sample of 160 participants who visited any of the four antenatal municipality clinics in Chitungwiza. After checking for multicollinearity and outliers, multiple linear regression analysis was employed to evaluate the effect of household income, distance to the nearest clinic, waiting period on first visit, age, family support, marital status, pregnancy intention and the level of completed education on utilization of antenatal care services. The unstandardized regression coefficients ($\beta_1$ to $\beta_8$) show the effect of each predictor variable on utilization of antenatal care. The study established that age ($\beta_1$=0.550, p=0.000), marital status ($\beta_2$=0.519, p=0.000), pregnancy intention ($\beta_3$=0.404, p=0.000), family support ($\beta_4$=-0.381, p=0.000), distance to the nearest clinic ($\beta_5$=-0.358, p=0.000), household income ($\beta_6$=0.320, p=0.000), and waiting period on first visit ($\beta_7$=0.082, p=0.000), and had significant influence on utilization of antenatal care services. The level of completed education had a non-significant influence utilization on antenatal services by adolescent mothers in Chitungwiza ($\beta_8$=0.190, p=0.054). The study recommended that families and local clinics should create enabling environments which makes it easier for adolescent mothers to frequent the antenatal clinics. The influence of socio-economic factors cannot be ignored. At the same time, clinics should improve on service delivery in the form of enough drugs and personnel to avoid unnecessary delays when one visits the clinic.



***Keywords***: *Adolescent mothers, antenatal factors, barriers to ANC usage, health service utilisation, recommended strategies*

**Declaration Page**

I declare that the dissertation is my original work except where sources have been cited and acknowledged. The work has never been submitted, nor will it ever be submitted to another university for the award of a degree.

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## Copyright

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## List of Acronyms and Abbreviations

| | |
|---|---|
| ANC | Anti Natal Clinic |
| COVID 19 | Corona Virus Disease 19 |
| DHIS2 | District Health Information Systems |
| LICS | Low- and Middle-Income Countries |
| MDGs | Millennium Development Goals |
| MoHCC | Ministry of Health and Child Care |
| PMTCT | Prevention of mother-to-child transmission |
| WHO | World Health Organization |
| UN | United Nations |
| UNICEF | United Nations Children's Fund |
| ZDHS | Zimbabwe District Health Survey |

## Definition of Key Terms

**Safe motherhood**: preventing maternal and infant death and disability through access to basic health care

**Complication of pregnancy**: Pathological process occurring in pregnancy or puerperium requiring medical intervention

**Maternal mortality**: The risk associated with pregnancy

**Early antenatal booking**: Registering for first antenatal care services at 12 weeks gestation or earlier

**Professional delivery attendance**: The percentage of births that were attended to by a medically trained person, defined as a doctor, nurse-midwife.

**Adolescent mothers**: An adolescent is a young person who is developing into an adult (Quarantine named Cambridge Dictionary 2020). Adolescent mothers are described by World Health Organization Global health estimate 2015) as mothers aged 19 years or younger at the time of delivery irrespective of the outcome of the pregnancy and irrespective of the mother's marital status. In this study adolescent mothers will refer to women who are 19 years or younger at the time of delivery or during their first visit to Reproductive and Child Health (RCH) clinic for vaccination of newborns.

**Antenatal care:** is the care that women receive during pregnancy that helps to ensure healthy outcomes for women and newborns (Lincett, Anoh, Gomez and Munjanja). In this study, antenatal care will refer to the number of visits made by a pregnant adolescent to the ANC before delivery and not to the content of care.

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**Utilization**: is described using the frequency or number of visits to the antenatal care clinic made by a pregnant adolescent from the first visit until the end of pregnancy. For the purpose of this study, a pregnant adolescent who makes less than four visits will be defined as inadequately utilized ANC whereas those with four visits or more will be categorized as adequately utilizing ANC services.

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# CHAPTER 1 INTRODUCTION

## 1.1 Background

Maternal health is essential for the population to be healthy and productive (FANC, 2017). The Millennium Development Goals (MDGs) of the United Nations (UN) sought to lower worldwide pregnancy - related mortality rates by 75% by 2015. Every day, 830 women die from preventable causes owing to poor maternity care around the world (World Health Organization 2020). Maternal mortality is still a persistent problem in low-income countries (LICs), and half of the deaths take place in Sub-Saharan Africa (Black, Laxminarayan, Temmerman, and Walker 2020).

In some African nations, maternal deaths are unexpected but avoidable (Nimakoh, Carolan, and McCann) (2017). Poor socioeconomic situations, inferior quality of treatment, shortage of healthcare professionals and infrastructure, and challenges with accessing medical facilities might all contribute to maternal death (Girum and Wasie 2017). For women living in war zones and unstable environments, vulnerability and a scarcity of resources are further barriers to maternity healthcare access (Bulage, Urdal, and Sundby 2015).

These conditions may have a role in the elevated risk of maternal bleeding, disorders, and illnesses following childbirth, as well as illegal abortions (Ev Say, et al., 2015).

Zimbabwe's maternal death rate has been rising, with the nation now ranking in the top forty countries in the world, with a rate of over 960 per 100 000 births (World Bank, 2012). The recorded number of deaths during delivery in Zimbabwe

rose significantly from 612 deaths per 100,000 live births in 2006/7 to 960 deaths per 100,000 live births in 2010/11, according to the ZDHS (2012). The use of Antenatal Care (ANC) services, such as early appointments, enough visits, and giving birth at a registered health clinic, are some of the markers of maternal mortality. According to the United Nations (2016), most maternal fatalities might be avoided if women were given professional health care from the first trimester of pregnancy until delivery.

It is thus cause for concern throughout the world when a substantial number of pregnant teenage girls die from avoidable disorders, diseases, and difficulties during pregnancy and delivery, despite the fact that managing these issues can culminate in the lowering of maternal mortality by up to 46% (Munjanja 2017).

The primary goal of ANC enhancement of the mother and foetus health. Early guidance on food and behaviour; early identification of illnesses and rapid treatment; adjustments of disorders, vaccination and micronutrient supplements; and birth and delivery preparations are some of the interventions provided through ANC (ZDHS 2010-11).

Given that high HIV prevalence has led to maternal deaths, the added advantage of ANC is early admission into PMTCT programs. Approximately, 46 percent of maternal death instances across Zimbabwe were HIV related (UN, 2015). Additionally, admission into ANC programs is critical for delivering in a health facility, since these services increase the likelihood of safe deliveries under the guidance of trained health workers (ZDHS 2010-11). For ANC to be helpful in reducing bad pregnancy outcomes, the timing and the number of visits, and the location of birth are all crucial.

Despite the fact that women in Zimbabwe attend ANC at a rate of 90%, with each woman attending at least one visit, only 19% of women received ANC in the first trimester and approximately most the women (40%) in the fourth and fifth months of pregnancy. ANC is considered to be successful when the mother visits the clinics in the early weeks of pregnancy, say from 12 to 16 weeks (ZDHS 2010-11). According to the ZDHS (2011), there is overwhelming evidence that a larger percentage of expecting mothers fail to complete the prescribed number of ANC visits. WHO (2012) advises that the minimum visits for pregnant women is four during the course of the pregnancy. While delivering in a medical facility minimises the risk to the parent and the newborn child by providing adequate medical treatment and sanitary conditions, data shows that home deliveries have increased from 23% (Bicego 2015) to 34% (ZDHS10-11), with relatives and either qualified or unprofessional traditional health support workers assisting (Rossie 2014).

As a result of delayed usage of ANC, limited visits, and home births, a considerable several mothers and their infants in Zimbabwe are at highly exposed to high levels of maternal death. Longer distances to clinics, shortage of booking fees, drugs, healthcare workers, health service provider attitude, and finally the issue of lockdown have all contributed to a decrease in deliveries, particularly in Chitungwiza District (ZDHS 2010-11 and Munjanja 2017). Religious considerations have also encouraged people to avoid going to the doctor, and this is especially true among Apostolic Churches (Chakawa, 2015).

In a nation dominated by Apostolic Churches, accounting for a large section of the population, 33 percent of women are members of these faith organizations (Maguranyanga 2015). Maternal morbidity and death are high in Zimbabwe (October-December, 2014). The government has assisted expecting mothers through construction of waiting shelters at various clinics in Zimbabwe. The expecting mothers would stay in these shelters at clinics as the date of delivery nears in an effort to enhance access to ANC treatments; and the advantages of these shelters have been documented in the literature (Gilson 1997). The MoHCC removed booking and user fees for deliveries which happen at primary health centres, in addition to enhancing medicine supply and offering sexual reproductive health (United Nations, 2013). Although these determinants have been extensively researched in most parts of the world, the findings of these studies are not conclusive. Furthermore, few studies have been conducted in Zimbabwe, especially after the review of the ANC guidelines to 12 weeks by WHO. Emergency of COVID 19 and the associated lockdown justifies the need to explore the determinants of ANC uptake.

**1.2 Statement of the problem**

ANC levels are low at the Chitungwiza District Health Department. Pregnant adolescent women schedule ANC appointments late in their pregnancy, usually in the second trimester, and do not follow up on their appointments. According to the DHIS2 figures, almost 76 percent of pregnant teen births in Chitungwiza have occurred at home since the lockdown began. According to Matron Munyukwi 10/02/20, many pregnant teens seek professional assistance when issues emerge during pregnancy or childbirth. The Matron goes on to say that because of the

poor ANC uptake, clinics are finding it difficult to successfully execute PMTCT which is aimed at pregnant women. However, there are more pregnancy-related fatalities in the district that are unreported because to the COVID 19 regulations lockdown's impact on accessibility. Pregnant teens are only permitted to make one booking and are expected to return when they are in labor, resulting in a spike in maternal deaths in Chitungwiza District. The major goal of safe motherhood action groups is to raise awareness among homes and communities about the need of scheduling ANC in the first trimester, as well as to enhance health seeking behavior (MoHCC 2009). As a result, the purpose of this study is to determine the variables that contribute to pregnant adolescent's low usage of ANC services in Chitungwiza District. Given that a lot has been implemented the number of home deliveries is a cause for concern and several expecting mothers visit the clinic for ANC at late r stages of the pregnancies. This current study looked into how pregnant adolescents in Zimbabwe used ANC booking, attended enough ANC visits, and delivered at health facilities.

### 1.3. Broad objectives

To determine factors associated with pregnant adolescents 'utilization of antenatal services in Chitungwiza District Zimbabwe.

#### 1.3.1 Specific Objectives

i. To evaluate the utilization of prenatal services by pregnant adolescents in Chitungwiza District Zimbabwe.

ii. To investigate the barriers to pregnant adolescents' utilization of antenatal services in Chitungwiza District Zimbabwe.

iii. To advance the strategies which encourage utilization of antenatal services by pregnant adolescents' in Chitungwiza District, Zimbabwe.

**1.4 Research questions**

i. What factors promote continuous utilization of antenatal services among pregnant adolescents in Chitungwiza District, Zimbabwe?

ii. Are there any barriers faced by pregnant adolescents in the usage antenatal services in Chitungwiza District Zimbabwe?

iii. What policies and approached could be adopted to promote antenatal utilization by pregnant adolescents in Chitungwiza District, Zimbabwe.?

**1.5 Assumptions**

The researcher assumed that the participants would answer the questionnaire in an honestly without coercion or force from the health workers at the clinics. The study also assumed that the information for the study could be best be collected form the individuals affected by the condition, hence the need to select the adolescent pregnant mothers. The study also assumed that the results obtained from the analysis conducted would be the best, and can form the basis for further arguments and development of concepts on adolescent pregnancy in developing nations such as Zimbabwe.

