Exploring existing strategies to provide health promotion services to adolescent girls in the North West Province

DE Mahlangu

orcid.org/0000-0002-6622-9153

Mini-dissertation accepted in partial fulfilment of the requirements for the degree *Master of Business Administration* at the North-West University

Supervisor: Dr C Niesing

Co-Supervisor: Dr W Naude

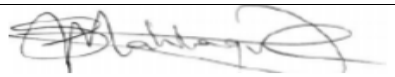
Graduation: July 2024

DECLARATION

SOLEMN DECLARATION OF OWN WORK BY THE STUDENT

Module Name	**Mini-Dissertation**
Module Code	**MBAD 873**
Assignment Title	**Mini-Dissertation**
Assignment due date	**22 March 2024**

I declare that the assignment which I herewith submit to the North-West University in partial compliance with the requirements set for the Master of Business Administration (MBA) degree is my own original work, has been text-edited in line with professional communication standards, and has not already been submitted to any other institution for evaluation purposes.

Signature of student:		
Student initials and surname	**DE Mahlangu**	
Student number	**43618596**	
Date signed	**17 March 2024**	

ACKNOWLEDGEMENT

I want to express my gratitude to all those who have contributed to completing this dissertation.

I am deeply grateful to my supervisors, Dr. Christi Niesing and Dr. W. Wikus Naude, for their invaluable guidance, unwavering support, and expertise throughout the research process. Their encouragement has been instrumental in shaping this dissertation.

I sincerely thank the North-West Department of Health for granting permission and providing the necessary support to conduct this study. Their collaboration has been integral to the successful completion of this research.

Lastly, I want to acknowledge the participants of my study whose contributions and cooperation made this research possible. This dissertation represents a collective effort, and I am grateful to everyone who contributed to its realisation.

ABSTRACT

Background: Adolescent sexual and reproductive health (SRH) has been a critical public health concern, necessitating comprehensive strategies for effective health promotion. In the North-West Province (NWP) of South Africa, addressing the diverse needs of adolescent girls posed unique challenges influenced by socioecological factors. Understanding the intricacies of existing health promotion services was crucial for tailoring interventions that aligned with the experiences and perspectives of this demographic.

Aim: This research explored existing strategies for providing health promotion services to adolescent girls in the NWP.

Methodology: Healthcare workers in the NWP were interviewed using a qualitative research design. The gathered data underwent thematic analysis, identifying recurring themes and patterns. The Socioecological Model was utilised as a theoretical framework to analyse findings across multiple levels – individual, interpersonal, community, institutional, and policy. The study adhered to ethical considerations, ensuring participant anonymity and confidentiality.

Findings: The study unravelled intricate challenges in tailoring SRH content for diverse age groups, emphasising the need for comprehensive, age-appropriate education. Myths surrounding family planning rooted in cultural and religious beliefs emerged as a significant barrier, hindering informed decision-making among adolescents. Clinic infrastructure limitations impacted privacy during SRH consultations, underlining the community-level implications of healthcare accessibility. At the institutional level, health system barriers, including a shortage of healthcare workers and medication stocks, were identified, pointing to systemic challenges affecting SRH service delivery.

Conclusion: The findings accentuated the complexity of adolescent SRH in the NWP, revealing challenges across individual, interpersonal, community, institutional, and policy levels. Comprehensive SRH education in schools, destigmatising family planning, addressing clinic infrastructure challenges, and improving health system resources were imperative for effective interventions. Age-appropriate strategies and interdepartmental collaboration could enhance the impact of health promotion services.

Recommendations: Adolescents were encouraged to actively seek comprehensive SRH information from reliable sources. Embracing open communication with healthcare providers ensured informed decision-making.

Healthcare providers must undergo regular Adolescent and Youth-Friendly Services (AYFS) training to ensure that knowledge gaps are filled. Prioritising privacy and confidentiality, even within limited infrastructure, was crucial. Collaborative efforts to enhance interdepartmental communication and extend AYFS professional nurses to schools could optimise the reach of SRH education.

Advocates urged the Department of Health to invest in implementing comprehensive sex education programmes in schools. Initiatives to destigmatise family planning and improve clinic infrastructure should be prioritised. Addressing healthcare worker shortages and ensuring adequate medication stocks were essential for sustaining effective SRH services. Interdepartmental collaboration between health and education sectors should be fostered to create a holistic approach to adolescent health in the region.

KEYWORDS

Teenage pregnancy
Adolescents
Contraception
Abstinence
Health education
Teen Parenting
Pregnancy prevention
Sex education
Sexual and reproductive health (SRH)
Adolescent Youth and Friendly Services (AYFS)
Human Immunodeficiency Virus (HIV)
Sexually Transmitted Infection (STI)
Pre-Exposure Prophylaxis (PrEP)

Table of Contents

KEY CONCEPTS

Teenage pregnancy: Refers to a pregnancy in females under the age of 20. A significant public health issue is the prevalence of teenage pregnancy, as it can negatively affect the mother's and child's health and well-being.

The North- West Province Department of Health (NWDoH) Is a government department responsible for providing healthcare services in the NWP of South Africa. Its mandate is to provide quality and accessible health services to all province residents, regardless of socio-economic status.

Health promotion: Refers to activities that aim to enhance the well-being of people and communities through education, behaviour change, and environmental modifications. Health promotion efforts may include health education and awareness campaigns, disease prevention and screening programmes, and policy changes promoting healthy lifestyles.

Risk factors: Identifying the various factors that increase the risk of teenage pregnancy, such as lack of access to contraception, poverty, lack of sex education, and unhealthy relationships.

Prevention strategies refer to various measures to prevent a particular disease, problem, or issue. These strategies can include interventions to reduce the risk of developing a condition and actions to prevent the spread of an existing condition. They involve a range of approaches, including education, awareness campaigns, implementing policies, and using medical interventions such as vaccination treatments.

Educational and economic outcomes: Examining the impact of teenage pregnancy on the educational and economic outcomes of the mother and the child, including school completion rates, employment opportunities, and income levels.

Cultural and societal norms: Examining the impact of cultural and societal norms on teenage pregnancy, including attitudes toward sex, pregnancy, and parenting.

Interventions: refers to identifying effective interventions to reduce teenage pregnancy rates and improve outcomes for teenage parents and their children.

Sexual and reproductive health (SRH): Refers to overall physical, mental, and social wellness in every aspect and is referred to as related to the reproductive system, as well as the ability to have satisfying and safe sexual relationships. It encompasses various issues related to SRH and rights, including family planning, sexual health, STIs, adolescent sexual and reproductive health, infertility and safe abortion.

Department of Health Policies: The guidelines, regulations, and initiatives set forth by the Department of Health in the NWP influence the provision of healthcare services to adolescents.

Healthcare Workers' Perspectives: Insights from professionals delivering healthcare services to adolescents, offering valuable perspectives on challenges and potential improvements.

Social media for Health Promotion: The use of online platforms to disseminate health information and promote awareness, especially among active teenagers on social media.

Family Planning Interventions: Programmes and strategies aimed at helping individuals make informed decisions about family planning, including contraceptives.

Infrastructure Challenges: Issues related to the physical facilities, equipment, and resources in healthcare settings that impact the delivery of SRH services.

Socioecological Model: A theoretical framework that examines how individual, interpersonal, community, institutional, and policy factors collectively influence health-related behaviours and outcomes.

LIST OF ABBREVIATIONS

NWU- North-West University

NWDoH – North-West Province Department of Health

SRH - Sexual and reproductive health

AYFS - Adolescent Youth and Friendly Services

HIV- Human Immunodeficiency Virus

STI- Sexually Transmitted Infection

PrEP- Pre-Exposure Prophylaxis

SEM- Socioecological Model

NWP- North-West Province

1. CHAPTER 1: INTRODUCTION TO THE RESEARCH PROBLEM AND METHODOLOGY

1.1 *Introduction/ background to the study*

Sub-Saharan Africa has the world's highest prevalence of teenage pregnancy (Gunawardena *et al.,* 2019:1). In South Africa, pregnancy among young people is a major concern. The number of registered births for teenagers in South Africa was approximately 100,000 in 2017, representing 13.9% of the total registered births (Govender *et al*., 2020:1). Of the 1 051 311 births registered in 2019, 131 705 (12.5 %) were born to mothers who were between the ages of 10 and 19 years old (Tshililo et al., 2019:1). Nearly 28% of young women reported having been pregnant by the age of 19 years. (Ngubane & Maharaj, 2018:1). In 2020, 17,7% of the population of the North- West Province (NWP) consisted of adolescents, and the province reported a significant increase in termination rates of teenage pregnancies between 2017 and 2019 (Health challenges faced by adolescents, Stats SA, 2022).

In the past three decades, the South African government has been constructing agreements, procedures, policies, and campaigns to fortify the public health system and improve service delivery (Sithole & Mathonsi, 2015:5). In 2020, 17,7% of the population of the North-West Province (NWP) consisted of adolescents, and the province reported a significant increase in termination rates of teenage pregnancies between 2017 and 2019. The North-West Province is also experiencing the same key public health system challenges (Malakoane *et al*., 2020:1). Health promotion studies and assessments are limited. Mechanisms for indicating evidence of health promotion usefulness need to be improved. Occupational health promotion education and training standards are needed (Erwin & Brownson, 2017:1227). There are less competent health promotion consultants who are skilled or in power to advise lawmakers about the efficiency of health promotion action (Bandura, 2013:299).

A study by Coovadia *et al.* (2009:817) found that South African societies faced challenges in accessing health services, particularly in underdeveloped provinces. Subsequently, the initiative of the South African National Strategic Plan (SANSP 2017–2022) was meant to solidify community systems to expand access to services using community-based care programmes addressing Human Immunodeficiency Virus (HIV), drugs and sexually transmitted infections (STIs).

Research shows high mobile phone access among teenagers; however, using these devices to access sexual and reproductive health (SRH) information is limited due to the cost of services, lack of marketing, and infrastructural/network quality (Feroz *et al.,* 2021:1).

Efforts to decrease teenage pregnancy rates should address the underlying issues associated with teenage pregnancy (Cook & Cameron, 2017:327). These efforts may involve strategies such as delaying the onset of sexual activity and promoting the consistent use of condoms and other forms of contraception (Breuner *et al*., 2016:1). Additionally, it provides comprehensive education on sexual health and life skills, equips teenagers with the ability to communicate and negotiate safe sexual practices with their partners, and promotes the idea of responsible womanhood so that young women view pregnancy as a potential obstacle to their future success (Matswetu & Bhana, 2023:1). Abebe *et al*. (2020:1) stated that teenage pregnancy was associated with adverse outcomes such as pre-eclampsia, blocked labour, dysfunctional deliveries, adenomyosis, postnatal bleeding, early delivery, and perinatal death. This study aims to develop a managerial strategy to provide health promotion services to decrease the high pregnancy rate in girls between 10 and 19 years of age from the NWP.

1.1.1 *The sexual activity rate among teenagers*

The Youth Risk Behaviour Survey conducted in 2002 in South Africa described that among adolescent girls aged 12–20 years who were sexually active, 16.4% had been pregnant (Reddy *et al*. 2007:1859). This occurrence increased to 19% in 2008 (Morgan *et al*., 2013:2171). A study by Onyensoh *et al.* (2013:227) in the NWP showed that over 87% of 14 to 15-year-old teenagers specified that they were engaging in sexual intercourse.

Despite various measures taken by the government and collaborative support from other sectors of society to reduce adolescent childbearing, the occurrence continues to be a significant health concern in South Africa. This study intended to assess the sexual behaviour of adolescents, the effectiveness of preventive measures and mitigating factors in reducing adolescent motherhood. Moreover, it aimed to conduct a thorough investigation to comprehend and comprehensively analyze the rate of facility-based deliveries among individuals aged 10 to 19 years in the NWP.

1.1.2 *Access to contraceptive services*

The South African government has made the provision of contraceptives free since 2001 (Jonas *et al*., 2016:1). The Department of Health stated in 2002 that the government continues to inform and advance the prospect of contraceptives in the country, including the addition of very modern forms in public state hospitals and primary healthcare clinics free of charge (DoH, 2002). The South African government is continuously updating and upgrading the opportunity for access to birth control methods (Jonas *et al.,* 2016:1).

A study by Onyi (2013:10) in the NWP showed that less than 37% of teenagers consistently used contraceptives. Most teenagers do not use contraceptives or Choice of Termination of Pregnancy Act services, even though these facilities are available to the public nationwide (Ehlers *et al.,* 2000:43). Research shows that most rural sub-districts in the NWP are culturally categorised. Overcoming such cultural barriers demands a multifaceted approach that combines cultural sensitivity with innovative strategies for education and awareness (Moroole, 2021:1). The non-use of contraceptives among teenagers who participate in unsafe sex also puts them at risk for sexually transmitted infections (STIs), HIV, and unexpected teen pregnancies (Shangase *et al*., 2021:1). Other factors that limit access to contraceptives include clinics located long distances from communities, the lack of transportation to health centres, and clinic hours coinciding with school hours (Onyensoh *et al.,* 2013: 227)

Since 2017, the use of contraceptives methods, specifically external condom usage, has declined among teenagers (Chiang *et al.,* 2021: e0249064). The literature informs that unintentional teenage pregnancy can result from contraceptive failure, non-use of preventive services, and in some cases, as a result of rape (Ajayi & Ezegbe, 2020:1). Different contraceptive methods' success rate relies on correct and consistent use (Blumenthal *et al.,* 2011:121). Unintentional pregnancy regularly forces teenagers to confront challenging issues, including abortion, adoption, or raising a child without essential support (Mumah *et al.,* 2020:1)

The usage of condoms among adolescent teenage girls aged 15 to 24 years has shown to have dropped significantly from 66.5% in 2008 to 49.8% in 2017 (Naidoo *et al.,* 2019:21). A higher number of adolescent girls aged 10-19 years engage in risky sexual behaviour, thus, exposing themselves to various consequences beyond teenage pregnancy, such as HIV infection and STIs (Naidoo *et al.,* 2019:21).

Adolescent teenagers in South Africa are often noted to experience high rates of unintended pregnancies, STIs, and other SRH challenges (Sedgh *et al.,* 2015:223). Moreover, South Africa has the uppermost burden of adolescents and young adults living with HIV globally. Even though the high occurrence of HIV, STIs, and teen pregnancy keeps rising, teenagers do not use community health services in South Africa, stating barriers when visiting clinics as the reason (Makola *et al.,* 2019:158). This study highlights the essence of understanding the socio-cultural annotations of healthcare workers' perceptions of teenage SRH and providing SRH services.

This study was conducted considering the intensifying unplanned teenage pregnancies. This study aimed to explore existing strategies and services available to support health promotion for teenage girls aged 10-19, in the NWP Interventions intended to reduce teenage pregnancy rates targeted features associated with teenage pregnancy. These features included;

- reducing early sexual introduction,
- encouraging consistent use of condoms and other preventive measures,
- providing access to complete life skills and sexual health education,
- training adolescent girls with skills to be able to say no to unsafe sex, and
- forming a social norm of responsible womanhood so that teenagers observed being pregnant as unfavourable to their future progress.

1.2 ***Preliminary literature review***

1.2.1 *The delivery rate in 10 to 19 years (adolescents)*

Adolescent motherhood is a significant global social and health problem. It is prevalent in sub-Saharan Africa (229/1000), compared to other regions (47/1000 globally) (Woollett *et al*., 2021:377). According to the World Health Organization (WHO) (2016), sub-Saharan Africa accounts for more than half of all births occurring during adolescence. An estimated 21 million teenagers between 15 and 19 years in developing regions fall pregnant each year, and approximately 12 million of them give birth. Estimates also suggest that 2.5 million girls aged less than 16 years give birth every year (WHO, 2019). Teenage pregnancy and childbirth are relatively elevated in South Africa (Stats SA, 2022).

Approximately 97,143 girls in their teenage years gave birth in South Africa in 2017, representing 13.9% of all recorded births (Govender *et al*. 2020:1). Of the 1 051 311 births registered in 2019, 131 705 (12.5 %) were born to mothers who were between the ages of 10 to 19 years old (Tshililo *et al*., 2019:1). In South Africa, pregnancy among young people is a matter of great concern. By age 19, almost 28% of young women reported being pregnant (Ngubane & Maharaj, 2018:1).

The prevention of unplanned pregnancies and HIV/ AIDS are of significant importance in SRH (Moche, 2022:1). Sexual and reproductive health encompasses a broad range of topics, including sexual behaviour, STIs, HIV/AIDS, family planning, abortion-related issues, pregnancy, childbirth, post-partum care, breastfeeding, maternal and infant nutrition, and infertility services (Holtman, 2022:1). Beksinska *et al.* (2020:55) argue that numerous aspects regarding STI/HIV and unplanned teenage pregnancy prevention mainly depend on men's cooperation. According to Beksinska *et al.* (2020:55) and Moche (2022:1), providing adolescent boys with information can empower them to navigate peer pressure, make informed and positive decisions, take accountability for their actions, and engage in effective communication with their partners regarding personal and sexual topics.

1.2.2 *Contributing factors to adolescent motherhood*

In South Africa, limited research has been conducted on the factors linked with adolescent pregnancy and other sexual risk behaviours, such as the low usage of birth control and deprived information of preventives, amongst others mentioned (Jonas *et al.,* 2016:1). The reproductive health unawareness amongst adolescent teenagers, for instance, the uncomplicated understanding of pregnancy likelihood because of unprotected sexual interaction, is also influential to adolescent pregnancy (Gwiji*,* 2022:1). Risky sexual interaction is typical among South African teenagers and is notorious for having several unpleasant health and social consequences (Mkhwanazi, 2010:347). Adolescent pregnancy in South Africa is a top consequence of unprotected sex, with subsequent risks such as HIV, AIDS, and other STIs (Govender *et al.,* 2020:1).

Adolescent pregnancy in South Africa is a multidimensional problem with several contributing factors, for instance, poverty, gender discrimination, gender-based violence, drug use, underprivileged access to contraceptives, and pregnancy termination issues (Vukapi, 2020:1).

Additional contributing factors are the inappropriate use of contraceptives, insufficient number of healthcare practitioners and healthcare facilities, healthcare workers' arrogances and behaviour, and inadequate SRH information (Mulaudzi, 2022:1). Teenagers looking for SRH services continue to face challenges in accessing these services. The identified barriers, as per the study by Dlamini *et al.* (2017a:1), include discrimination, unfriendly conduct from healthcare professionals, lack of secrecy and privacy, inconvenient working times of public services, and other social challenges that hinder their access to SRH services (Naidoo *et al*., 2019:21).

Teenagers often engage in risky behaviour, such as sexual activities, which can lead to unplanned pregnancies, STIs, and HIV (Lara & Abdo*,* 2016:417). These habits, including early sexual introduction, unprotected sexual engagement with multiple partners, and low contraceptive use, are common among young people in South Africa (Silva *et al.,* 2022:13933).

Few studies in South Africa reported factors associated with adolescent pregnancy and other sexual risk behaviours, for instance low use of contraceptives and poor knowledge of contraceptives (Chersich *et al*., 2017:307; Mkhwanazi *et al*., 2010:347). Reproductive health ignorance among teenagers contributes to teenage pregnancy (Hammack *et al.*, 2019:1041). The study indicates that carefree sexual behaviours, premature sexual introduction, sex without condoms, several sex partners, and everyday birth control use are common among adolescents in South Africa. This despite the South African government providing contraceptives at no cost since 2001. The South African government is continuously updating and upgrading the opportunity for access to birth control methods. Additionally, the government has added contemporary methods of birth control, for example, implants that have been obtainable in community public hospitals and primary healthcare clinics since 2014 (DoH, 2002).

1.2.3 *Implications of adolescent motherhood*

The World Health Organization (WHO, 2016) approximates that annually, 70,000 maternal deaths occur due to complications arising from unsafe and illegal abortions. Additionally, around 585,000 women lose their lives each year due to complications associated with pregnancy and childbirth (Middleberg, 2006:1). A study by Oyston *et al.* (2017:199) also

noted that one in 36 women in sub-Saharan Africa is at risk of dying from pregnancy-related causes, including abortion.

South Africa has the highest number of HIV-positive teenagers and youth compared to any other country in the world (Zanoni *et al.,* 2016:4). The South African National HIV Prevalence, Incidence, and Behaviour Study in 2012 projected that 720,000 youth aged 15 to 24 are infected with HIV (Shisana, 2014:57). In 2019, around 70,000 adolescent girls contracted HIV in South Africa, constituting roughly 35% of all newly reported HIV infections nationwide. Presently, the HIV prevalence among females aged 15 to 19 is 5.8% (UNAIDS, 2020). Additionally, the United Nations International Children's Emergency Fund (UNICEF) reported in 2023 that the global count of teenagers aged 10 to 19 living with HIV reached approximately 1.65 million individuals.

UNAIDS Country Report in 2015 estimated 6.8 million infections in South Africa (UNAIDS, 2015). Even though teenagers have the highest prevalence of new HIV infections in South Africa, they often do not go to medical centres for HIV testing. In the late 1990s and early 2000s, postponements in admission to HIV treatment and deficient HIV anticipation tools contributed to more than 330,000 children being born with HIV through perinatal transmission (Zanoni *et al.,* 2016:4).