**1.6 Significance of the study**

By identifying characteristics that either favorably or adversely impact expecting women's use of prenatal care services in Chitungwiza District, Zimbabwe, this study adds to the development of the quality of antenatal service delivery to pregnant adolescents. The knowledge gathered from this study's findings will be

utilized to develop strategies for enhancing the delivery of prenatal care to pregnant women by increasing variables that encourage them to use them. It also offered several approaches for overcoming the hurdles to using these services.

### 1.7 Delimitations

The study was conducted in Chitungwiza district. The study included only pregnant adolescents' only. The sample size was determined from the health registers hence misses out those who are not attending ANC. COVID 19 lockdowns and movements restrictions are also delimitation of the study.

### 1.8 Limitations of the study

Time constraint was encountered since the researcher is employed and on attachment. Financial constrains limited the research since the study required money to be carried out. The other limitation the researcher faced was shortage or empirical data to support your hypotheses.

### 1.9 Summary

The main objective of this chapter was to give a general introduction of the study on the utilization of antenatal care services by adolescent mothers in Chitungwiza, Zimbabwe. The chapter specifically outlined the problem statement and operational objectives and questions which formed the basis for chapter 2 on literature review. Among other aspects evaluated, the assumptions, significance of the study as well as the limitations.

# CHAPTER 2 LITERATURE REVIEW

## 2.1 Introduction

Antenatal care has been identified as one of the "four pillars" of safe motherhood (World Health Organization, 1994). By the same token, family reproductive health, a safe delivery, and basic obstetric care were suggested to be the other three. The set of pillars was created to guarantee that expecting mothers have a safe delivery, as well as healthy newborns, in order to avoid the dreaded consequences of maternal death. The focus of this chapter is to review the work done by other scholars on the utilization of antenatal services. The work covers both theoretical and empirical literature on the determinants of adolescent mother's utilization of antenatal services around the globe.

## 2.2 The concept of antenatal care

The term antenatal care refers to the treatment that expecting mothers get throughout pregnancy to assist ensure that they and their babies have a good result (WHO, 2015). Of late, concern has been devoted to the importance of antenatal care especially in developing and less developed nations (Yah, et al., 2020). The WHO phased out the conventional "risk approach" to prenatal care and recommended a more modern strategy that prioritizes quality over number of visits (Van Eijk, 2006).

The primary objective of antenatal care is assisting in the maintenance of normal pregnancies by conducting regular assessments (Travers, Hirschman, & Naylor, 2020). Additionally, there has been found to a significant positive relationship between antenatal care and early detection of pregnancy complications (Thein, et

al., 2012). It can be suggested that pregnant women who visit health care centres for assistance during the course of the pregnancy present high chances of safe delivery than those who do not.

Preventive interventions, supportive care, and counselling and birth preparedness and complication readiness planning are all examples of individual care that can assist sustain normal development of the pregnancy (WHO, 1994). Birth preparedness, disease prevention and early detection of complications are among the objectives of ANC (Tesfaye, et al., 2018).

### 2.2.1 Health promotion and disease prevention

A one-on-one encounter between a physician and a pregnant woman gives an opportunity to talk about key concerns influencing the woman's health, pregnancy, and delivery plans (Tekelab, et al., 2019). By the same token, Tesfaye, et al., (2018) suggested that interaction between a health care professional and the expecting mother is the starting point to map the way forward on influencing the health of the mother and the foetus and to deliberate on childbirth. According to Ouma, et al., (2010), usually, the discussion between the expecting mother and the health worker includes nutrition, hygiene, infection prevention, danger signs, importance of exercise and rest, and importance of breast feeding. For patients who are HIV positive, ANC would assist in individualized risk reduction, and PMTCT (Musarandega, et, at., 2017). ANC also recommends preventative treatments, tetanus immunization, iron supplements, anemia reduction, treatment for hookworm, prevention of HIV and PMTCT, malaria protection, and taking of vitamin supplements (FANC, 2017).

### 2.2.2 Detection and treatment of existing diseases and conditions

According to Gloyd, Chai and Mercer (2018), HIV, malaria, STIs and TB are among the diseases and disorders that can adversely impact mothers and newborns if left untreated. Antenatal services also assist in the treatment of existing conditions and other disease that are known to have an effect on the health of the child and the mother. If an anomaly is detected well time, health practitioners can take corrective action and protect both the child and the mother.

### 2.2.3 Birth preparedness and management of complications.

Iron overload, infections, bleeding disorders, preeclampsia, abnormal embryonic growth, and aberrant foetal position are among other complications which are attended to at during ANC visits (FANC, 2017).

Mekonnen, Dune and Perz (2019) are of the opinion that ANC assists the mother to prepare for safe delivery and early detection o0f complications such which could be related to the position and movement of the baby. If complications are detected earlier, this gives health practitioners the time to prepare should any special requirement be needed.

Among other aspects, the mother should prepare for the following during pregnancy, place of birth, who will attend to her, the fees to be paid, medication and other emergencies. Additionally, it was also noted that support during and after birth is an important factor (FANC 2017).

### 2.2.4 Coverage of Antenatal Care

The proportion of expecting mothers in developing countries who got prenatal care during pregnancy increased by 20% between 1990 and 2001 (WHO/UNICEF, 2015). Asia made the most gain (31%), while Sub-Saharan

Africa showed the least growth (4 percent). Despite increased coverage of prenatal services across the world, pregnant teenage women, particularly those who are unmarried, remain marginalized populations that do not get full benefits or take use of all antenatal care possibilities. Migrants, ethnic minorities, the destitute, and those living in remote rural villages are among the other disadvantaged groups (WHO 2015).

### 2.3 The meaning and nature of adolescent pregnancy

Among the common definitions, adolescent pregnancy refers to pregnancy in a girl who is 19 years or less at the time of giving birth, regardless of marital status or result of the pregnancy (Mandima, et al., 2022). "Teenage pregnancy" is an alternate term. In sections of the developing world where fertility rates are high and early marriages are frequent, teen pregnancy is common (Reynolds, Wong, & Tucker 2016). Sub-Saharan Africa will have the highest proportion of adolescent women who are moms or pregnant in 2020, (that around 20-40 percent). Pregnancy and delivery have been identified as the top causes of death among women aged 15 to 19 in underdeveloped nations due to high rates of early childbearing (Save the Children 2020).

### 2.4 Effective antenatal care interventions

Studies on the scientific literature on prenatal care have shown that there are several of successful antenatal therapies as well as others that are ineffective but are still employed due of tradition (Makunika, & Manyange, 2021) and (Lweno, 2013). Antenatal care gives more emphasis on the importance of breast feeding, the need for supplements before and after delivery, and the dangers associated with smoking and drinking of alcohol (Fulpagare, et al, 2018).

## 2.5 The Andersen Health Seeking Behaviour Model

The Andersen Health-Seeking Behavior Model is the theoretical underinning utilized to explore the impact of various factors on adolescent pregnancy in Chitungwiza, Zimbabwe. The Andersen model evolved from a behavioral model developed in the 1960s. The model was created in four stages, including input from a number of cooperating scholars at the University of Chicago's Centre for Health Administration Studies (Andersen, 1995). At various stages of its development, factors of health care use were incorporated in order to create a model that could best explain variations in health care use through time and access to treatment.

The four-phase model, popularly known as the emerging model, depicted the many impacts on health-care utilization and, as a result, health status. It also featured 18 feedback loops that showed how the outcome influences predisposing variables, perceived demand for services, and health behavior (Andersen 1995:7).

**Environment Population Health Behaviour Outcomes**

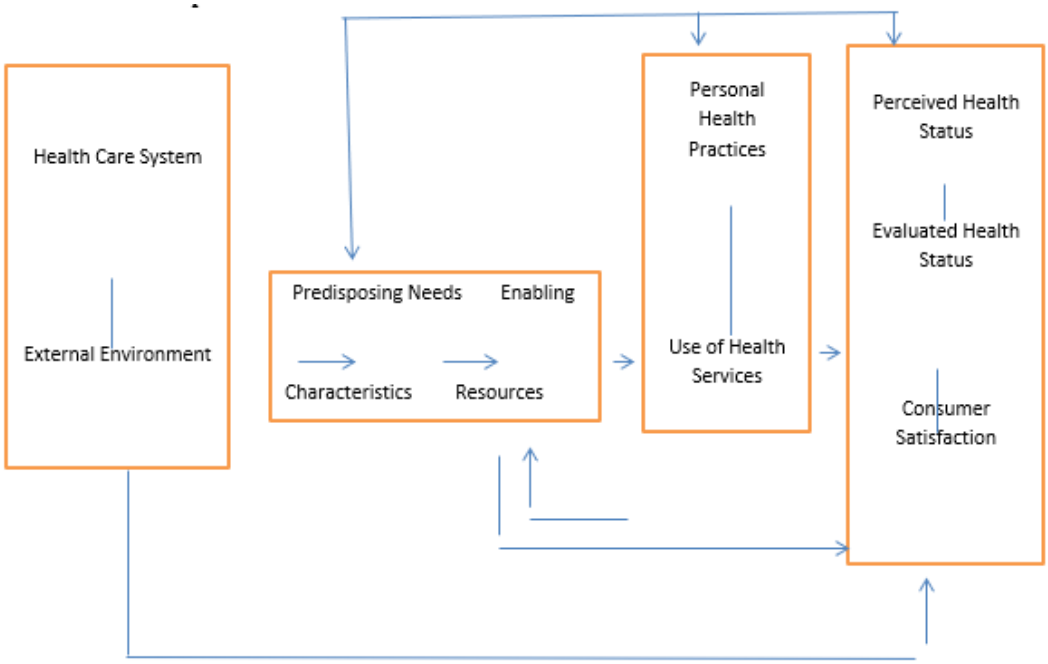


**Figure 2. 1 Andersen's Emerging Health Seeking Model Phase 4**

### 2.5.1 Predisposing Characteristics

These are socio-cultural traits of the patient that existed before the outbreak of the illness. The predisposing characteristics include the social structure, health beliefs and demographic variables. In a research conducted by Hueston, Geesey, and Diaz (2018), older teenagers (aged 17-19) had higher odds of beginning prenatal care in the first trimester than those between 15 and 16 years. Adolescents (those under the age of 18) and older women (those over the age of 34) were the least likely to seek prenatal care. Pallikadavath, Foss, and Stones (2015) observed similar findings in India, finding that prenatal check-ups were a common thing among women who got married while they were 19 years or above compared to those who married younger.

### 2.5.2 Marital Status.

In various research, adolescent marital status was observed to impact the use of prenatal care. Unmarried adolescents used prenatal care services less than married adolescents, according to Treffers, Olukoya, Ferguson, and Liljestrand (2019). In their study on inequalities in pregnancy outcomes in Canada based on marital and cohabitation status, Luo, Wilkins, and Kramer (2018) backed this up. They discovered that single moms were more likely than mothers in formal or common law marriages to have an unfavorable pregnancy outcome. Marriage or fatherhood was viewed as a proxy for higher family income and enhanced psychological support during pregnancy, and hence contributed to better outcomes (Partington, et al., 2019). Unmarried status was also linked to a delay in starting prenatal care, according to a study conducted in the United States by Hueston (2018).

### 2.5.3 Educational Level

Erasmus, Knight, & Dutton (2020) and Fagbamigbe & Idemudia (2017) share the same views that in several regions of the world, teenage educational levels have been shown to impact prenatal care usage. Teenage pregnancy was established to be very high among girls who had low education (Westoff, 2016). This is supported by research conducted by Hueston (2018), which discovered that low levels of education are among the variables linked to delayed prenatal care beginning in the United States. In their Kenyan study, Van Eijk (2016) showed that women with less than 8 years of schooling had sporadic visits (not more than 3 times) or did not visit ANC at all. In Ethiopia, a population-based nationwide research was conducted to explore the differences in socio demographic variables, pregnancy outcomes, and child survival between adolescent (those below 20 years) and those above 20-34 years (adult) women. When compared to adult

moms, a larger number of teenage mothers lived in rural regions, had no education beyond elementary level and were from the most disadvantaged economic index (Taffa & Obare, 2016). In comparison to adult moms, a smaller proportion of adolescent mothers (36.5 percent vs. 46.2 percent) received a prenatal visit. However, after adjusting for education level, place of residence, and wealth index, their inequalities in ANC usage and rate of delivery in health facilities were eliminated (Taffa & Obare 2016). Navaneetham & Dharmalingam 2015 were of the view that women married men who were holders of a degree were four times more likely than women whose husbands had no education to get a prenatal check-up. In Kassala, Eastern Sudan, a cross-sectional community-based research was conducted to assess prenatal care coverage and identify characteristics linked to inadequate antenatal care. Poor prenatal care coverage was linked to low levels of education of the (Ali, 2016).

### 2.5.4 Religion

The use of prenatal care has been demonstrated to be influenced by religion as a cultural element (Choudhury & Ahmed, 2011). Muslims were far more likely than pregnant women of other religions to seek normal prenatal treatment in India, according to a study performed in India by (Pallikadavath, 2015). Thus, it can be suggested that religious beliefs of the teenagers and their family members influences the health seeking behaviour. Some religious groups encourage the women to visit the clinic for ANC and the opposite is true for others.

## 2.6 Summary

The chapter evaluated the important literature on the determinants of teenage pregnancy. The views of various scholars have been compared and contrasted. In

some cases, the author also added her voice. The following chapter is on the research methodology employed to collect and analyse the data for the study.

# CHAPTER 3 METHODOLOGY

## 3.1 Introduction

The research approach and method used throughout the study are discussed in depth in this chapter. The study's environment, design, population, sampling criteria and techniques, data collecting methods, data analysis methodology, and ethical issues are all outlined.

## 3.2 The Research design

A mixed method methodology was utilized to identify and explain characteristics that influence pregnant adolescents' usage of prenatal care services. To acquire numerical data from the respondents, the researchers employed a self-developed questionnaire. In addition, the researcher described pregnant adolescents' use of prenatal care and identified characteristics that favorably or adversely impact pregnant adolescents' use of antenatal services in Chitungwiza District.

### 3.2.1 Study setting

The study was carried out at Chitungwiza Municipality’s four clinics thus, Seke north, Seke South, Zengeza 3 and St Mary’s clinic from the period of August 2020 to 2021 April. All pregnant women who registered for ANC during the period of August 2020 and April 2021 were part of the study. The data was collected from the postnatal wards after delivery and during the first visit to the clinics for vaccination of new-born.

### 3.3 Population and Sampling

#### 3.3 .1 Study population

Between January 2020 and April 2021, the research sample consisted of teenage mothers who attended ANC at Chitungwiza Municipality Clinics. The participants in this study were adolescent females in the ANC wards and those who had their first immunization at the ANC.

To choose study participants, a nonprobability (nonrandom) sampling technique was adopted. The convenient sampling approach was utilized, in which respondents were included in the research because they happened to be at the right place at the right time.

The non-random sample approach may generate bias in participant selection, however it was chosen due to data collecting restrictions and a lack of a valid sampling frame in the research region. Adolescent moms who attended ANC in Chitungwiza municipality's four clinics and adolescents' mothers who birthed in the postnatal ward made up the research sample. Participants in the research must be adolescent moms who have completed the written consent and accent forms.

#### 3.3.2 Inclusion criteria

The research's inclusion criteria were as follows: teenage moms aged 10 to 19, Chitungwiza district residents at the time of the study, Adolescent mothers who were admitted to the postnatal ward or attended the ANC clinic during the study period, adolescent mothers who signed informed consent to participate in the study for those aged 19 and under the age of 18, and adolescent mothers who signed an accent form by their parents or guardians for those aged under 18.

### 3.3.3 Exclusion criteria

Women above the age of 19 even if they are pregnant were excluded from the study

### 3.3. 4 Sample size calculation

The following sample size formula was used to estimate the sample size.

$$n = \frac{zpq}{d\,2}$$

Where z is the z-score and = 1.96 is the 95% CI, p is the rate of prevalence, d is the standard error (0.05) and n is the target sample for this study.

Using an estimated prevalence of pregnant women in Chitungwiza of 19% the calculated sample size is 205 respondents.

### 3.3.5 Sampling procedure

The researcher identified her participants at the health facilities who have come for ANC services.

### 3.4 Data Collection Instruments

The questionnaires used specifically for the study to collect data. As part of the procedure, the researcher used both closed and open-ended questions. The questionnaire was translated into Shona the language that is easily understood by all Chitungwiza respondents. The questionnaires was subjected to the midwives and sisters in charge and those with experience of running antenatal care services for critical review and to the Chitungwiza ethics committee.

### 3.4.1 Dependent variables

The dependent variable was utilization of antenatal services being represented by the number of times the adolescent visited the ANC. The participants were required to state the number of visits they made to the clinic to seek ANC services.

### 3.4.2 Independent

The independent variables were household income, distance to nearest ANC, waiting period at clinic on first visit, family support, marital status, pregnancy intention and level of completed education

## 3.5 Pilot Study

The Zengeza 3 clinic hosted a pilot study to construct and evaluate the suitability of research equipment and determine the viability of the project. Experts, including experienced clinicians and registered nurses, were requested to check the validity of the instruments by looking at them and confirming that they are measuring the construct that they are designed to measure. Practitioners with expertise in the field were asked to rate the items on the questionnaires on a scale of important to not important to extremely important. To guarantee clarity, the instruments were pretested during the pilot project by offering 10 adolescent girls in Chitungwiza district the opportunity to complete them in order to determine the clarity of the questions and eliminate ambiguities. The research will not cover the moms of adolescent children.

## 3.6 Data Collection Procedure

Following the birth procedure, the collection was done in the postnatal ward. The adolescent mother's verbal agreement to participate in the research is obtained by

a nurse midwife. After the nurse agreed to participate, she was given a questionnaire to complete anonymously before being discharged from the clinic. The completion of the questionnaire did not interfere with the scheduling of postnatal care for the mother and infant, such as breastfeeding counselling, care of the perineum or surgical wound, and new-born vaccine. Before the woman was discharged, the nurse midwife would review the information obtained in the questionnaire on some of the study's main features using the prenatal card. Adolescent mothers who were willing to participate in the 10th day baby examinations and filled out the consent and accent forms were asked to fill out the questionnaires. Once the questionnaires were completed, an attendant from the reproductive and child health clinic checked the information collected in the questionnaires using the antenatal card. If there is a mismatch, the mother will be contacted for clarification before entering the clinic. The instrument was coded in Google Forms and sent out to participants to complete using their mobile devices to safeguard the participants.

### 3.7 Analysis and Organization of Data

The information obtained from the study participants was entered and stored into Microsoft Excel sheet. IBM SPSS v26 was used to analyse the data. Prior to full analysis, data cleaning and coding was conducted. After the coding the data was then transferred into the computer for statistical analyses. Descriptive analysis of data was done using frequencies and percentages. Tables were used to visualize the results of the study. After checking for outliers and multicollinearity, a multiple linear regression model was developed to evaluate the effects of the various factors on utilization of ANC services by adolescent mothers.

### 3.8 Ethical Considerations

The survey would be done in an anonymous manner. To protect secrecy, respondents' names were replaced with serial numbers. Each participant completed an informed consent form as a condition of participation. The goal of the study, its advantages to pregnant women, and the fact that the option to participate or not participate would have an impact on the quality of services provided to the particular mother or her infant were all highlighted on the permission form. The study also guaranteed the right to fair treatment; participants were chosen based on the study's inclusion criteria, and responders were treated properly throughout the investigation.

The participants were not expected to suffer any damage as a result of the study, and the permission form made it clear that they had the option of not responding to any questions that might cause them social or psychological distress.

The proposal was examined by the Chitungwiza ethics committee, and the study participants gave written informed permission. The questionnaires will be kept under lock and key and destroyed once the findings have been disseminated. The Chitungwiza Municipality Health Department granted permission to conduct the study.

### 3.9 Summary

This chapter outlined the steps followed by the researcher to conduct the research. The chapter evaluated the study design, population and sample size as well as the sampling techniques adopted. The data collection techniques as well at the

research instruments were also highlighted. The collected data was coded and analysed in IBM SPSS v26. The chapter following chapter looks at the data presentation and analysis.

# CHAPTER 4 DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

## 4.1 Introduction

After collecting the required data, the next step was to clean the data and perform preliminary analysis followed by final data analysis. In this chapter, the researcher presents, analyzes, and discusses the results of the study. Based on the structure of the research instrument, demographic results are presented first. Later, the chapter brings to the fore the major findings on the various factors influencing the utilization of antenatal services by adolescent mothers in Chitungwiza, Zimbabwe. Finally, a multiple linear regression model was developed, and the results were compared with empirical findings from other scholars.

## 4.2 The response rate for the study

The respondents for this study were classified by clinic to make sure that all four municipality clinics in Chitungwiza District are represented. The results are shown in table 4.1 below.

**Table 4. 1 Response rate by clinic**

| Clinic | Target Sample (n) | Actual sample (n) | Response rate |
|---|---|---|---|
| Zengeza | 55 | 39 | 71% |
| Seke South | 50 | 48 | 96% |
| Seke North | 50 | 39 | 78% |
| St Marys | 50 | 34 | 68% |
| **Total** | **205** | **160** | **78%** |

*Source: Calculations in IBM SPSS v 26.*

In this study, the overall response rate was 78%. The research instrument (questionnaire) was first tested for clarity of items before final deployment to respondents. This ensured that all questions were easy to understand to most of the respondents. As noted in the previous chapter, the instrument was coded and sent out to respondents using Google Forms thereby avoiding contact with respondents since the data was collected during the COVID-19 pandemic era. Thus, respondents could complete the questionnaire in the comfort of the homes.

### 4.3 Respondents by demographic information

This section presents the results of the variables analyzed using univariate analyses. These variables are location, religion, who attended the respondent at the clinic, marital status, level of completed education and source of water. The results of these variables are presented and discussed below.

#### 4.3.1 Respondents by location

As depicted in table 4.2 below, the highest proportion of participants indicated that their location was rural, followed by urban and peri urban. These results suggest that adolescent mothers were found in all the respective three locations. It can also be argued that sexual activity was high amongst young girls in Zimbabwe regardless of location. The challenges brought about by the covid-19 pandemic could be one major factor contributing towards early pregnancies.

#### 4.3.2 Religion of the respondents

Religion was also another demographic factor considered by this study. Most of the respondents indicated that they were Christians while the rest fell in other religious categories. Religion influences the behavior of children in many ways as reported in previous studies. Religion can also be a source of positive teachings

towards the behavior of girls. While religion has been known to provide positive teachings to girls, there are other factors that have a negative impact on the life of girls in society such as drugs, alcohol abuse and other activities.