1.2.4 *Access to health care services*

Medication accessibility has also been a persistent concern in the NWP. According to the latest 2021/22 financial year annual report, the Department's Health procured and distributed less medication than the targeted amount. The lack of access to contraceptive services, specifically for teenage girls, is a wide-reaching problem (Mulaudzi, 2022:1). Over 150 million females in emerging countries have unmet contraceptive needs (Errico, 2018:1). The use of contraceptives among South African teenagers is low because sexual engagements and commencement of sexual acts are happening at an earlier age (Lara & Abdo, 2016:417).

The non-use of contraceptives among teenagers who participate in unsafe sex also increases their risk of contracting STIs, HIV, and unintended pregnancies (Shangase *et al.,* 2021:3669). A study by Onyi (2013:10) in the NWP showed that fewer than 37% of teenagers consistently used contraceptives.

Most teenagers do not use contraceptives or the choice of termination of pregnancy services. However, these facilities are available to the public nationwide (Gwiji, 2022:1). Research shows that most rural sub-districts in the NWP are culturally categorised, and other barricades impact contraceptive familiarity and practices. Other factors that limit access to contraceptives are clinics that are long distances from other communities, the non-existence of transportation to health centres, and clinic hours coinciding with school hours (Onyensoh *et al.,* 2013: 227).

1.2.5 *Current health promotion programmes and education on SRH*

Teenagers require SRH education, yet this need continues to be unmet (Holtman, 2022:1). To address this issue, the utilisation of advanced and different tactics is essential to ensure access to safe, operative, inexpensive, and adequate SRH services (Schaaf & Khosla, 2021:6033). Health education incorporates any strategic amalgamation of learning experiences intended to influence, empower, and strengthen behaviour that is favourable to healthy individuals or communities (Holtman, 2022:1). Efforts to promote health go beyond educational programmes and should also prioritise the establishment and maintenance of a comprehensive, accessible, and equitable health system that serves all poor and underserved groups within a particular community.

The South African government, including the NWP, have implemented the MHealth strategy (2015-2019). This strategy involved utilising mobile phones and multimedia tools to enhance healthcare delivery and achieve health-related objectives (Barron *et al.,* 2016:201). Despite global evidence suggesting that teenagers were generally open to using innovative technologies (such as MHealth) to address issues related to SRH information and services, this enthusiasm was less prevalent in lower-middle-income countries like South Africa (Lee *et al.,* 2019:11847).

In 2014, the South African government, in collaboration with the National Department of Health (NDH), launched the MomConnect initiative, designed to support pregnant women using mobile phones (Barron *et al.,* 2016:201). To ensure the service's accessibility and user-friendliness, individuals could access the program through their mobile phones using a free SMS service available in all official South African languages.

The primary objective of this initiative was to deliver targeted health promotion messages to pregnant women, offering support throughout their pregnancy journey and enhancing the

health of both the mother and the unborn child. A study by Skinner *et al.* (2018:1) revealed encouraging participant feedback, indicating that the programme's engagement empowered them to achieve better health outcomes for themselves and their unborn babies. Furthermore, many participants expressed that they had developed a strong connection with the initiative and had heightened trust in the source of the communicated information.

The Department of Basic Education (DBE) reported that in 2017 alone, over 15,000 teenage pregnant girls were still in school. A survey study by Ramalepa *et al.* (2020:27) in the NWP showed that, according to learners, there were no learner pregnancy-related programmes in the school. However, the study stated that the SRH-related topics were only mentioned in the Life Orientation class.

Participants specified that the information learned was insufficient to enable them to make well-versed choices. Moreover, the study discovered that educators opposed having pregnant learners at school because they were not qualified to deal with pregnancy-related emergencies (Manyathi, 2014:1). Shefer *et al.* (2013:1) further supported the negative connotation of teachers being reluctant to have pregnant learners in class.

In 2018, the DBE issued a National Policy on the Prevention and Management of Learner Pregnancy in Schools, supporting the 2007 Measures for Prevention and Management of Learner Pregnancy (Department of Basic Education, 2018:15). This policy highlights the position of empowering stakeholder partnership with its inclusivity of services of other departments, such as health and social development, to develop school-level learner pregnancy policies. However, the draft does not propose the definite management of pregnant learners in schools, it does not address strategies to support pregnant learners, and no further education on SRH is mentioned (Ramalepa *et al.,* 2020:27).

1.3 *Problem statement*

The core challenge revolves around the prevalence of adolescent births within the NWP and the existing strategies needed to tackle this issue more effectively. Sub-Saharan Africa witnesses over 50% of adolescent births, and the region accounts for a substantial proportion of approximately 21 million pregnancies and 12 million births annually among teenagers aged 15 to 19 in developing countries. Additionally, an estimated 2.5 million girls under 16 become mothers annually. South Africa is faced with the challenge of 70,000 adolescent girls contracting HIV in South Africa annually, constituting roughly 35% of all newly reported HIV infections in the nation (UNAIDS, 2020).

Unsafe sexual activity among teenagers aged 10-19 poses significant health risks, including STIs. Pregnant adolescent girls also face various complications, such as eclampsia and stress disorders, while grappling with the responsibilities of parenthood without adequate emotional and physical preparation (Tshililo *et al*., 2019:1).

Teenage pregnancy has severe consequences in the NWP, leading to high dropout rates among teenagers, and most teenage mothers do not return to school after giving birth. Over half of the school dropouts can be attributed to teenage pregnancy, with less than 20% of teenage mothers completing their education (Gwiji, 2022:1). This situation significantly contributes to the cycle of poverty experienced by adolescent mothers and their children. Disturbingly, the World Health Organization (WHO, 2016) reports over 70,000 maternal deaths annually due to unsafe abortions and nearly 585,000 deaths of women related to pregnancy and childbirth.

The NWP of South Africa faces multiple challenges related to healthcare accessibility and the burden of teenage pregnancies on the healthcare system. Many teenagers in the region lack access to contraception, resulting in high rates of unplanned pregnancies; this strains the healthcare system as young mothers require frequent prenatal and postnatal care and specialised infant services. Addressing these issues necessitates an increased investment in healthcare infrastructure, targeted interventions to improve access to family planning services, and concerted efforts to reduce the prevalence of teenage pregnancies.

To address these pressing concerns, this study aimed to explore existing strategies for providing health promotion services to adolescent girls in the NWP. It assessed the existing health promotion services available to teenage girls in the NWP while highlighting critical

managerial aspects of the NWDoH concerning the management of SRH among adolescent girls in the region.

1.4 *Research objectives/questions/aim/purpose*

1.4.1 *Motivation*

This research was essential to determine the available support systems in primary health and to explore the strategies and services available in the NWDoH.

1.4.2 *Aims*

This study aimed to explore existing strategies and services available to support health promotion for teenage girls aged 10-19, in the NWP.

1.4.3 *Objectives*

- To identify current health promotion services available to teenage girls in the NWP
  - Conduct document analysis on the Department of Health (DoH) websites and social media platforms to review health promotion strategies targeted at teenage girls.
- To identify the critical managerial points in the NWDoH regarding SRH management of teenage girls in the NWP.
  - Conduct interviews with Community Health Workers to explore their insights and understanding regarding the health promotion measures accessible to adolescent girls.

1.5 *Scope of the study/delimitations*

1.5.1 *Field of study*

This research focused on Health systems research in the NWP.

1.5.2 *Sector/industry/business under investigation*

Health systems research in the NWP.

1.5.3 *Geographical demarcation*

This study was conducted in the NWDoH. The province comprises four (4) Districts: Ngaka Modiri Molema, Bojanala, Dr Kenneth Kaunda, Dr Ruth, and Segomotsi Mompati Districts.

1.6 ***Research methodology***

A research design is a description or strategy of how the researcher desires to accomplish a study, led by the fundamental problem that has been articulated (Tisdall *et al.,* 2008:1). The study was structured into two distinct sections. The first section, Section One, involved an extensive literature review encompassing all accessible and available documents related to SRH promotion for teenage pregnancy within the NWP. This review also examined relevant content on social media platforms. For Section Two, the study used semi-structured interviews as a methodological approach.

1.6.1 *Literature review*

The literature review is a technique that allows the researcher to review earlier research concerning the selected topic (Tacon & Vainker, 2017: 558). The initial section of this research study was the literature review, which aimed to familiarise the reader with motherhood among adolescents, statistics regarding teenage pregnancy, current methods used by health services concerning teenage pregnancy, and the history of teen pregnancy in NWP. This section presented secondary data collected and analysed in previous studies to use and reference (Walliman, 2021:1).

The central focus of the study entailed investigating both primary and secondary research objectives, which involved a comprehensive examination of the then-current promotional strategies. This exploration was conducted through an in-depth analysis of the existing literature about various aspects of adolescent girls' sexual behaviour, the effectiveness of preventive measures, and the mitigating factors contributing to reducing adolescent motherhood. By scrutinising these areas, the study gained insights that shed light on the

efficacy of existing strategies which can potentially guide the refinement and development of more impactful approaches to address adolescent pregnancies.

This study utilised dissertation papers, books, several academic sources, and applicable published citations to obtain information (Sandelowski, 2004:1366; Tzafestas, 2018:535). In their study, McCambridge *et al*. (2014:267) noted that secondary data benefitted researchers more when they could not obtain the applicable primary data in person, which happened most of the time.

The literature review showed evidence of some introductory analyses, confirmed the establishment of preliminary concepts, and provided, where suitable, statistics concerning the theoretical literature on the subject (Aveyard, 2018:1). The process of sampling the literature is discussed in 1.6.2.2.

1.6.2 *Empirical study*

For this study, a qualitative descriptive approach was adopted, following the qualitative explorative approach as detailed by (Bradshaw *et al.,* 2017:2333; Sandelowski, 2000:334). According to Creswell (2017:1), the qualitative research design approach involves the following steps: identifying the research problem, selecting a research design, conducting a literature review, selecting a sample, collecting data, analysing data, and interpreting the findings. This approach was regularly referred to as realistic research that aimed to gather rich, eloquent data regarding a particular phenomenon to emerge an understanding of the phenomenon being investigated (Creswell, 2018:1). The methodology used in this qualitative research was to describe and provide a comprehensive understanding of a phenomenon or experience. It was a straightforward and pragmatic approach that aimed to capture the essential characteristics and meanings of the studied subject (Sandelowski, 2000:334).

The research process involved emerging questions and procedures with data typically collected in the participants' setting. This approach emphasised simplicity and straightforwardness in data collection, analysis, and reporting. Primary data encompassed information and figures gathered, analysed, and interpreted for an imminent research study (Kumar, 2018:1).

The primary data for this study was collected through an empirical investigation of current strategies to provide health promotion services to adolescent girls in the NWP. The data in

a qualitative study were attained through observations, interviews, focus groups, or documents and were utilised to define entities and public movements (Creswell, 2018:1; Sandelowski, 2008:193).