### 4.3.3 Marital status of the respondents

Most of the respondents in this study indicated that they were married while the rest fell in other marital status categories. It can also be noted that about 5% of the respondents reported that they were cohabiting. For those who are not married, 20% each reported that they were single or divorced. These results suggest about 40% lack of support systems among adolescent mothers in the district. If the mother does not have someone to support her during pregnancy, chances are high that she would engage in prostitution to earn a living.

### 4.3.4 Source of care at the clinic

Respondents were also asked who attended them on their first visit to the antenatal clinic. Most of the adolescent mothers indicated that they were attended by a nurse-midwife and the remainder by a doctor. Results in table 4.2 below reveal a worrisome shortage of medical doctors in Zimbabwe. In this case, adolescent mothers will only be attended by a medical doctor if there is a problem which needs the attention of a specialist gynecologist. This study argues that increasing the number of specialist medical doctors in the district would assist in the prevention of pregnancy and delivery complications.

### 4.3.5 Completed level of education of the respondents

Three categories for the level of education of the respondents were considered. Table 4.2 above shows that there were equal proportions for those who were at secondary level and above; and those below. At the other extreme, the lowest

proportion (about 13%) reported that they had reached college or university level. The major reason for the increase in the proportion of adolescent mothers in the district could be because of early dropout from school. This study argues that the responsible authorities should look further into the details why the adolescent mothers reported lower levels of education.

### 4.3.6 Source water of the respondents

The source of water of the respondents was another demographic factor considered in this study. The source of water is an indication of the lifestyle of adolescent mothers in Zimbabwe. The greatest proportion, about 28%, indicated that they get their water from covered wells. About 22% of the respondents reported that they had access to tap water. These results suggest that the populations in rural, urban and the peri-urban are highly likely to be exposed to water borne diseases such as typhoid and diarrhea.

**Table 4. 2 Demographic characteristics of participants**

| | | N=160 | N (%) |
|---|---|---|---|
| Location | Urban | 53 | 33.1 |
| | Peri-urban | 43 | 26.9 |
| | Rural | 64 | 40.0 |
| Religion | Christianity | 132 | 82.5 |
| | Muslim | 7 | 4.4 |
| | ATR | 10 | 6.3 |
| | Other | 11 | 6.9 |
| Marital Status | Single | 32 | 20.0 |
| | Married | 88 | 55.0 |
| | Divorced | 32 | 20.0 |
| | Co-habiting | 8 | 5.0 |
| | Widowed | 0 | 0.0 |
| Completed education | No formal education | 32 | 20.0 |
| | Primary | 48 | 30.0 |
| | Secondary | 60 | 37.5 |
| | College/University | 20 | 12.5 |
| Source of water. | River | 26 | 16.3 |

| | | | |
|---|---|---|---|
| | Spring (protected) | 26 | 16.3 |
| | Spring (unprotected) | 18 | 11.3 |
| | Well (covered) | 44 | 27.5 |
| | Well (uncovered) | 11 | 6.9 |
| | Tap (public) | 15 | 9.4 |
| | Tap (domestic) | 20 | 12.5 |
| Source of care during clinic visits | Doctor | 25 | 15.6 |
| | Nurse-midwife | 135 | 84.4 |

*Source: Calculations in IBM SPSS v 26.*

### 4.4 Descriptive statistics

Since some items were classified as scale variables in IBM SPSS, descriptive statistics were obtained as shown in table 4.3 below. The total number of participants who completed the instrument was 160. All the analysis performed was based on this valid sample size. The average number of visits was 4.8. As stated in the previous chapters, the WHO guidelines recommend a minimum of 4 visits during pregnancy. Therefore, the number of visits for adolescent mothers was slightly above average. If more efforts could be put into educating the adolescent mothers on the importance of increasing visits, chances are high that this figure would improve. The age of the participants was between 15 and 19 years with a mean of 17.45 and a standard deviation of 1.45. It can be noted that some girls get pregnant as early as at 15 years. Early age pregnancies usually result in complications if not properly managed. The measures of socioeconomic status shown in table 4.3 above included number of children in families under 16, personal income, household income, number of people staying at the same house and the number of the rooms being used at the house. These results paint a very poor picture concerning the socio-economic status of the participants of the study.

This study argues that most of the adolescent mothers were poverty stricken since the average monthly household income was about ZWL10 000 (about USD110) for an average family of 3. Due to the rise in the cost of living in Zimbabwe, the adolescent mothers would not be able to buy other necessary medicines and supplements. With regards to previous pregnancies, it seems the majority of the adolescent women were on their first pregnancy. Most of the respondents confirmed their pregnancies at an average of 8 weeks of gestational period. The average distance travelled to the nearest clinic was about 7.6 kilometers.

**Table 4. 3 Descriptive statistics**

| | N | Min | Max | Mean | Std. Dev |
|---|---|---|---|---|---|
| Number of visits (nvis) | 160 | 1.0 | 8.0 | 4.8 | 2.371 |
| Age | 160 | 15.0 | 19.0 | 17.5 | 1.453 |
| Children Under 16 | 160 | .0 | 4.0 | 1.76 | 1.407 |
| Personal Income | 160 | 1.0 | 8.0 | 4.3 | 2.356 |
| Household Income | 160 | 4.0 | 17.0 | 10.6 | 4.158 |
| Persons in House | 160 | 1.0 | 6.0 | 3.1 | 1.631 |
| Rooms in House | 160 | 1.0 | 4.0 | 3.0 | .816 |
| Previous Pregnancy above 28 weeks | 160 | .0 | 1.0 | .48 | .501 |
| Pregnancy Confirmation Time | 160 | 5.0 | 14.0 | 8.0 | 2.379 |
| Distance to clinic | 160 | 2.0 | 12.0 | 7.6 | 2.735 |
| Valid N (listwise) | 160 | | | | |

*Source: Calculations in IBM SPSS v 26.*

### 4.5 Variable development

To conduct multivariate analysis, variable development was performed using the details in table 4.4 below.

**Table 4. 4 Variable development process**

| Variable | Purpose | Development & explanation |
|---|---|---|
| Number of visits (nvis) | Dependent variable | The number of visits has been used as the proxy for utilization of antenatal services. The higher the number of visits, the greater the adolescent's utilization. |
| Household Income (hhinc) | (Enabling factor/resource) Independent variable | The reported average household income has been used as a measure of wealth (socio economic status). |
| Distance (dist) | (Enabling factor/resource) Independent variable | The distance travelled from place of residence to local antenatal clinic. |
| Age1 | (Predisposing needs) Independent variable | Age was dummy coded into two groups as follows: (1 if less than 18 years and 0 if between 18 and 19 years). |
| Waiting time (wait) | (Enabling factor/resource) Independent variable | The amount of time taken before being served at the clinic on first visit. |
| Education (edu) | (Predisposing needs) Independent variable | Education was dummy coded into two groups as follows: (1 for secondary and above, 0 if less than secondary,) |
| Pregnancy intention (pint) | (Personal health practice) Independent variable | Pregnancy intention was dummy coded into two groups as follows: (1 if planned, 0 if not planned,) |
| Marital status (marit) | (Predisposing needs) Independent variable | Marital status was dummy coded into two groups as follows: (1 if married, 0 otherwise) |
| Family support (fmsup) | (Enabling factor/resource) Independent variable | Family support was dummy coded into two groups as follows: (1 if accompanied to clinic, 0 otherwise) |

*Source: Calculations in IBM SPSS v 26.*

### 4.6 Multiple linear regression analysis results

This section presents and analyses the results of the multiple linear regression model developed for this study. Multiple linear regression analysis enabled the research to determine the effect of each predictor variable on the dependent variable. Before running the model, it was necessary to check if the explanatory variables suffered from multicollinearity. The collinearity statistics are shown in table 4.5 below.

**Table 4.5 Collinearity statistics**

| | | Collinearity Statistics | |
|---|---|---|---|
| **Model** | | **Tolerance** | **VIF** |
| 1 | age1 | .839 | 1.192 |
| | fmsup | .717 | 1.396 |
| | marit | .741 | 1.349 |
| | pint | .680 | 1.470 |
| | edu | .780 | 1.282 |
| | hhinc | .253 | 3.958 |
| | dist | .250 | 3.996 |
| | wait | .772 | 1.296 |

a. Dependent Variable: nvis

*Source: Calculations in IBM SPSS v 26.*

The Variance Inflation Factor (VIF) and the Tolerance Statistic highlight whether a predictor has a strong linear relationship with the other predictors. Collinearity

is identified if the largest VIF is greater than 10 (or the Tolerance below 0.1) (Sage, 2019). Results in table 4.5 suggest that collinearity was not a problem. Therefore all the independent variables were adopted in the multiple linear regression.

### 4.6.1 Model Summary

The results presented in tables 4.5 and 4.6 below show the model diagnostic test results. The R-square and the Adjusted R-square were 0.95 (95) and 0.947 (94.7) respectively. Thus, using the adjusted R-square as the measure of explained variation, approximately 94.7 of the variation in the number of visits was due to effects of the independent variables as a set. On the other hand, 5.3 of the variation in the number of days was due to other factors. The overall F-statistic was 358.64 ($p<0.05$) suggesting a statistically significant multiple linear regression model.

**Table 4.6 Model summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .975[a] | .950 | .947 | .545 |

a. Predictors: (Constant), edu, pint, age1, wait, dist, marit, fmsup, hhinc

*Source: Calculations in IBM SPSS v 26.*

### 4.6.2 Analysis of Variance (ANOVA)

**Table 4. 7 Analysis of variance**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 852.722 | 8 | 106.590 | 358.643 | .000[b] |
| | Residual | 44.878 | 151 | .297 | | |
| | Total | 897.600 | 159 | | | |

a. Dependent Variable: nvis

b. Predictors: (Constant), edu, pint, age1, wait, dist, marit, fmsup, hhinc

*Source: Calculations in IBM SPSS v 26.*

### 4.6.3 Multiple linear regression coefficients

Using the unstandardized regression coefficients, the multiple linear regression model could be stated as follows:

$$nvis = 4.23 + 0.320\,hhinc - 0.358\,dist - 0.082\,wait - 0.55\,age1 - 0.381\,fmsup + 0.519\,marit + 0.404\,pi$$

Model (1) is the multiple linear regression model developed for this research study. The respective regression coefficients show the relationship between each predictor variable and utilization of antenatal services by adolescent mothers. These results are interpreted and discussed below.

**Table 4. 8 Multiple linear regression coefficients**

| Model | Unstandardized Coefficients | Standardized Coefficients | *t* | Sig. |
|---|---|---|---|---|

| | | *B* | Std. Error | Beta | | |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 4.226 | .442 | | 9.6 | .000 |
| | hhinc | .320 | .021 | .56 | 15.5 | .000 |
| | dist | -.358 | .032 | -.41 | -11.3 | .000 |
| | wait | -.082 | .025 | -.07 | -3.2 | .001 |
| | age1 | -.550 | .096 | -.11 | -5.7 | .000 |
| | fmsup | -.381 | .102 | -.08 | -3.7 | .000 |
| | marit | .519 | .101 | .11 | 5.1 | .000 |
| | pint | .404 | .110 | .08 | 3.7 | .000 |
| | edu | .190 | .098 | .04 | 1.9 | .054 |

a. Dependent Variable: nvis

*Source: Calculations in IBM SPSS v 26.*

NB: ***B*** is the unstandardized regression coefficient and ***t*** is the student t-test statistic. The unstandardized coefficients show the effect of each predictor variable on utilization of antenatal care.