1.6.2.1 Research paradigm

Scholars are guided by their theoretical assumptions as they conduct research (Coates, 2021:171). A research paradigm is founded on people's viewpoints and expectations about the world, which impact the approaches that they use to conduct research (Kivunja & Kuyini, 2017:26). It formulates a base for the research by describing the nature of reality, sources of information, standards, beliefs, and integrity of the research (Kivunja & Kuyini, 2017:26).

Pragmatism is a methodology that proposes several different ways of interpreting the social order and conducting research to explore reality. This combination of diverse methodologies may offer a broader understanding of the studied phenomena (Kaushik & Walsh, 2019:225). Respective paradigms have different perceptions of axiology, ontology, epistemology, methodology, and research rhetoric (Sandelowski, 2000:334).

The chosen research design for this study fell within the epistemology paradigm, which is based on validity, parameters, and methods of acquiring knowledge (Kivunja & Kuyini 2017:26). Epistemology delves into our understanding of reality and is associated with the inquirer's relationship to society being explored (Vukapi, 2020:1). It is the study of how information is attained, created, and authenticated regarding health services and promotion (Bradshaw *et al.,* 2017:2333). The epistemology of this study explored how NWDoH impacted knowledge about health services and promotions, available sources of knowledge about health services and promotion for teenage pregnancy, and methods and techniques used to impart knowledge and validate the knowledge acquired to ensure its relevance and applicability to different contexts and settings. This exploration included investigating issues such as access to healthcare, the role of health education and promotion in preventing teenage pregnancy, illness and disease, and the impact of healthcare policy on the delivery of health services.

The rationale for deciding on this technique was that conducting interviews with NWDoH personnel and conducting a comprehensive literature review was fundamental to understanding the phenomenon of interest. Service interactions were identified as the primary means to access the information needed for a thorough investigation.

1.6.2.2 Study population and sampling (recruitment)

Sampling literature for the systematic literature review comprises an extensive exploration across diverse databases, as outlined by Muka *et al.* (2020:49) as well as Sandelowski and Barroso (2003:153). This exploration involves employing pertinent research terms associated with the study, encompassing keywords, phrases, and concepts. The literature search notably emphasised keywords such as teenage pregnancy, SRH, health education, sex education, and the NWDoH. To procure literature with pertinent information, the researchers delved into resources such as the NWDoH database, journals, and websites, guided by the approach detailed by Cresswell (2017:1).

Several factors were evaluated to ensure the relevance and quality of the sources, as highlighted by Havill *et al.* (2014:112). These factors encompassed the publication date, the author and publisher's credibility, and the research design's rigour. Based on the inclusion criteria established for the literature review, all materials or sources needed to be published in either English or one of the official South African languages. Furthermore, they had to specifically address teenage pregnancy, with a preference for studies conducted within the NWP. The sources included the NWDoH database, published journals, social media accounts, and websites. These outlets were sampled to gather literature containing pertinent data. A vital factor in the selection process was to choose sources with relatively recent publication dates. This temporal restriction ensured that the information utilised remained current and relevant to the study's objectives.

The study's objective was to identify a collection of sources or strategies available at the time of the study that possessed relevance, credibility, and alignment with the research aims. This curation process involved the application of exclusion criteria, which served to identify and remove studies or literature that did not pertain to teenage pregnancy or were incongruent with the research question, as highlighted by Macutkiewicz and MacBeth (2017:113). Literature not directly addressing teenage pregnancy within the NWP was excluded, ensuring the research remained centred on the intended scope. Sources lacking authorship credibility or originating from unreliable sources were omitted, thereby upholding the integrity and calibre of the data under scrutiny. Non-academic sources like personal blogs, opinion pieces, and unverified social media content were also excluded from consideration to maintain an academic and research-focused approach.

Expert sampling was used in this study, focusing on selecting individuals considered experts or highly knowledgeable in the field of study. These individuals had extensive experience and expertise in the investigated topic and were expected to offer valuable insights and an in-depth understanding of the subject matter. In this study, the participants were individuals directly involved in prevention programmes and health promotion within the DoH in the four districts (Hospitals and Community health centres) under the NWP. The population for this study consisted of people in various roles within the DoH, including but not limited to Community Health Workers, Health Educators, and Programme Managers responsible for health promotion and prevention initiatives. The NWDoH independently and consciously selected participants who would provide information relevant to the central focus of the study, and the list was provided. Once the recruitment was completed, the identified potential interviewees were sent an invitation letter or email outlining the study's purpose, procedures, expected time commitment, protection of confidentiality, and consent form. The participants were then invited to participate in individual interviews.

The NWDoH assumed the role of gatekeeper and mediator in this context. Department of Health (DoH) officials served as mediators by liaising between the research team and the target population. They assisted in identifying potential participants, facilitated the recruitment process, explained the study's objectives, and guided participants through the informed consent process. Access to the population was enabled through coordination with relevant department heads and obtaining the necessary permissions from higher authorities within the DoH.

The NWDoH appointed a mediator and an impartial individual to oversee the obtaining of informed consent. The NWDoH is responsible for formulating a recruitment strategy to identify potential interviewees. No formal advertising or promotional efforts were planned to recruit participants. Instead, the study was communicated directly through official channels within the department. The study was introduced through formal invitations to potential participants, along with informational materials outlining the study's objectives.

Engaging with personnel from the DoH through interviews offered first-hand insights, policy perspectives, and practical experiences closely tied to the subject under investigation. The inclusion criteria for selecting interview participants involved their specific roles, experience level, geographical location, and their affiliation with primary healthcare centres and designated health clinics within the NWP.

The NWDoH acted as the gatekeeper, appointing a mediator and an independent person to sign the informed consent. They were responsible for the recruitment strategy to identify potential interviewees. Interviewing individuals from the DoH offered first-hand knowledge, policy insights, and practical experiences related to the subject matter. The inclusion criteria included their roles, experience level, geographical location, the primary healthcare centre, and chosen health clinics in the NWP. Participants were required to hold positions within the NWDoH relevant to the study's focus; only qualified and non-teenage DoH workers were interviewed. This age restriction ensured that participants had the necessary maturity, experience, and understanding to provide meaningful insights into the research topic. Interviewees were expected to have a history of direct interaction with affected populations and have access to relevant information, data, or experiences that could contribute meaningfully to the study. The NWDoH was in partnership with NWU, and authorisation was obtained from the NWDoH to conduct this study through NWU.

Individuals who were not associated with the DoH were excluded from participation, as the study explicitly involved affiliated participants. Department of Health workers located outside the NWP were also excluded, ensuring that insights were contextually relevant to the NWP. Additionally, volunteers and non-professionals were excluded, as the study sought input from professionals. Those unwilling to participate were also excluded, ensuring the interviewees were genuinely interested and invested in the research process.

This study was carried out across all four districts within the NWDoH, and a selection was made to ensure comprehensive coverage of the NWP. The research employed a maximal variation sampling approach as outlined by Creswell (2023:12) to achieve a diverse range of perspectives. This method involved intentionally selecting individuals who exhibited distinct characteristics or experiences.

The sample frame was determined based on the researcher's feasible access. Throughout the study, the principle of information power, as Creswell emphasised (2018:1), was embraced to guarantee that the collected data was sufficient to analyse the research phenomenon thoroughly. The approach of maximal variation sampling was applied, and data collection continued until data saturation was achieved, adhering to Korstjens and Moser's concept (2018:120).

1.6.2.3 Collection of data

Data collection is a comprehensive method of gathering information to address the research question, purpose, and objectives (Asenahabi, 2019:76). Collecting data defines the entire process of research design where a researcher would obtain information to make an informed decision regarding the study in question (Creswell, 2018:1). Data that is readily available and can be obtained from an existing database is called secondary data (Creswell, 2017:1). The primary data refers to data that is not readily available to a researcher and must be collected from scratch as part of the study (Sovacool *et al., 2018:12)*. Qualitative approaches encompass diverse data collection methods, such as interviews, literature reviews, and web analyses, as suggested by Morgan (2022:64). In this study, the data collection strategies of literature review and interviews were utilised. These approaches were pivotal in identifying current health promotion services available to teenage girls in the NWP and pinpointing critical managerial aspects within the NWDoH concerning managing SRH among teenage girls.

For the literature review (section one of the study), the sources employed encompassed dissertations, papers, books, credible academic sources, and citations from the NWDoH website, as articulated by Creswell (2017:1). Secondary data, as emphasised by Sovacool *et al.* (2018:12) proved beneficial when primary data collection in person was unfeasible, a circumstance frequently encountered in research endeavours. The study followed defined inclusion and exclusion criteria during the literature search process to sift through potential materials, consistent with Granić and Marangunić's (2019:2572) guidance. Excluded from consideration were studies that lacked relevance to the study's population or focus, non-human participant studies, materials not published in reputable peer-reviewed journals or credible sources, studies exhibiting high bias or low-quality recent research, as expounded by Granić and Marangunić (2019:2572).

The study's inclusion criteria involved documents and sources related to teenage pregnancy and sexual production, with relatively recent publication dates and material written in English (Granić and Marangunić, 2019:2572). Furthermore, published studies in peer-reviewed journals or other credible sources, studies conducted on human participants, studies that reported original research or systematic reviews and meta-analyses, and sources containing health promotion strategies targeted at teenage girls and available information on the NWDoH and NWP were included in the study.

For the second section of the study, qualitative data was gathered through semi-structured interviews. Employing semi-structured interviews allowed for a nuanced exploration of participants' beliefs and viewpoints about a specific subject, as highlighted by Creswell (2017:1). This method proved reliable, as it invited insights from Community Health Workers regarding their knowledge and perspectives on health promotion interventions catering to the target group, as indicated by Creswell (2018:1).

An interview guide was meticulously crafted to facilitate the interviews, drawing from insights from the initial literature review and research findings. Participants were engaged in discussions centred around critical dimensions such as current social media health promotions, benefits and challenges of current promotions, practices and strategies concerning health promotion efforts aimed at teenage girls, and health practices for teen mothers.

Participants provided insights into how teenage girls seek health-related information and their preferences. By conducting semi-structured interviews guided by these domains, the study aimed to comprehensively uncover the dynamics and perceptions surrounding health promotion strategies for teenage girls within the NWP.

1.6.2.4 Thematic data analysis

Thematic data analysis is a technique for finding, analysing, establishing, defining, and reporting themes within a data set (Braun & Clarke, 2006:77; Sandelowski, 2000:334). It is more interpretive and exploratory and aims to identify and analyse themes or patterns that represent the underlying meaning and essence of the data. Thematic data analysis is less concerned with categorisation and quantification and more focused on understanding participants' subjective experiences and perspectives (Sandelowski, 2000:334). Data analysis in qualitative explorative is a collaborative process and should be introduced in the initial phases of the research process (Sovacool *et al., 2018:12)*. Data was analysed using thematic analysis.

A qualitative approach aims to yield discoveries, and qualitative analysis then converts data into conclusions (Morgan, 2022:64). Braun and Clarke (2006:77) reasoned that thematic analysis is a valuable technique for exploring the viewpoints of diverse research participants and producing unforeseen perceptions. It is also beneficial for summarising the main

features of an extensive data set, as it helps the investigator take a well-structured approach to management data, helping yield a clear and prepared outcome (Staunton *et al.,* 2021:1)

This study adopted the six-phased process of thematic data analysis. This method is, in fact, a reiterative and philosophical process that progresses over time and contains a continuous back-and-forth movement between phases (Creswell, 2018:1). The phases include:

- Acquainting data,
- Creating initial codes by documenting all findings,
- Making sense of theme acquaintances,
- Identifying broader patterns or themes by grouping related codes,
- Describing and identifying themes,
- Constructing the report.

This six-phased method was applied in the study. Document study contained the process of grazing, in-depth analysis, exploratory content, and interpretation of documents. Researchers used interviewers' assessment and matrix analysis for exploratory content.

The data collection technique for this study focused on interviews with the key managers of the health services facilities and documentation analysis. During the qualitative interview, participants were requested consent to tape-record the interview while taking notes. These would help when there was a need to refer. The researcher transliterated all data gathered by electronic resources.

1.6.2.5 Rigour

In qualitative research, researchers ensure that they conduct the study rigorously and systematically and that the findings are valid, reliable, and trustworthy. These measures are referred to as rigour (Braun & Clarke, 2019:589; Creswell, 2018:1). Creswell identifies four strategies for enhancing rigour in qualitative research: credibility, transferability, dependability, and confirmability (Creswell, 2018:1).

To enhance the credibility and transferability of the discoveries, researchers may use techniques such as triangulation, member checking, and peer debriefing (Frasso *et al.,* 2018:527). In this study, the researcher repeatedly returned to their data to ensure that the paradigms, categories, descriptions, and interpretations made sense (Braun and Clarke, 2021:328). To ensure transferability, the researcher provided detailed and thick descriptions

of the research context and the participants. Furthermore, the supervisor verified the correctness of the interview results in case there was a need to double-check the interview transcripts for conformity with the evidence given (Daniel, 2019:118; Harrison *et al*., 2020:473).

According to Bryman *et al.* (2014:38) and Creswell (2018:1), validity in quantitative research defines the degree to which the chosen measuring tool measures the intended concept. These necessitate gathering evidence from different sources to prove that the scale measures what it intends to measure and does not measure unplanned and unrelated features. To check the accuracy of the qualitative discoveries, the researcher worked with the supervisor to determine if the interview transcripts were accurate (Frasso *et al.,* 2018:527).

According to Korstjens and Moser (2018:120), qualitative studies were expected to exhibit dependability and confirmability. To achieve this, the researcher meticulously documented all research processes and decisions at each stage (Carcary, 2020:166). Furthermore, the researcher employed reflexivity to critically examine their assumptions and biases throughout the research process. This approach aimed to ensure the consistency and reliability of the findings over time.

1.7 *Limitations of the study*

Although this work contributed positively to the existing body of knowledge on teenage pregnancy and available health care services in the NWP, the study had boundaries. One of the most significant limitations was the geographical scope of the sampling, chosen for its simplicity, convenience, and low cost. These limitations, however, provide opportunities for upcoming research. A similar study could focus on other provinces or countries as upcoming contributions. The study's findings may only be generalisable to other populations or contexts within the sample. Additionally, the reliance on self-reported data in the study may have been subject to social desirability bias, potentially leading to underreporting or overreporting of particular experiences or behaviours. The study did not aim to generalise the findings to the population but to gauge the nature of the phenomenon.

1.8 *Ethical considerations*

The conduct of research studies is an ethical process (Staunton *et al.,* 2021:1). Research ethics is a system of principles or guidelines of conduct that offer researchers a code of moral guiding principles on how to conduct research in an ethically satisfactory manner (Bandura, 2014:69). Below are the ethical considerations for the study.

- Respect and autonomy

The researcher upheld the intrinsic worth and human dignity of all individuals, acknowledging their autonomy in deciding to partake in the study, in alignment with Kivunja and Kuyini's perspective (2017:26). Throughout the research process, participants were treated with the utmost respect, and their involvement was not reduced merely to a means to an end.

The principle of respecting participants' autonomy, as emphasised by the National Institutes of Health (NIH) (2018), was upheld, ensuring they could freely make decisions and act without coercion. Participants were afforded the privilege to withdraw from the study without any repercussions and were comprehensively informed about the potential implications of their engagement. Respecting the principles of privacy and confidentiality, the researcher ensured that any information collected remained confidential and was not divulged to external parties without the participant's explicit consent, as per Giordano *et al.* (2007:264).

- Justice and distributive justice

The research diligently maintained fairness and prevented discrimination throughout the study, striving to ensure that both the benefits and responsibilities of the research were equally distributed, as underscored by Cresswell and Gilmour (2014:17). To uphold impartiality in the selection process, the study encompassed all four NWDoH districts. This approach sought to uphold an unbiased approach, considering the potential ramifications of the research across various demographic groups. Furthermore, the study guaranteed that the benefits and potential risks from the research were fairly and evenly allocated among all participants.

- Beneficence and non-maleficence

This study aimed to explore existing strategies and services available to support health promotion for teenage girls aged 10-19, in the NWP. The researcher minimised any potential risks or harm to participants and ensured that the benefits of the research outweighed any

potential risks. The research study had clear objectives designed to advance knowledge or improve health outcomes (Munhall, 1988:150).

- Risk/benefit analysis

The risk-benefit analysis was a critical procedure employed to evaluate whether the advantages derived from a research study surpassed the potential risks and whether these risks were deemed acceptable relative to the potential benefits, as highlighted by Rid and Wendler (2011:141). In conducting this research, the researcher thoroughly examined the potential gains and drawbacks of the study. This assessment considered the potential ramifications across diverse population groups, especially those that were vulnerable or disadvantaged, aiming to ensure an equitable balance of benefits and risks.

The researcher adhered to established protocols to align with ethical research standards by completing an ethics claim form mandated by the NWU. This step was taken in strict adherence to ethical research requisites and principles.

- Permission and informed consent

Authorisation to conduct this study through the NWU was granted by the NWDoH and Human Research Ethics Committee (HREC). An ethics committee performed ethical clearance procedures to ensure the study was ethically designed and did not subject participants to undue risks. The principle of informed consent was rigorously adhered to, entailing the provision of comprehensive information to participants. This information empowered participants to make informed decisions about their involvement, including details about the research's objectives, potential risks and benefits, and any alternative options, aligning with the insights of Lentz *et al.* (2016:65). To formalise this process, the consent form was crafted by the guidelines set forth by the HREC, which participants were provided and requested to sign.

In preparation for qualitative interviews, participants received lucid and easily understandable information about the study; this encompassed the study's purpose, methodologies, and foreseeable advantages and disadvantages. The researcher ensured that participants provided voluntary agreement and had the right to withdraw freely from the research at any point (Fujii, 2012:717).

- Confidentiality

Confidentiality pertains to the ethical duty of researchers to uphold the privacy of participants' personal and sensitive data, as defined by Giordano *et al.* (2007:264). To safeguard this principle, researchers ensured that participants provided informed consent, clearly outlining the measures implemented to preserve their privacy and uphold confidentiality by not disclosing their identity. Collected data was securely stored, employing participant codes instead of personal identifiers to protect privacy further. This practice was consistently maintained, extending even to interviews with NWDoH staff, where confidentiality and anonymity of participants were rigorously upheld.

- Anonymity

Preserving the anonymity of participants was crucial to encourage open and honest responses and maintain the integrity of the research (Saunders *et al.,* 2015:616). All data collected through interviews were carefully anonymised. Personal identifiers, including names, locations, or other identifying information, were removed from the dataset to ensure that individual responses could not be traced back to specific participants.

- Data management

Effective data management practices are necessary to protect the rights and interests of participants, ensure the quality and accuracy of the data, and promote the responsible and ethical conduct of research (Staunton *et al.,* 2021:1). The researcher took the necessary steps to ensure that the data was stored securely to prevent unauthorised access, use, or disclosure. All participants' responses and information were recorded in a manner that did not directly link them to their data. Audio recordings were transcribed and stored securely. Each participant was assigned a unique identifier or code to maintain anonymity throughout the research process. Data was stored securely using encrypted and password-protected systems to prevent unauthorised access. Physical documents and records were stored in locked cabinets to ensure confidentiality.

Furthermore, the data was accurate, reliable, and free from errors or biases. The results were shared responsibly and transparently. Access to the collected data was limited to authorised research team members, including the student, supervisor, and co-coder.

- Dissemination of research results

Dissemination of research outcomes stands as a pivotal aspect of the research journey, ensuring that the insights garnered from a study are shared with pertinent stakeholders and the broader scientific community (Southwell *et al.,* 2010:55). The researcher meticulously conveyed the findings in a manner that faithfully reflected the ethical contemplations integrated into the research process, aligning with the established guidelines of the NWU and the AUTHeR framework. This commitment extended to sharing the research findings with the NWDoH, fostering collaboration and the informed implementation of potential implications derived from the study.

- Conflict of interest

The research sought to avoid conflicts of interest wherever possible and prioritised the integrity and objectivity of the study in all decisions and actions related to the research (Sah & Feiler, 2020:88). The researcher took appropriate measures to manage or mitigate the risk if they identified a conflict of interest.

- Monitoring

The researcher continuously assessed and evaluated research activities to identify and address potential ethical concerns (Budin-Ljøsne *et al.,* 2023: e13518). Participants in research studies were requested to provide valuable feedback on the ethical considerations of a research project. Researchers were proactive in monitoring ethical considerations to ensure that research was conducted in a manner that was ethical and trustworthy. The supervisor guided the researcher, who produced a monitoring report for NWU, the ethical clearance committee, and NWDoH.

1.9 *Budget*

Given the nature and scope of the research, no budget was required for the successful execution of the study. The research team maintained ethical practices, ensured participant confidentiality, and adhered to all necessary guidelines and regulations throughout the research process. To show appreciation for the invaluable contributions made by participants to the research, the research team decided to compensate those who participated in online interviews with a token of appreciation in the form of an R50 data voucher. It is worth noting that most interviews were conducted in person, and participants who opted for online interviews used their data voluntarily. The supervisor's research budget

would cover the costs for these vouchers. This gesture aimed to acknowledge and express gratitude for the participant's willingness to engage in the study and the significance of their insights. The total budget was determined based on the actual number of participants and their specific involvement requirements. Notably, the study was completed without spending the allocated budget.