### 4.7 Impact of household income on utilization of antenatal services by adolescent mothers

Household income (hhinc) had a statistically significant positive regression coefficient of 0.32 with p-value < 0.05. Holding other things constant, a one unit increase in household income would result in the number of visits increasing by about 0.32 units. The implications of these findings are that the socio-economic status of the adolescent mothers has a significant impact on the number of visits. Chances are high that those with financial resources can afford to visit the clinics

and pay the required fees at any time during the pregnancy and the opposite is true.

### 4.8 Distance to clinic and utilization of antenatal services by adolescent mothers

The regression coefficient for distance to clinic was -0.358 with p-value < 0.05. These results suggest a significant negative impact of distance on the number of visits to the antenatal clinic by adolescent mothers. This study argues that increasing the number of clinics probably in the form of satellite clinics may help to alleviate the challenge. Key informant number one had this to say:

> *The distance to the clinic is usually a major challenge especially in rural areas. Mothers find it difficult to walk for 20 km to access health services. In some parts of the district, transport is a challenge and people have no option other than walking to the clinic.*

### 4.9 Waiting period and utilization of antenatal services by adolescent mothers

The waiting period before being attended on the first visit had a statistically significant negative impact on the number of visits as shown by a slope coefficient of 0.082 with p-value <0.05. The implication of these results is that long waiting times at the clinics are a deterrent factor as far as the number of visits are concerned. This is a sign of poor service from health care givers. If services

could be done in a short space of time, adolescent mothers will utilize the antenatal clinic more often.

### 4.10 Influence of age on utilization of antenatal services by adolescent mothers

The regression coefficient age was 0.55 with p-value < 0.05 suggesting a statistically significant impact of age on utilization of antenatal services by adolescent mothers in Chitungwiza. More specifically, the number of visits for mothers below 18 years of age were significantly less than for those above 18 years. It can be argued that younger adolescent mothers do not access antenatal services very often. This age group should be targeted for activities such as social work and counselling.

### 4.11 Family support and utilization of antenatal services by adolescent mothers

Family support was dummy coded to differentiate mothers who were accompanied to the clinic from those who came on their own. As shown in equation (1) above, the regression coefficient was -0.381 (p-value < 0.05). Family support was found to have a significant negative impact on the utilization of antenatal services. In this case, the number of visits for those individuals who reported to have been accompanied to the clinic by a relative were significantly lower than for those who went to the clinic on their own. While family support is usually expected to have a positive influence on utilization, surprisingly in this

study it showed a negative effect. Using data obtained from the interviews, respondent number 4 had this to say:

> *Usually, families do not tolerate early pregnancies especially if the girl child was supposed to be in school. Family support would be very low when parents are usually not happy. As a result, adolescent mothers prefer to visit the clinic on their own without assistance from any family member. Culturally, girls are rejected by their own family if the details of the pregnancy are not clear. It is a taboo in the Zimbabwean culture to keep a pregnant girl child at home when the husband is not known. Some parents tell the girl child to look for the father of the pregnancy.*

### 4.12 Marital status and utilization of antenatal services by adolescent mothers

For the purposes of regression analysis, marital status was dummy coded into two variables, that is those married and those not married. The results suggested that the number of visits for those who are married were significantly higher than for those who were not married. Chances are high that if the adolescent mother has support from a spouse, she is likely to frequent the antenatal clinic. This study argues that being married brings stability, a sense of peace and stability on the part of the adolescent mother. Additionally, if one is married, the spouse has a responsibility of making sure that the mother visits the antenatal clinic. With regards to marriage, key informant number 2 had this to say:

*The reason why adolescent mothers do not utilize the antenatal clinic is due to marital status. Those married get support from their husbands in the form of the much needed financial and medical assistance. Those not married lack strong support systems. Some adolescent mothers would have been divorced and this complicates the whole story. As a result, visiting the antenatal clinic would be done at later stages of the pregnancy normally in the final trimester.*

### 4.13 Pregnancy intention utilization of antenatal services by adolescent mothers

Pregnancy intention was also dummy coded into planned and not planned pregnancy. The number of visits for those who reported planned pregnancies were significantly higher than those with unplanned pregnancies. Thus, the intention of getting pregnant had a significant impact on the number of visits made by adolescent mothers. This study also noted that unplanned pregnancies among adolescent mothers are one reason for depressed utilization of antenatal services. These results were also synthesized by respondent number 3 who noted that:

*Since the beginning of the COVID-19 pandemic, there has been an increase in the number of unplanned pregnancies, especially among the adolescents. These adolescents find it difficult to come for*

*antenatal services as a result of stigma and discrimination they face in the society. Campaigns should be done to teach these mothers that utilizing antenatal services early would ensure the safety and health of both the mother and the child.*

### 4.14 Education and utilization of antenatal services by adolescent mothers

Education was dummy coded to reflect those who were at and above secondary level and those below. The regression coefficient for education was 0.19. However, this coefficient was not statistically significant (p-value > 0.05). More specifically, the number of visits for both the groups was not significantly different. In this case, education did not have a significant impact on the number of visits. Chances are high that the risk-taking behavior among the adolescent is the same despite the level of education.

### 4.15 Adolescent mothers' satisfaction with service delivery by clinic

The study also evaluated the level of satisfaction with service delivery by clinic. Considering the level of satisfaction, about 58 of the respondents suggested that the level of satisfaction with service delivery at the clinics was very low. On the other hand, 33 and 10 suggested that the level of satisfaction was moderate and high respectively. As reflected in the instrument, shortage of drugs, unfriendly health service providers and lack of social support are major contributing factors to poor satisfaction with service delivery at all four clinics in the district.

**Table 4. 9 Satisfaction with service delivery by clinic**

| | | | Satisfaction Level | | | |
|---|---|---|---|---|---|---|
| | | | Low | Moderate | High | Total |
| Clinic | Zengeza | Count | 20 | 13 | 6 | 39 |
| | | within Clinic | 51.3 | 33.3 | 15.4 | 100.0 |
| | Seke South | Count | 23 | 20 | 5 | 48 |
| | | within Clinic | 47.9 | 41.7 | 10.4 | 100.0 |
| | Seke North | Count | 25 | 10 | 4 | 39 |
| | | within Clinic | 64.1 | 25.6 | 10.3 | 100.0 |
| | St Marys | Count | 24 | 9 | 1 | 34 |
| | | within Clinic | 70.6 | 26.5 | 2.9 | 100.0 |
| Total | | Count | 92 | 52 | 16 | 160 |
| | | within Clinic | 57.5 | 32.5 | 10.0 | 100.0 |

*Source: Calculations in IBM SPSS v 26.*

## 4.16 Summary

Being the second last chapter, an analysis of the major findings on factors affecting the utilization of antenatal services by adolescent mothers was conducted. Demographic variables such as location, marital status, religion, source of water, source of care at clinic, age, education of the respondents was important in this study. The impact of predisposing, enabling factors and health

facilities on the utilization of antenatal services by adolescent mothers was analyzed through use of a multiple linear regression model. Chapter 5 summarizes and concludes the research project. Recommendations for management and various stakeholders together with recommendations for further studies shall also be given in the final chapter.

# CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Introduction

Chapter 5 focuses on the summary of findings, conclusions, and recommendations. In this chapter, the findings on the objectives stated in chapter 1 are evaluated. Based on the summary of findings presented, conclusions were drawn and briefly compared with existing literature on the adolescent mothers' utilization of antenatal care services. The chapter ends by means of policy recommendations and recommendations for further study.

## 5.2 Summary of Findings

The main objective of the study was to evaluate the utilization of antenatal services by adolescent mothers in Chitungwiza, Zimbabwe. The following are the major findings of the research study:

### 5.2.1 The impact of household income on utilization of antenatal services by adolescent mothers

The study established that household income had a significant effect on the utilization of antenatal services by adolescent mothers in Chitungwiza ($p<0.05$). Holding other things constant, a one unit increase in household income would result in the number of visits increasing by about 0.32 units.

### 5.2.2 Distance to clinic and utilization of antenatal services by adolescent mothers

The study established that longer distances deter adolescent mothers from utilizing antenatal services in Chitungwiza. The distance to the nearest clinic had a significant negative influence on utilization of antenatal services (p-value<0.05). It was also noted that some mothers also travel for about 20kms to their nearest clinic.

### 5.2.3 Waiting period and utilization of antenatal services by adolescent mothers

The study found that waiting period before one is served on first visit has a significant negative influence on the utilization of antenatal services by adolescent mothers in Chitungwiza (p-value < 0.05). The study also noted that clinics usually delay their service delivery not only to adolescent mothers but to patients in general.

### 5.2.4 Impact of age on utilization of antenatal services by adolescent mothers

The study established that age had a significant influence on the utilization of antenatal services in Chitungwiza (p-value < 0.05). More specifically, the number of visits for mothers below 18 years of age were significantly lower than for those above 18 years. This study observed that mothers less than 18 years did not meet the number of required visits to the clinic.

### 5.2.5 Family support and utilization of antenatal services by adolescent mothers

Family support had a significant negative impact on the utilization of antenatal services. In this case, the number of visits for those individuals who reported to

have been accompanied to the clinic by a relative were significantly lower than for those who went to the clinic on their own. While family support is usually expected to have a positive influence on utilization, surprisingly in this study it showed a negative effect.

### 5.2.6 The impact of marital status on utilization of antenatal services by adolescent mothers

The study established that marital status had a significant positive influence on the number of visits made to the clinic by the adolescent mother (p-value < 0.05). The results suggested that the number of visits for those who are married were significantly higher than for those who were not married. Chances are high that if the adolescent mother has support from a spouse, she is likely to frequent the antenatal clinic.

### 5.2.7 The impact of pregnancy intention on utilization of antenatal services by adolescent mothers

The study established that pregnancy intention had a significant influence on the number of visits made by adolescent to the antenatal clinic. The number of visits for those who reported planned pregnancies were significantly higher than those with unplanned pregnancies. Thus, the intention of getting pregnant had a significant impact on the number of visits made by adolescent mothers. This study also noted that since the beginning of the COVID-19 pandemic, there has been an increase in the number of unplanned pregnancies, especially among the adolescents. These adolescents find it difficult to come for antenatal services because of stigma and discrimination they face in the society.

### 5.2.8 Impact of education on utilization of antenatal services by adolescent mothers

The study established that the level of completed education did not have a significant influence on the number of visits made to the antenatal clinic in Chitungwiza (p-value > 0.05). The number of visits for those above and below secondary level were not significantly different from each other.

### 5.2.9 Adolescent mothers' satisfaction with service delivery by clinic

The study noted that most of the adolescents (58) were dissatisfied with the services offered by the antenatal clinics in Chitungwiza. Among other factors, shortage of drugs, unfriendly health service providers and lack of social support are major contributing factors to poor satisfaction with service delivery at all four clinics in the district.

## 5.3 Conclusions

Based on the findings presented above, the research study made the following conclusions:

### 5.3.1 Conclusions on household income and utilization of antenatal services by adolescent mothers

The study concluded that the household income of the adolescent mothers has a significant impact on the number of visits. Chances are high that those with financial resources can afford to visit the clinics and pay the required fees at any time during the pregnancy and the opposite is true.