1.10 *Timeframe (table and gantt chart)*

1.10.1 *Time horizon*

Melnikovas (2018:34) defined the time horizon as the time interval over which a study takes place. Some studies are lengthy as they include multiple questions from participants. These are referred to as longitudinal studies (Melnikovas, 2018:29). This study is divided into two phases, the literature review and qualitative study, and took one year to complete.

Table 1. 1. Timeframe

Task Name	**Duration**
Applying for ethical clearance and completion of the scope of the study	26 June 2023
Comprehensive literature review on teenage pregnancy and health services	26 March 2023
Developing measuring tools	30 May 2023
Complete experiential study methodology	30 August 2023
Receive ethical clearance	05 December 2023
Send out questionnaires and conduct interviews	20 December 2023
Analysing of results	8 February 2024
Conclusions and commendations	23 February 2024
Language Editing	10 March 2024
Closeout for submission	18 March 2024

2. CHAPTER 2: LITERATURE REVIEW

This literature review broadly examines various sources, including academic articles, journals, and the NWDoH database. The purpose is to explore crucial subjects associated with established approaches in delivering health promotion services to adolescent girls in the NWP. The review focuses on critical aspects of SRH services relevant to young individuals, situating the present study within the broader context of existing information. Its goal is to compile pertinent, credible sources and align them with the research objectives, deliberately excluding studies that do not address the research question.

2.1. *Introduction*

The rise in undesirable sexual behaviours among adolescent students has raised concerns and attracted the attention of researchers in global public health. These researchers strive to develop innovative approaches to enhance positive sexual health outcomes. Reports from 2021 accentuated a notable rise in adolescent pregnancies, with Save the Children observing a 60% rise in the count of infants born to teenage mothers in Gauteng, South Africa (Barron *et al*., 2022:252). According to O'Regan (UNICEF, 2021:1), the number of school-going adolescents affected by teenage pregnancy in South Africa is a cause for concern due to its high incidence rate.

Globally, an estimated 21 million adolescent girls between 15-19 years old become pregnant annually in developing countries (WHO, 2020:1). In South Africa, there is a concerning unmet need for contraception, with 31% of adolescent girls aged 15-19 facing this issue (Jonas *et al*., 2020:1). On a global scale, around 3.9 million illegal abortions happen annually among 15 to 19-year-old girls (Njogu, 2019:1). Teenage pregnancy is a pervasive global challenge. A worldwide study revealed that out of 1.1 billion women of childbearing age (15-49 years), 190 million do not use contraception (Christin-Maitre, 2022:457).

From 2015 to 2020, the global adolescent birth rate averaged 41 births per 1,000 adolescents aged 15 to 19. Sub-Saharan Africa displayed a significantly higher adolescent birth rate of 99, whereas Western Europe exhibited a substantially lower rate at eight births per 1,000 adolescents. In line with the global average, South Africa recorded a rate of 41 births per 1,000 during this period (Barron *et al*., 2022:252).

The global issue of young people's SRH is a significant concern, as highlighted by the WHO in 2019. Physiological factors, such as the physical and hormonal changes in their bodies, may lead to risky sexual behaviours, emphasising the need for SRH care (Luvuno *et al*., 2019:1). A study conducted by Breuner *et al.* in 2016 revealed that only 10% of sexually experienced adolescents identified healthcare providers as a source of information on birth control, STIs, and HIV. The WHO's 2023 fact sheet reports over a million estimated daily diagnoses of asymptomatic STIs worldwide. Adolescents and teenagers have been acknowledged as a priority population at risk of STI infections due to potentially risky sexual behaviours (WHO, 2022).

2.2. Exploration of health promotion strategies in the North-West province through the Socio-Ecological Model (SEM).

The SEM, developed by Uriel Bronfenbrenner, has emerged as a vital theoretical framework for understanding human development, particularly regarding health outcomes for young individuals (Bronfenbrenner, 1975:439). This model, formalised as a theory in the 1980s, provides a comprehensive lens through which to examine the multifaceted influences on individual behaviour, considering internal and external factors and interactions across various levels. In the realm of adolescent health promotion services in the NWP, the SEM proves invaluable in dissecting the complexities involved.

The SEM serves as the analytical cornerstone in this study, offering a structured framework for exploring the factors influencing the utilisation of SRH services among adolescent girls. Mulaudzi (2022:1) emphasises that the SEM effectively comprehends the interplay between internal and external elements that shape individual behaviour. The model's consideration of interactions at different levels — individual, interpersonal, organisational, and community — aligns seamlessly with the multidimensional nature of health promotion strategies.

Chimphamba (2012:1) highlights the growing trend among academics to utilise the social-ecological paradigm to understand societal, interpersonal, and systemic aspects of health. This academic shift underscores the relevance of SEM in the present research, providing a robust foundation for delving into the intricacies of health promotion services for adolescent girls.

A study by Apanga and Adam (2015:1) show that SEM has been actively employed in evidence-based youth health programmes to enhance impact and improve outcomes. The relational systems within the ecological theory, as outlined by Iruka *et al*. (2020:15) — microsystem, mesosystem, exosystem, and macrosystem — offer a structured approach to dissecting the various influences on adolescent health in the NWP.

Applying the SEM aligns with the study's aim to scrutinise perceptions, beliefs, and attitudes that shape interactions at different levels. Hayes *et al*. (2022:1) emphasise the microsystem's impact on youth development, encompassing institutions such as family, school, and peers. The mesosystem, focusing on integrated relationships, resonates with the interconnected nature of factors influencing health outcomes. The exosystem encapsulates the broader associations impacting youth experiences. At the same time, the macro system incorporates overarching cultural, religious, and socio-economic beliefs and values (Boulanger-Lapointe *et al*., 2019:81).

The SEM provides a robust framework for understanding the complex influences on health promotion services for adolescent girls in the NWP. This literature review prepares the groundwork for the subsequent analysis of the results. It demonstrates how SEM will facilitate a nuanced exploration of the multifaceted factors affecting the utilisation of SRH services among this demographic. The structured approach of SEM, considering interactions at various levels and encompassing diverse elements, will be instrumental in deriving meaningful insights from the research findings.

2.3. Adolescence Sexual And Reproductive Health

During adolescence, individuals undergo significant physical, mental, and emotional transformations driven by heightened hormonal activity. These biological changes not only stimulate an increased interest in sexual behaviour but also render adolescents susceptible to associated risks (Moche, 2022:1). The global concern surrounding the SRH of young people is underscored by alarming HIV prevalence rates in Africa among individuals aged 10 to 24 (WHO, 2019). In the context of HIV infections, South Africa ranks fourth globally with a 19 per cent infection rate, as reported by Mulaudzi (2022:1) based on Statista data (2019).

Adolescents, compared to adults, face elevated risks of reproductive system-related issues such as STIs, early pregnancies, abortions, and HIV/AIDS. Adekola and Mavhandu-Mudzusi (2021:1) note a global increase in sexual activity among the youth, emphasising the urgency of addressing this trend.

South Africa's National Integrated SRH and Rights Policy (2019) outlines a comprehensive service package for the youth, encompassing;

- sexuality education,
- contraceptive distribution and counselling,
- HIV prevention and management,
- STI prevention and management,
- screening and management of sexual and gender-based violence,
- antenatal, intrapartum, and post-partum care.

It emphasises the importance of privacy, confidentiality, tailored services, and informed consent for teenagers accessing SRH services. Vanwesenbeeck *et al*. (2016:471) emphasises the importance of sexual education in empowering adolescents with the knowledge and skills needed to make informed decisions about sexual activities. In South Africa, a lack of contraception knowledge contributes to over 50% of teenage pregnancies, with 55% resulting from a misunderstanding of the risks involved (Jonas *et al.* (2020:1). Despite the youth constituting 17.2% of South Africa's population, only 1.2% seek healthcare (Mathibela & Skhosana, 2021:1).

During the first quarter of 2020/2021, the male condom distribution rate was only 25.3%, while no female condoms were distributed, according to DHIS (District Health Information System) data. The lack of contraceptive information contributes to the incorrect use of contraceptives among South African teenage girls (Qolesa *et al*., 2017:1). The limited contraceptive choices available to teenage girls pose challenges, compounded by their lack of awareness about female condoms and understanding of the distinctions between male condoms (Holtman, 2022:1). The inadequate sexual education in South Africa contributes to a low level of awareness among teenagers regarding SRH and a deficiency in the practical skills needed to implement that knowledge. Consequently, a minimal number of teenagers engage in condom use during sexual intercourse (Qolesa, 2017:1).

2.4. Unintended pregnancies among teenagers

Teenage pregnancy, often unplanned, presents significant challenges for adolescent girls. In South Africa, a staggering 76% of pregnancies among girls aged 15 - 19 were found to be unintended, reflecting a trend of risky, coerced, and unprotected sexual encounters. These encounters lead to the transmission of STIs, notably HIV (Woldesenbet *et al*., 2021:23740). These pregnancies pose serious health risks, especially for younger girls aged 10 - 14. Empowering teenage girls to avoid unprotected sex requires comprehensive information on SRH, including the consequences of teenage pregnancy (Gwiji, 2022:1). To effectively prevent teenage pregnancy and foster health literacy development in South Africa, it is crucial to impart SRH knowledge. This knowledge will play a pivotal role in enhancing health literacy specifically tailored to SRH services for teenagers.

Adolescents facing pregnancy encounter stigmatisation within their communities and healthcare settings, while millions of girls experience unintended pregnancies each year. As a result, the girls often resort to unsafe abortions (Denno et al.,2020: 269; Makola et al., 2019:158), highlighting the urgent need for comprehensive reproductive healthcare complications during pregnancy and delivery are the leading causes of death for girls aged 15 to 19 worldwide (Gunawardena *et al.,* 2019:1). Unplanned pregnancies contribute to the horizontal transmission of HIV and increase the risk of adverse health outcomes for infants born to adolescent mothers (WHO, 2018). The United Nations projects a continued rise in adolescent pregnancies by 2030, particularly in African countries, where access to healthcare services remains limited (Barron *et al.,* 2022:252).

Between 2017 and 2021, only 52% of adolescent girls aged 10 to 19 in the NWP availed themselves of primary care services in the public sector (Barron *et al*., 2022:252). In addition to health concerns, early pregnancy disrupts education and economic aspirations, as adolescent parents face delays in pursuing their goals (Ngubane & Maharaj, 2018:1). These adverse effects extend beyond the individual, impacting socio-economic status, education, and overall well-being. Investing in family planning and SRH services offers a proactive approach to addressing the multifaceted challenges of teenage pregnancy (Govender *et al*., 2020:1). By promoting access to comprehensive healthcare and education, societies can mitigate the adverse consequences and empower adolescent girls to reach their potential.