### 5.3.2 Conclusions on distance to clinic and utilization of antenatal services by adolescent mothers

The study concluded that, the longer the distance to the clinic, the less one utilizes antenatal care services. Adolescent mothers find it difficult to access medical attention because of the distances they have to travel for long distances travel Chitungwiza. This study argues that increasing the number of clinics probably in the form of satellite clinics may help to alleviate the challenge.

### 5.3.3 Conclusions on waiting period and utilization of antenatal services by adolescent mothers

It was also concluded that the longer the waiting period on first visit, the lower the utilization of antenatal services. Longer waiting time before one is attended at the clinics are a deterrent factor as far as the number of visits are concerned. This is a sign of poor service from health care givers. If services could be done in a short space of time, adolescent mothers will utilize the antenatal clinic more often.

### 5.3.4 Conclusions on age and utilization of antenatal services by adolescent mothers

The study concluded that the number of visits for mothers below 18 years of age were significantly less than for those above 18 years. Chances are high that the adolescents below 18 years face challenges in coming in disclosing their pregnancy, hence the reduced number of visits. In some circumstances, they only show up for antenatal care when they are almost due for delivery.

### 5.3.5 Conclusions family support and utilization of antenatal services by adolescent mothers

The study concluded that adolescent mothers are not receiving family support in Chitungwiza. Chances are high that our cultural background makes it difficult to assist the girl child especially when one gets pregnant without following the proper marriage channels. In this case, the adolescent becomes an outcast in the family.

### 5.3.6 Conclusions on marital status and utilization of antenatal services by adolescent mothers

The study further concluded that married adolescents are more lily to increase their visits to the clinic as compared to those who are not. Being married brings peace and stability on the part of the adolescent mother. Additionally, if one is married, the spouse has a responsibility of making sure that the mother visits the antenatal clinic. Mothers with complicated marriages find it difficult to frequently visit the clinic for antenatal care since they lack support from spouses.

### 5.3.7 Conclusions on pregnancy intention and utilization of antenatal services by adolescent mothers

The research concluded that the pregnancy intention or the nature of the pregnancy had a significant influence on the number of visits made by the adolescent mother to the antenatal clinic. This study also noted that unplanned pregnancies among adolescent mothers are one reason for depressed utilization of antenatal services.

### 5.3.8 Conclusions on the impact education on utilization of antenatal services by adolescent mothers

The study concluded that the level of completed education did not have a significant influence on the number of visits to the antenatal clinic. More specifically, the number of visits for both the groups was not significantly different. Chances are high that the risk-taking behavior among the adolescent is the same despite the level of education.

### 5.3.9 Conclusions on adolescent mothers' satisfaction with service delivery by clinic

Adolescent mothers have shown high levels of dissatisfaction with service delivery from antenatal clinics in Chitungwiza. Poor services are being offered n the district as a result of many factors, chief among them being shortage of drugs and qualified personnel.

## 5.4 Recommendations

Recommendations for this study are broken down into policy recommendations and recommendations for further study.

### 5.4.1 Policy recommendations

- Parents have the mandate to make sure that they provide all the needed material resources and support to the girl child. Financial resources reduce capacitate adolescent mothers to visit antenatal clinics frequently.
- The study also recommends that authorities in Chitungwiza should come up with new ways of reaching to adolescent mothers. For example, establishment of satellite or mobile clinics in the district could shorten the

distance which mothers travel. In the end, this encourages one to seek medical attention each time they have an appointment.

- Authorities in local clinics should give priority to mothers seeking antenatal services and avoid delaying service delivery. Increasing the number of midwife nurses at the clinics can go a long way in reducing the time it takes for mothers to get served.
- Provision of counseling services to adolescent mothers on the important of early registration and frequent visits to antenatal clinics should be put in place. Adolescent mothers less than 18 years proved to make less visits when compared to other groups. Hence, this study recommends that parents and other relatives should make it easier for adolescents to disclose their pregnancy.
- Parents and other members of the community are encouraged to nature the girl child on the value of marriage. Churches and other religious groups also play a role in making sure that the girl child has been taught to value marriage. Spouses also support the adolescent mother when it comes to the number of visits they have to make to the clinic.
- Provision of family planning materials to the youths could go a long way in reducing unplanned pregnancies. Usually, when the pregnancy is not planned, the mother does not visit the clinic as required and this would increase the chances of complications during birth. This study suggests that family planning materials should be made accessible to adolescents.

- Programs which aim to encourage usage of antenatal services by adolescents should target mothers regardless of their level of education. This is because the risk-taking behavior was almost similar among the adolescents apart from having completed secondary level or not.
- The local authorities should improve on service delivery in clinics. Availing of drugs and enough personnel would alleviate some of the delays being experienced at the local clinics.

### 5.4.2 Recommendations for further study

The study evaluated the factors which influence the utilization of antenatal care services by adolescents in Chitungwiza. Future research could include other districts in various provinces. Additionally, regional studies can assist in policy formulation and implementation as far as the girl child is concerned. Since this was a cross sectional study, longitudinal studies should be done to track if there are any changes, especially after policy interventions.

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## APPENDICES

**APPENDIX 1: English Questionnaire.**

ADOLESCENTS' UTILISATION OF ANTENATAL SERVICES AT CHITUNGWIZA DISTRICT

All information here with provided will be treated confidentially. It is not necessary to indicate your name in this questionnaire.

INSTRUCTIONS

1. Please answer all questions by providing an "X" in the box corresponding to the chosen alternative or by writing your opinion in the space provided.
2. Please answer all questions as honestly, frankly and objectively as possible.
3. Answer according to your own opinion and experience.
4. Please return the questionnaire by 2020 to 2021

| |
|---|
| Answer the questions by placing an X in the box corresponding to the alternative which is applicable to you or write down your responses in the space provided |

**SECTION A: DEMOGRAPHIC DATA**

1. How old are you?

**For official use**

| Age | Answer |
|---|---|
| 15 to19 years | 1 |
| 20 to 25 years | 2 |
| 26 to 30 years | 3 |
| 31 to 35 years | 4 |
| 1.5 36 to 40 years | 6 |
| 1.7 40 to 45 years | 7 |

**2. Residence?**

| | Answer |
|---|---|
| Urban | 1 |
| 2.2 Peri- urban | 2 |

**2. Indicate your religion**

| Religion | **Answer** |
|---|---|

| | |
|---|---|
| 3.2 Roman Catholic | 1 |
| 3.3 Lutheran | 2 |
| 3.4 Anglican | 3 |
| 3.5 Seventh Day Adventist | 4 |
| 3.6 Pentecostal Assemblies | 5 |
| 3.7 Jehovah's Witness | 6 |
| 3.9 Other Specify | 7 |
| Other specify | 8 |

**3. Indicate your marital status**

| | **Answer** |
|---|---|
| 4.1 Single | 1 |
| 4.2 Married | 2 |
| 4.3 Divorced | 3 |
| 4.4 Co –Habiting | 4 |
| 4.5 Other (specify) | 5 |

**5. What is your highest level of completed education?**

| | Answer |
|---|---|
| 5.1 Primary | 1 |
| 5.2 Secondary | 2 |
| 5.3 University College | 3 |
| 5.4 No formal education | 4 |

**6 What is the highest level of completed education of your husband/partner?**

| | Answer |
|---|---|
| 6.1 Primary | 1 |
| 6.2 Secondary | 2 |
| 6,3 University /College | 3 |
| 6.4 No formal education | 4 |
| 6.5 I do not have a husband/partner | 5 |

**7. How many children under sixteen years are living with you in the house?**

| | **Answer** |
|---|---|
| 7.1 None | 1 |
| 7.2 One | 2 |
| 7.3 Two | 3 |
| 7.4 Three | 4 |
| 7.5 Four | 5 |
| 7.6 Five | 6 |
| 7.7 Six and more | 7 |

**8. My personnel monthly income Zimbabwean $ RTGS**

| | Answer |
|---|---|
| 8.1 Less than 1000 | 1 |
| 8.2 1000-5000 | 2 |
| 8.3 5000-10 000 | 3 |
| 8.4 10 000-15 000 | 4 |
| 8.5 15 000-20 000 | 5 |
| 8.6 20 000- 25 000 | 6 |

| | |
|---|---|
| 8.7 More than 25 000 | 7 |

**9. Monthly Income of the household in Zimbabwean $ RTGS**

| | Answer |
|---|---|
| 9.1 Less than 1000 | 1 |
| 9.2 1000-5000 | 2 |
| 9.3 5000-10 000 | 3 |
| 9.4 10 000-15 000 | 4 |
| 9.5 15 000-20 000 | 5 |
| 9.6 20 000- 25 000 | 6 |
| 9.7 More than 25 000 | 7 |

**10 How many persons are living with you in your house?**

| | **Answer** |
|---|---|
| 10.1 None | 1 |
| 10.2 One | 2 |
| 10.3 Two | 3 |
| 10.4 Three | 4 |
| 10.5 Four | 5 |
| 10.6 Five | 6 |
| 10.7 Six and more | 7 |

**11. How many rooms do you have in your house?**

| | Answer |
|---|---|
| 11.1 None | 1 |

| | |
|---|---|
| 11.2 One | 2 |
| 11.3 Two | 3 |
| 11.4 Three | 4 |
| 11.5 Four | 5 |
| 11.6 Five | 6 |
| 11.7 Six | 7 |

**12 The source of water is…….**

| | **Answer** |
|---|---|
| 13.1 River | 1 |
| 13.2 Spring (unprotected) | 2 |
| 13.3 Spring (protected) | 3 |
| 13.4 Well (uncovered) | 4 |
| 13.5 Well (covered) | 5 |
| 13.6 Tap water (public) | 6 |
| 13.7 Tap water (domestic) | 7 |

**SECTION B ANTENATAL INFORMATION**

14. Please indicate how many pregnancies you have which have gone beyond 28 weeks.

| Number of pregnancies beyond 28 weeks and beyond | ANSWER |
|---|---|
| 14.1 One | 1 |

| | |
|---|---|
| 14.2 Two | 2 |
| 14.3 Three | 3 |
| 14.4 four | 4 |
| 14.5 Five and more | 5 |

15. Your intention to get pregnant with your last pregnancy.

| | ANSWER |
|---|---|
| 15.1 My last pregnancy was planned | 1 |
| 15.2 My last pregnancy was unplanned | 2 |

16. Your history of obstetric problems

| | Yes | No |
|---|---|---|
| 16.1 Previous Pregnancies | 1 | 2 |
| 16.2 Previous deliveries | 1 | 2 |
| 16.3 Abortions | 1 | 2 |
| 16.4 Curettages | 1 | 2 |
| 16.5 Low birth weight (LBW) | 1 | 2 |
| 16.6 Preterm deliveries | 1 | 2 |

| | | |
|---|---|---|
| | | |

17. Specify the type of contraception used before your pregnancy.

| | ANSWER |
|---|---|
| 17.1 Male condom | 1 |
| 17.2 Female condom | 2 |
| 17.3 Oral contraceptive pills | 3 |
| 17.4 Injectable | 4 |
| 17.5 Other (specify) | 5 |
| 17.6 I have not used contraception before getting pregnant | 6 |

18. When did you confirm pregnancy?

| | ANSWER |
|---|---|
| 18.1 Less than 2 months<br>‘ | 1 |
| 18.2 2-4 months | 2 |
| 18.3 More than 5 months | 3 |

**19. At what gestational age did you start attending antenatal clinic for the first time?**

**(Show antenatal card available)**

| | ANSWER |
|---|---|

| | |
|---|---|
| 19.1 Less than 4 times | 1 |
| 19.2 2-4 months | 2 |
| 19.3 5-7 months | 3 |
| 19.4 7-9 months | 4 |

20. How many times did you attend antenatal clinic services?

(Show antenatal card if available)

| | ANSWER |
|---|---|
| 20.1 Less than 4 times | 1 |
| 20.2 4-5 times | 2 |
| 20.3 More than 5 times | 3 |

21. Who attended to you during antenatal visits? (Source of care)

22. Who accompanied you to the clinic?

| | ANSWER |
|---|---|
| 22.1 Parent (mother/father ) | 1 |
| 22.2 Husband /partner | 2 |

| | |
|---|---|
| 22.3 Others (specify) | 3 |
| 22.4 More than one family member | 4 |
| 22.5 None | 5 |

23. Who supported you financially throughout your pregnancy?

| | ANSWER |
|---|---|
| 23.1Parent(mother/father) | 1 |
| 23.2 Husband | 2 |
| 23.3 Others/(specify) | 3 |

24. Do you have insurance to cover or cater for your health?

| | **ANSWER** |
|---|---|
| 24.1 Yes (Ask to show membership card) | 1 |
| 24.2 No | 2 |

25. How far is the antenatal clinic from your place of residence?

| | **ANSWER** |
|---|---|
| 25.1 Less than 1km | 1 |
| 25.2 1-5 km | 2 |
| 25.3 6-10 km | 3 |
| 25.4 More than 10km | 4 |

26. What did you do to get missed service?

| | ANSWER |
|---|---|
| 26.1Missed altogether | 1 |
| 26.2 Shift to another clinic/ hospital | 2 |
| 26.3 Forced to buy from my own pocket | 3 |
| 26.4 They were obtained in the same to clinic during follow-up visits | 4 |

Please indicate to what extent you agree with the statement below.

**Please use the following scale to tick appropriate answer**

| | |
|---|---|
| Strongly agree | 5 |

| | |
|---|---|
| | |
| Agree | 4 |
| Neutral (neither agree or disagree) | 3 |
| Disagree | 2 |
| Strongly disagree | 1 |

**27. Satisfaction with service delivery**

| | | | | |
|---|---|---|---|---|
| 27. 1The quality of antenatal care I care I received at the clinic was good | | | | |
| 27.2 The attitude of the service providers were good | **1** | **2** | **3** | **4** |
| 27.3The nurses were friendly | **1** | **2** | **3** | **4** |
| 27.4 I waited a short while before being helped | **1** | **2** | **3** | **4** |
| 27.5 The drugs/ vaccines were always available | **1** | **2** | **3** | **4** |
| 27.6 Social support was available | **1** | **2** | **3** | **4** |
| 27.7 All procedures and examinations were fully explained | **1** | **2** | **3** | **4** |
| 27.8 The danger signs and complications during pregnancy delivery was explained to me | **1** | **2** | **3** | **4** |
| 27.9 Essential items needed for delivery were explained to me | **1** | **2** | **3** | **4** |
| | | | | |

**28. Were you explained the anticipated mode of delivery (individualized birth plan)**

| | Answer |
|---|---|
| | |

| | |
|---|---|
| 28.1 Yes | 1 |
| 28.2 No | 2 |
| 29.3 | 3 |

**29. Any suggestions to improve antenatal service provision to adolescent mothers?**

**THANK YOU FOR YOUR PATICIPATION**

**APPENDEX 2: Shona Questionnaire**

**Donzvo retsvakurudzo ino ndere kutsvaka zvinokanganisa vana mai vakazvitakura kuuya kuchipatara kuzoongororwa pamuviri**

Tevedzerai zvinodikanwa

1. Munokumbirwa kuti mupindure mibvunzo yose muchiisa "X" mukabhokisi rinoenderana nezvamunobvurana nazvo kana kunyora mafungiro enyu mubhokisi imomo.

2. Munokumbirwa kuti mupindure mibvunzo yese muchireva chokwadi chenyu chose.

3. Pindurai mibvunzo zvichienderana nezvamakambosangana nazvo uye maonero enyu.

4. Munokumbirwa kuti mugodzosa bepa remubvunzo yetsvakurudzo kana mapedza kupindura.

**Chikamu chekutanga:**

| Wava nemakore mangani | Mhinduro |
|---|---|
| 1.1 Gumi nemashanu kusvika makumi maviri | 1 |
| 1.2 Makumi maviri kusvika makumi maviri nemashanu | 2 |

| | |
|---|---|
| 1.3 Makumi maviri nemasere kusvika makumi matatu | 3 |
| 1.3 Makumi matatu nerimwe kusvika makumi matatu nemashanu | 4 |
| 1.4 Makumi matatu nemasere kusvika makumi matatu nemana | 5 |
| 1.5 Makumi mana nerimwe kusvika makumi mashanu | 6 |
| | |

2. Munogara kupi

| | Mhinduro |
|---|---|
| 2.1Murokesheni | |
| 2.2 Mumaruwa ema Seke | |

**3. Chitendero chenyu**

| Chitendero chenyu | **Mhinduro** |
|---|---|
| 3.1 Muslim | 1 |
| 3.2 Roman Catholic | 2 |
| 3.3 Lutheran | 3 |
| 3.4 Anglican | 4 |
| 3.5 Seventh day Adventist | 5 |
| 3.7 Jehovah's Witness | 6 |
| 3.8 Zvimwe zvitendero | 7 |

| | |
|---|---|
| | |

**4. Ruzivo pamusoro pekuroorwa**

| | **Mhinduro** |
|---|---|
| 4.1 Muzvare | |
| 4.2 Wakaroorwa | |
| 4.3 Wakasiyana nemurume | |
| 4.4 Kubika mapoto | |
| 4.5 Zvimwe | |

**5. Dzidzo yemudzimai**

| | |
|---|---|
| 5.1 Puraimari | |
| 5.2 Sekondari | |
| 5.3 Yunivhesiti /Korichi | |
| 5.4 Hauna kumboenda kuchikoro | |
| | |

**6. Dzidzo yemurume**

| | |
|---|---|
| 6.1 Puraimari | 1 |
| 6.2 Sekondari | 2 |
| 6.3 Yunivhesiti/ Korichi | 3 |

| | |
|---|---|
| 6.4 Haana kumboenda kuchikoro | 4 |
| 6.5 Handina murume | 5 |

**7. Munogara nevana vangani vari pasi pemakore gumi nematanhatu**

| | **Mhinduro** |
|---|---|
| 7.1 Hapana | 1 |
| 7.2 Mumwechete | 2 |
| 7.3 Vaviri | 3 |
| 7.4 Vatatu | 4 |
| 7.5Vana | 5 |
| 7.6 Vashanu | 6 |
| 7.7 Vatanhatu zvichienda mberi | 7 |

**8. Muhoro wepamwedzi pamadhora emuZimbawe (RTGS)**

| | Mhinduro |
|---|---|
| 8.2 Churu zvichidzika | 1 |
| 8.3 Churu kusvika pazvuru zvishanu | 2 |
| 8.4 Zvuru zvishanu kusvika pagumi rezvuru | 3 |
| 8.5 Gumi rezvuru nerimwe kuzvika | 4 |

| | |
|---|---|
| pagumi rezvuru nezvishanu | |
| 8.6Gumi rezvuru nezvitanhatu kusvika pa zvuru makumi matatu | 5 |
| 8.7 Zvuru makumi matatu nemashanu kusvika pazvuru makumi mana | 6 |
| 8.7 Makumi mana kusvika makumi mana nemashanu ezvuru | 7 |

**9. Munogara nevanhu vangani mumba menyu**

| | Mhinduro |
|---|---|
| 9.1Hapana | 1 |
| 9.2 Mumwe chete | 2 |
| 9.3 Vaviri | 3 |
| 9.4 Vatatu | 4 |
| 9.5 Vashanu | 5 |
| 9.6 Vatanhatu zvichienda mberi | 6 |

**10 .Munogara makamuri mangani**

| | Mhinduro |
|---|---|
| 10.1 Hapana | |
| 10.2 Imwechete | |

| | |
|---|---|
| 10.2 Maviri | |
| 10.3 Matatu | |
| 10.4 Mana | |
| 10.5 Mashanu | |
| 10.6 Matanhatu zvichienda mberi | |

**11. Mvura yamunoshandisa munoiwana pai**

| | Mhinduro |
|---|---|
| 11.1 Murwizi | 1 |
| 11.2 Mudhamu | 2 |
| 11.3 Mutsime rakachengetedzwa | 3 |
| 11.4 Mutsime risina kuchengetedzwa | 4 |
| 11.5 Mumugodhi wakavharwa | 5 |
| 11.6 Mumugodhi usina kuvharwa | 6 |
| 11.7 Papombi | 7 |

**Chikamu Chepiri. Antenatal Information**

1.4Makazvitakura kangani mukapfuura mavhiki makumi maviri nemapfumbamwe

| | Mhinduro |
|---|---|

| | |
|---|---|
| 12.1 Kamwechete | 1 |
| 12.2 Kaviri | 2 |
| 12.3 Katatu | 3 |
| 12.4 Kana | 4 |
| 12.5 Kashanu zvichipfuura | 5 |

**13. Tarisiro yenyu yekuita nhumbu mushure mekunge mamboita imwe nhumbu**

| | **Mhinduro** |
|---|---|
| 13.1Pamuviri pangu pekupedzisira panga pakarongwa | 1 |
| 13.2 Pamuviri pangu pekupedzisira panga pasina kurongwa | 2 |

**14. Makamboita dambudziko here makazvitakura**

| | | | | | |
|---|---|---|---|---|---|
| 14.1 Pamuviri paka pfuura | Hongu | Kwete | N/A | | |
| 14.2 Pane mwana wanda kambosununguka | | | | | |
| 14.3 Pandakabva pamuviri | | | | | |
| 14.4 Curettages | | | | | |
| 14.5 Mwana akabarwa asina huremu hunotarisirwa | | | | | |
| 14.6 Mwana akabarwa asina kusvika | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 14.7 N/A | | | | | |

**15. Mishandisa chii pane zvinotevera kudzivirira pamuviri**

Maishandisa mhando ipi yekudzivirira pamuviri musati mazvitakura

| | **Mhinduro** |
|---|---|
| 15. 1 Makondomu echirume | 1 |
| 15.2 Makondomu echikadzi | 2 |
| 15.3 Mapiritsi | 3 |
| 15.4 Kubaiwa | 4 |
| 15.6 Zvimwe ( taura) | 5 |
| 15.7 Handina kushandisa zvinodziviria pamuviri ndisati ndazvitakura | 6 |

**16. Makazviona kuti mazvitakura riini**

| | **Mhinduro** |
|---|---|
| 16.1 Ndava nemwedzi muviri | |
| 16.2 Ndava nemwedzi miviri kusvika pamwedzi mina | |
| 16.3 Ndava nemwedzi mishanu zvienda mberi | |

17. Makatanga kuuya kuChipatara kuzonyoresa pamuviri pakura zvakadini

(Ratidzai nekadhi rekuchipatara kana muinaro)

| | **Mhinduro** |
|---|---|

| | |
|---|---|
| | |
| 17.1 Mwedzi muviri zvichidzika | |
| 17.2 Mwedzi muviri kusvika pamina | |
| 17.3 Mwedzi mishanu kusvika minomwe | |
| 17.4 Mwedzi minomwe kusvika pasere | |