2.5. Sexually transmitted infection rates among adolescents

STIs pose a significant global public health challenge, impacting individuals and healthcare systems (WHO, 2021). Swift detection and treatment are crucial to avert significant health complications (Mulaudzi, 2022:1). The WHO (2021) reports over a million daily diagnoses of asymptomatic STIs globally, emphasising the urgent need for intervention. Adolescent girls in South Africa face a heightened risk of STIs, particularly HIV, with 38% of new infections in 2017 occurring among youth (Zuma *et al*., 2022:8125). Human Immunodeficiency Virus (HIV) remains a primary global health concern, with 38 million people living with HIV by the end of 2019 (UNAIDS, 2020). South Africa's high prevalence underscores the urgency to address the issue, especially considering that unsafe sex is the leading risk factor for female adolescent death worldwide (Gunawardena *et al.,* 2019:1). The African region reports an alarming 96 million incident cases of syphilis, gonorrhoea, chlamydia, and trichomoniasis among individuals aged 15 to 49 years (Soriano, 2018:1). Adolescent pregnancy and HIV infection rates are exceptionally high in South Africa, highlighting the need for comprehensive reproductive health care and HIV prevention programmes. Despite efforts, there is a notable failure in ensuring young women's access to contraceptives, termination of pregnancy services, and HIV prevention.

Pre-exposure prophylaxis (PrEP) is a vital preventive measure involving the use of antiretroviral drugs by HIV-negative individuals at substantial risk of infection (WHO, 2017). In 2019, South Africa reported 200,000 new HIV infections, with 120,000 in women aged 15 and older (UNAIDS, 2020). Pre-exposure prophylaxis is available in public clinics, and the South African National Department of Health (NDOH) extended PrEP access in 2020. Still, challenges persist as awareness and uptake remain low. This outcome is partly due to insufficient knowledge, stigma, and misconceptions about potential side effects (NDOH, 2020).

Efforts to increase PrEP demand and uptake through campaigns and drives face obstacles, highlighting the crucial role of community education and awareness-sharing in addressing misconceptions (Moche, 2022:1). Addressing these challenges is essential to reducing the high HIV incidence among South African women over 15 years of age.

2.6. Barriers to contraceptive use among adolescents

Worrying trends in global adolescent sexual well-being contribute to increased prevalence rates of teenage pregnancy and STIs in specific regions, specifically in Africa (Lara & Abdo, 2016:417). Adolescents, identified as a priority population at risk of STIs due to risky sexual behaviours (WHO, 2023), often encounter difficulties accessing contraceptive services (Vukapi, 2021:1). Multifaceted barriers are influencing contraceptive use among adolescents, encompassing socio-economic, educational, familial, healthcare provider biases, and community judgments. In 2019, over 842 million women in their childbearing years utilised contraceptive methods, while 270 million women globally lacked access to the contraceptives they required (Kantorová *et al*., 2020:1). However, in sub-Saharan African nations, less than half of the demand for family planning was satisfied (Reddy *et al*., 2007:1859).

2.6.1. Perceptions, concerns, fears of side effects, stigma and decision-making in Reproductive Health Choices.

Teenage girls also face formidable barriers primarily due to widespread societal stigma and discrimination (Makola *et al*., 2019:158). The apprehension of being branded as promiscuous, especially concerning contraception use, hampers their willingness to seek SRH assistance. Healthcare providers exacerbate this challenge by stigmatising, interrogating, and occasionally denying services to teenage girls, perpetuating a cycle of discrimination (Holtman, 2022:1). The broader societal stigma surrounding teenage pregnancy serves as a deterrent for adolescents seeking SRH services, such as contraception or abortion, as they fear judgment and gossip (Duby *et al*., 2021:127). Factors like sexual category, matrimonial status, poverty, and age contribute to shaping the perception and experience of stigma and discrimination among teenage girls when seeking SRH information (Gwiji, 2022:1). Consequently, these formidable obstacles impede the delivery of essential services and raise significant concerns within the public health sector about the overall well-being of adolescent girls (Kantorová *et al*., 2020:1).

A study by Vukapi (2020:1) underlines that fear of family planning side effects significantly discourages adolescents from using family planning. While there is a global rise in modern contraceptive use, a sub-Saharan Africa (SSA) study found that the significant lag in

contraceptive use could be linked to a lack of planning empowerment (Naidoo *et al.,* 2019:21).

Within African societies, Sedlander *et al.* (2022:1) note the prevailing concern about maintaining fertility as proof of motherhood's societal importance. Findings from a study by Boamah-Kaali *et al. (*2021:173) on adolescents reveal specific worries about fatigue, nausea, insomnia, and menstrual disorders lasting up to 10 days, influencing family planning decisions.

A similar study by Naidoo *et al.* (2019:21) found a preference for traditional contraceptives due to perceived efficacy, where participants, while knowledgeable about SRH, hold misconceptions about long-term fertility risks associated with hormonal family planning. Concerns about irregular bleeding, abdominal pain, hypertension, obesity, and heart palpitations add layers to the complex decision-making landscape (Boamah-Kaali *et al.,* 2021:173).

Fears of reduced sexual performance and general body weakness stemming from misinformation within communities draw attention to the importance of knowledge dissemination on PrEP (Moche, 2022:1). Pre-exposure prophylaxis, while associated with mild side effects like nausea and headaches initially, serves as a preventive measure against HIV.

2.6.2. Socio-economic, social media, knowledge gap and Educational Barriers

Insufficient and inaccurate SRH information may lead young individuals to lack awareness of their SRH needs, doubt the effectiveness and safety of SRH services, and be hesitant to adopt contraceptive methods (Holtman, 2022:1). The absence of information about specific SRH services and a lack of knowledge regarding where to access them create barriers for youth seeking SRH services (Gwiji, 2022:1). Findings from a Mathibela and Skhosana (2021:1) study on adolescent SRH requirements revealed that many teenagers never sought SRH information from health facilities. Reasons included a lack of awareness of available services and concerns about seeking care alongside older individuals and healthcare professionals of different genders (McGorry *et al.*, 2022:61). Moche (2022:1) highlighted factors hindering young people from seeking health services, including lack of knowledge about available services, cost, distance to the facility, fear, and busy schedules.

Services tailored for youth should be readily available, cost-effective, confidential, non-judgmental, and devoid of discriminatory prerequisites (Murigi *et al*., 2020:1).

Teenagers in South Africa still feel constrained in seeking SRH services due to fears of being judged or influenced by older individuals (Mulaudzi, 2022:1). The apprehension of consulting for services alongside elders in the same facilities perpetuates this limitation. A lack of comprehensive sex education was identified as a significant gap among the youth (Keogh et al., 2020:119). Statistics reveal that approximately 75% of women with some form of tertiary education use contraceptives, highlighting the correlation between education and contraceptive practices (DoH, 2012). In the context of this literature review, prior studies have explored the community's role, impact, and influence. A study on socio-cultural factors influencing young people's use of SRH services found that peer and family norms notably increased the likelihood of SRH service utilisation, with family influence at 39% and peer influence at 28% (Dlamini et al., 2017a:1).

Teenagers turn to diverse media outlets to seek SRH information, emphasising the significance of social media and the internet in addressing high-risk behaviours like teenage pregnancy (Esmaeilzadeh *et al*., 2018:1). In South Africa, Facebook serves as a prominent platform for rapid information sharing and direct communication about SRH among teenagers, with concerns raised by parents about potential exposure to risky sexual behaviours (Kusheta *et al*., 2019:1). The primary channels for teenagers seeking SRH information are online platforms and the internet, which provide privacy and easy accessibility (Pretorius *et al*., 2019:1). However, concerns about the reliability of online sources exist (Magno *et al*., 2023:409). The widespread use of technology, particularly the internet, has increased teenagers' exposure to pornography, impacting their sexual development and potentially leading to psychological problems and early sexual debut (Huerta, 2019:1). Despite the internet's benefits, challenges arise due to a lack of guidance, privacy concerns, and questions about information reliability (Pretorius *et al*., 2019:1).

Policies like the South African Schools Act No. 84 (SASA) strive to protect the reproductive rights of teenage mothers, ensuring their continued access to education. Despite these protective measures, pregnant learners and teenage mothers encounter challenges navigating the intricate balance between pregnancy, motherhood, and schooling, impacting their educational pursuits (Gillespie *et al.,* 2022:1014). The success of school-based sex education programmes relies significantly on the availability of appropriate teaching and learning resources at the school level (Keogh *et al*., 2020:119).

According to a study by Glover *et al*. (2016:53), effective implementation faces obstacles such as a shortage of pertinent resources and educator-related challenges like incompetence and adherence to cultural or religious perspectives. Addressing specific subjects, such as sexual diversity, proves challenging due to inadequate training or conflicting socio-cultural values among educators.

2.6.3. Impact of religion, cultural beliefs and stigmatisation

The utilisation of contraceptives faces obstacles beyond their mere availability. Religion plays a significant role in determining contraceptive usage, with documented correlations existing between religion and contraception (Osuafor *et al*., 2018:1). Moral beliefs also play a role in contraceptive use, with some women refraining due to myths like the belief that contraceptives cause abortion (Ojiambo, 2021:1). These religious and moral convictions serve as inhibiting factors for some teenage girls when considering contraceptive use.

Cultural norms and social values also exert considerable influence, as many societies disapprove of premarital sex and the open discussion of sexual matters. These societies perceive sex education as encouraging promiscuity (Garland-Levett, 2017:121). This disapproval leads to stigma and humiliation when individuals seek sexual health information or services (Vongxay *et al*., 2019:1). Cultural changes in African nations, including South Africa, pose challenges for young people. Women are caught between traditional customs and modern societal demands for conservative sexual behaviour and early marriage (Tamang *et al*., 2017:13). Numerous studies indicate cultural barriers to sex education and service use (Garland-Levett, 2017:121). These studies emphasise that cultural beliefs significantly influence young people's perceptions and willingness to seek sexual health services. This influence is particularly pronounced in rural areas where cultural traditions remain prevalent.

2.7. Adolescent and Youth-Friendly Services (AYFS)

The concept of a youth-friendly structure encompasses several vital characteristics. First and foremost, such a structure should be conveniently located, ensuring easy access for local community members (Murigi *et al*., 2020:1). Adequate space is crucial, particularly in terms of counselling areas, offering visual and auditory privacy (Vukapi, 2020:1). Maintaining confidentiality is paramount for adolescent girls.

It necessitates a dedicated space, separate from adult clinic areas, to facilitate private consultations for teenagers (Damian et al., 2024:355). This approach aligns with the Quality Assessment Tool recommended by WHO, which emphasises the need for a physical environment conducive to providing AYFS (Damian *et al*., 2024:355).