18. **Makaenda kunoonekwa nachiremba kangani**

| | Mhinduro |
|---|---|
| 18.2 Kana zvichidzika | 1 |
| 18.3 Kashanu | 2 |
| 18.4 Kashanu zvichienda mberi | 3 |

**19. Ndiyani akakubatsirai pamaiva kuchipatara**

| | **Mhinduro** |
|---|---|
| 19.1 Nyamukuta | 1 |
| 19.2 Mukoti | 2 |
| 19 .3 Chiremba | 3 |
| 19.4 Vashandi vemuchipatara | 4 |
| 19.5 Nevashandi vepachipatara vakawanda | 5 |

**20.Ndiyani akakubatsirai kuenda kuchipatara**

| | **Mhinduro** |
|---|---|
| 20.1 Mubereki ( amai , baba) | 1 |
| 20.2Murume shamwari yechirume | 2 |
| 20.3Vamwewo | 3 |
| 20.4 Vanhu vemumhuri | 4 |
| 20.5 Hapana | 5 |

**21 Ndiyani aikupa mari pawaive wakazvitakura**

| | Hongu | Kwete | |
|---|---|---|---|
| 21.1Vabereki ( mai /baba | | | |
| 21.3 Murume shamwari rume | | | |
| 21.3 Vamwewo (taura) | | | |
| 21.4 Hapana | | | |

22. Mune tsamba inoshandiswa pakurapwa here (health insurance)

| | **Mhinduro** |
|---|---|
| 22.1Hongu ( Kadhi rekurapwa) | 1 |

| | |
|---|---|
| 22.2 Kwete | 2 |

23 **Kiriki yamunoenda iri kure zvakadini**

| | **Mhinduro** |
|---|---|
| 23.1 Kiromita zvichidzika | 1 |
| 23.2 Kiromita rimwe kusvika pamakiromita mashanu | 2 |
| 23.4 Makiromita matanhatu kusvika pagumi<br>Makiromita gumi zvichienda mberi | 3 |
| | |

27. Makagutsikana here nekubatsirwa kwamakaitwa

| 27.1 Makabatsirwa zvakanaka here kuchipatara | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| 27.2 Vana mukoti vanga vasina kukwindimwara | | | | | | |
| 27.3 Ndakamira nguva diki ndisati ndabatsirwa | | | | | | |
| 27.4 Vana mukoti vakandibata zvakanaka | | | | | | |
| 27.5 Zvokurapiswa zvakaita semapiritsi nemajekesini zvinenge zviripo | | | | | | |
| 27.6 Rubatsiro rwaivapo rwakakwana | | | | | | |
| 27.7 Zvaindiita zvose vaitsanangura | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 27.8 Zvakakosha zvaidiwa zvaitsanangurwa kuti ndipone zvakanaka | | | | | | |

**28 Makatsanangurirwa kuti muchabara sei**

| | **Mhinduro** |
|---|---|
| 28.1 Hongu | 1 |
| 28.2 Kwete | 2 |
| 28.3 Handizivi | 3 |

Pane zvimwe zvamungada kuwedzera kuti zvibatsire kubatsirwa kwemadzimai ari kusununguka neakazvitakura here?

**MUNOTENDWA NEKUBATSIRA KWAMAITA MUTSVAKURUDZO IYI.**

## APPENDEX 3: Key Informant guide

Interviews of clinicians will be done using the key informant guide. The questions include the following:

1. Did you receive any training in the provision of midwifery?
2. Explain the antenatal service at your clinic?
3. What are the reasons of low uptake of ANC at your clinic?
4. In your opinion how can we improve utilization of ANC services at your site?

## APPENDIX 4: English Consent Form

Title of the study: Utilization of Antenatal Service in Chitungwiza District, Zimbabwe, 2019.

Good day, my name is Masomera Varaidzo, a student at Africa University. I am conducting a study on utilisation of Antenatal Services in Chitungwiza District. This form gives you information about the study and will be used to document your willingness to take part in the study if you choose to do so.

Purpose of the study

To determine the utilisation of antenatal services by pregnant women in Chitungwiza District four clinics, January 2019-December 2020.

Procedures and duration

The eligible participants are pregnant women attending ANC at Chitungwiza Districts four clinics Seke North, St Marys, Seke North and Zengeza Clinic. You have been selected as a possible participant as you meet the stated selection criteria. A total of 235 participants will be enrolled in this study and if you decide to participate you will be asked to complete the questionnaire.

Benefits, risks or discomforts

There are no direct benefits to you for participating in this study. I am hoping that findings from this study will be used to improve ANC services, uptake. Risks of participating are minimal. It is possible that you may feel uncomfortable with some of the questions I will ask. You can choose to skip or to discontinue the interview if you feel uncomfortable

Confidentiality

Your personal details will not appear on the questionnaire if you choose to participate in this study. Any information that is obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your consent. A study participant number will be assigned to the questionnaire you completed. All study records will be kept in secure, locked filing cabinets separate from the information that identifies you personally like this consent form. Under some circumstances the University or Medical Research Council of Zimbabwe may need to review records for compliance audits only.

Additional Costs

There will be no additional costs to you because your participation except those related to the time taken while participating in this study.

Voluntary participation

Participation in this study is voluntary. If you choose not to participate in this study, your decision will not affect your future regular health care services in any way. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without penalty.

Authorization

Please ask any questions on any aspect of this study that is unclear to you before you sign this form. You may take as much time is necessary to think it over. Your signature indicates that you have read and understood the information above, have had all your questions answered and have decided to participate.

Signature of participant…….Date…….

Name of staff obtaining consent…….

Signature……. Date…….

**APPENDIX 5: Gwaro Retenderano**

Gwaro retenderano reapinda mutsvakurudzo

Musoro wetsvakurudzo Utilisation of Antenatal services in Chitungwiza District, 2020.

Mutsvakurudzi: Masomera Varaidzo

Zvamunofanira kuziva maererano nezvetsvakurudzo ino

i. Muri kukumbirwa kupinda mutsvakurudzo.
ii. Gwaro retenderano rino rinotsanangura tsvakurudzo iyi nezvamunotarisirwa kuita mutsvakurudzo.
iii. Munokumbirwa kuti munyatsoverenga gwaro rino kana kuti kukumbira kuti mumwe munhu akuverengerei.
iv. Shandisai nguva yose yamungada pakuriverenga.
v. Munopinda mutsvakurudzo nokuda kwenyu uye munogona kusarudza kusapinda muzvirongwa zvetsvakurudzo.
vi. Chero mukapinda mutsvakurudzo, munogona kubuda panguva chero ipi zvayo. Hapana zvamunoitwa nechikonzero chekuti munenge masarudza kubuda mutsvakurudzo.
vii. Angove yetsvakurudzo, tichakuzivisai kana tikawana ruzivo rutsva runogona kushandura pfungwa dzenyu maererano nekuti mungada kuramba muri mutsvakurudzo here kana kuti kwete.

Chinangwa chetsvakurudzo

Tinoda kuziva pamusoro pezvinotadzisa vanhu kadzi vakazvitakura kunyoresa pamuviri kukiriki mazuva anotarisirwa uye zvikonzero zvinoita kuti vasanyorese nenguva.

**Chikonzero chaita kuti mukumbirwe kupinda mutsvakurudzo**

Masarudzwa kupinda mutsvakurudzo ino kuburikidza nekwamunogara uye nekuti makazvitakura.

**Zvichaitwa**

Kana muchibvuma kupinda mutsvakurudzo ino, tichakubvunzai mibvunzo. Tinoda kukubvunzai mibvunzo maererano nemagariro enyu, uye mabatirwo amurikuitwa kuzvipatara maererano uye zvinokonzeresa vakadzi vakazvitakura kusanyoresa pamuviri nenguva nepamuviri.

**Zvakanaka zvamunowana**

Hapana chamunowana kuburikidza nekupinda mutsvakurudzo ino.

**Mubhadharo**

Hapana chamunobhadhara kuti mupinde mutsvakurudzo ino.Muchadzorerwa mari yekufambisa kwamaita muchiuya kuchipatara.

**Kuchengetedzwa kweruzivo**

Ruzivo rwamuchapa zvichaiswa pamwe chete nenhamba yerupawo yamuchapiwa, kwete zita renyu. Vatsvakurudzi vetsvakurudzo ino, Africa University Research Committee (AUREC) chete ndivo vachawana mukana wekuziva zvinenge zvabuda muongororo yemhinduro dzamuchapa kumibvunzo ichabvunzwa. Ruzivo urwu ruchachengetedzwa mumakombiyuta akachengeteka. Hatisi kuzoshandisa mazita mumaripoti ari maererano netsvakurudzo.

**Zvimwe zvinogona kuitwa kana mamwe marapirwo**

Kupinda mutsvakurudzo kuda kwenyu uye munogona kusarudza kubuda mutsvakurudzo chero nguva.

**Muripo wekuva mutsvakurudzo**

Hamubhadhariswi mari kuburikidza nekupinda kwenyu mutsvakurudzo.

**Chii chichaitika kana mukabuda mutsvakurudzo nguva isati yakwana?**

Zvisinei nekuti hamudi kupinda mutsvakurudzo kana kuti mabuda mutsvakurudzo, mucharamba muchiwana rubatsiro rwakafanana nerwamaisiwana kubva kukirinika senguva dzose.

**Kugoverana ruzivo rwezveutano hwenyu nevamwe**

Ruzivo ruri maererano nenhamba yerupawo ndirwo ruchagoveranwa nevamwe vatsvakurudzi, kwete zita renyu.

**Sainecha yenyu kana chidhindo chemunwe wenyu pagwaro rino chinoreva kuti**:

Maziviswa nezvechinangwa chetsvakurudzo ino, zvichaitwa uye zvakanaka zvamungawana kana njodzi dzamungasangana nadzo. Mapiwa mukana wekubvunza mibvunzo musati masaina. Mazvipira kupinda mutsvakurudzo ino pasina kumanikidzwa. Munonzwisisa kuti ruzivo rwatorwa pamuri zvinogona kuchengetedzwa kuti zvizoshandiswa mutsvakurudzo dzinenge dzabvumidzwa dzinokoshesa unhu hwevanhu.

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Sainecha yemunhu apinda mutsvakurudzo Zuva

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Zita remunhu awana mvumo Sainecha yemunhu awana mvumo Zuva

**APPENDIX 7: Chitungwiza Town Council Approval Letter.**

# CHITUNGWIZA MUNICIPALITY

All Correspondence to be addressed to the Town Clerk

If Calling, Please
Ask for Dr. T. I. Kasu

P. O. Box 70, ZENGEZA
CHITUNGWIZA
Cell: 0773 733 504
E-mail dhischitungwiza@gmail.com
dr.tonnykasu@hotmail.com

OUR REF :
YOUR REF :
DATE : 18 March 2021

**Attention:** Viola Musangomunei

**RE: REQUEST FOR AUTHORITY TO CONDUCT STUDY TITLED: DETERMINANTS OF TEEN PREGNANCY. A CASE OF ZENGEZA CHITUNGWIZA DISTRICT.**

The above matter refers

Your request to conduct the above-mentioned study has been approved. On completion of your research work, you are required to share your findings at a feedback session with the City Health Department.

CHITUNGWIZA MUNICIPALITY
DIRECTOR OF
HEALTH SERVICES (T) 04
18 MAR 2021
P. O. BOX CZA 70, CHITUNGWIZA
SIGN: .....

PP

Dr. T. I. KASU
DIRECTOR HEALTH SERVICES