The youth-friendly approach, tailoring health services to address the developmental needs and unique barriers young people face, has gained increased attention (McGorry *et al*., 2022:61). Specifically, tailored SRH services for teenagers represent a recent public health initiative, according to the study done in KwaZulu-Natal (Adeagbo *et al*., 2019:15681). A study in the UK noted that a significant shift in societal norms regarding adolescent sexuality prompted a re-evaluation of assumptions about adolescent HIV and SRH needs (Denno *et al*., 2020:269).

Adolescent healthcare differs from pediatric and adult healthcare due to physiological and psychosocial transitions. Therefore, the focus on adolescent HIV and SRH needs to be intensified (WHO, 2019). Adolescent and youth-friendly services have been applied for over two decades in developing countries and have shown the potential to increase young people's use of SRH services (Damian *et al*., 2024:355). Key components include training for healthcare providers, facility improvements for better access and quality, and community-based activities to create an enabling environment and increase demand (Denno *et al*., 2020:269).

Efforts to make health service provision adolescent-friendly, following the WHO quality of care framework, emphasise accessibility, acceptability, appropriateness, equity, and effectiveness (McGorry *et al*., 2022:61). Strode and Essack (2017:741) assert that under the prevailing approach, consent for contraceptives and contraceptive advice is permissible for a child from the age of 12, with the age threshold for prescription of drugs set at 14, and sterilisations permitted from the age of 18 (Strode & Essack, 2017:741; WHO, 2018).

Additionally, the legal framework in South Africa allows children to consent to sexual activities from the age of 16 (Ntini *et al*., 2023:1). It should be noted that this approach assumes that a child at the specified age possesses the requisite capacity to provide consent (Damian *et al*., 2024:355). The literature suggests that young people consistently demand privacy, confidentiality, and respectful treatment by providers as crucial attributes of quality health services.

Policymakers stress the importance of AYFS being not only friendly but also supportive, geared to the needs of teenagers, and allowing them to participate in decisions affecting their health (Vukapi*,* 2020:1). Youth-friendly services should be accessible, affordable, confidential, non-judgmental, and free from discriminatory requirements (Murigi *et al*., 2020:1).

While the Youth-Friendly Service model has limitations in its implication locally, negative experiences include a lack of privacy, sharing facilities with adults, long queues, negative attitudes of healthcare workers, and breach of confidentiality (Vukapi, 2020:1). Positive experiences include friendly staff, respectful communication, a non-judgmental approach, and adequate information (McGorry *et al*., 2022:61). These findings emphasise the importance of refining the Youth-Friendly Service model to better meet the needs and expectations of young individuals seeking healthcare services.

3. CHAPTER 3: REALISATION OF DATA COLLECTION AND ANALYSIS AND PRESENTING THE RESEARCH RESULTS

3.1. Introduction

This chapter presents the empirical findings of research conducted with healthcare workers in the NWP. As outlined in the preceding chapter, primary data was collected through semi-structured interviews. The initial section provides an overview of the participants' profiles and presents findings categorised into themes and their corresponding codes. These themes are structured based on their alignment with the study's objectives. It focuses on health workers' knowledge, perceptions, and experiences concerning SRH services and the prevailing strategies for delivering health promotion services to adolescent girls in the NWP. Consequently, this chapter delves into the discussion of findings under the following primary themes:

- Health Promotion Strategies.
- Challenges and barriers in providing healthcare services.
- Proposed Innovative Solutions for improving health promotion strategies.

These themes reflect the day-to-day realities surrounding healthcare workers' knowledge, perceptions, and experiences in delivering health promotion services to adolescent girls in the NWP. Each theme directly corresponds to and addresses the objectives of the study.

3.2. Data collection

The data collection process played a key role in addressing the overarching research question and fulfilling the study's purpose and objectives (Asenahabi, 2019:76). Qualitative data was gathered through semi-structured interviews. This method was selected to allow for the examination of the thoughts and opinions of the participants regarding health promotion interventions for adolescent girls in the NWP (Creswell, 2017:1). A guide for conducting interviews was prepared beforehand, based on the initial literature review.

During the interviews, participants shared their knowledge and perspectives on various dimensions. Included were current social media health promotion information, benefits and challenges of existing strategies, practices concerning health promotion efforts for teenage girls and teen mothers, and their health-related information-seeking behaviours and preferences. This approach aimed to explore the health promotion strategies for teenage girls within the NWP. The data collection process was structured to adhere to qualitative research principles outlined by Hirose and Creswell (2023:12), ensuring that insights were gathered systematically and rigorously. The data from the semi-structured interviews contributed to a robust and holistic understanding of the landscape of SRH promotion for teenage girls in the NWP.

3.3. Qualitative descriptive approach

The qualitative descriptive approach was instrumental in uncovering rich, nuanced insights into health promotion services for adolescent girls in the NWP and following the methodology outlined by Sandelowski (2000:334) and Bradshaw (2017:2333). The research design, comprising key steps such as problem identification, literature review, sample selection, data collection, and interpretation of findings, aimed at providing a comprehensive understanding of the phenomenon under investigation. The empirical investigation involved semi-structured interviews with essential health services managers utilising a qualitative explorative approach to capture the intricacies of the subject matter.

As Sandelowski (2000:334) and Braun and Clarke (2006:77) proposed, thematic data analysis proved essential in uncovering, defining, and reporting themes within the dataset. This interpretive and exploratory technique allowed deep exploration of participants' subjective experiences and perspectives. The six-phased process involved becoming acquainted with the data, collecting raw data, creating initial codes, making sense of theme connections, describing and identifying themes, and constructing the report (Cresswell & Gilmour., 2014:17). This iterative process ensured a thorough understanding of the data, resulting in a well-structured and insightful outcome.

3.4. Rigour

Rigour in this study was upheld by implementing key strategies in line with Creswell's (2018:1) research design principles. The following measures were applied:

- Credibility was safeguarded through an exhaustive literature review and meticulous data collection methods. Regular revisitation of the data was conducted to ensure that identified themes, categories, descriptions, and interpretations remained coherent and aligned with participants' experiences.
- Transferability was achieved by providing detailed and vivid descriptions of the research context and participants. This approach aimed to enhance a deeper understanding of the findings within a broader context.
- Dependability and confirmability were ensured through systematic data coding, inter-coder reliability checks, and maintaining transparency throughout the research process. To further enhance this aspect, co-coding discussions were held within the research team, involving both the student and the supervisor. This stringent approach was adopted to guarantee the consistency, reliability, and trustworthiness of the qualitative insights throughout the study.

3.5. Data analysis process

The researcher applied a data analysis framework discussed by Hirose and Creswell (2023:12) to achieve the outcomes by thoroughly examining transcripts obtained through semi-structured interviews with community healthcare workers. The primary goal was to explore insights about existing health promotion strategies for teenage girls within the NWP. The analysis process involved a structured approach, encompassing the organisation, coding, and interrelation of themes to interpret the diverse perspectives shared by participants.

Figure 3.1 shows a Creswell Model of Qualitative Data Analysis flow diagram, which was followed to ensure rigour and depth in extracting meaningful insights from the raw transcripts.

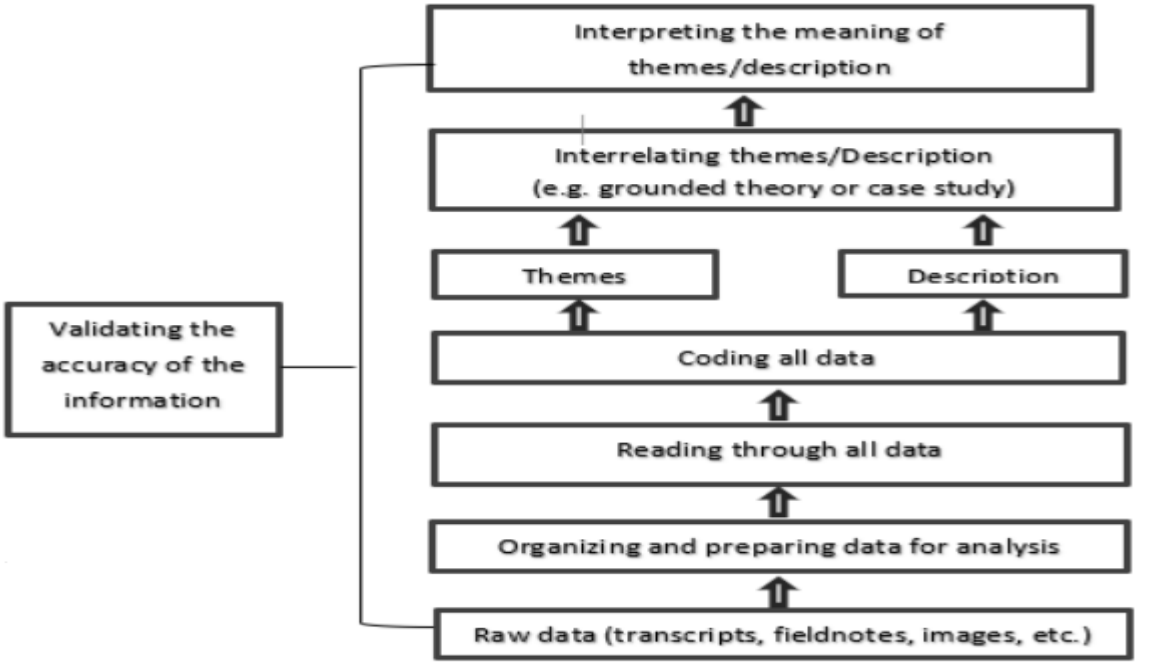


Figure 3. 1 Creswell Model of Qualitative Data Analysis used (Creswell et al., 2018:1)

Raw Data (Transcripts):

The initial phase involved collecting raw data from transcripts from semi-structured interviews conducted with participants. These transcripts served as the foundation for the subsequent stages of data analysis.

Organising and Preparing Data for Analysis:

Raw transcripts were organised systematically, ensuring each interview was identifiable and accessible. Data preparation involved cleaning and formatting the text, making it conducive for analysis and maintaining anonymity. This step established the groundwork for a comprehensive examination of the collected information.

Reading Through All Data:

The researcher engaged in an in-depth reading of all transcripts. This iterative process involved familiarising himself with the content, understanding participants' responses holistically, and identifying recurring patterns, topics, or issues within the data. The researcher had regular co-coding discussions with the supervisors to enhance rigour.

Coding All Data:

The coding phase entailed the systematic categorisation of data into meaningful units. The researcher assigned descriptive labels or codes to segments of text that captured key concepts, themes, or sentiments expressed by participants. This process allowed for the identification of patterns and emerging codes.

Themes and Description:

The coded data was then grouped into overarching themes. Themes represented recurring concepts or ideas that summarised the essence of participants' responses. Descriptive summaries were crafted for each theme, representing the insights gathered from the interviews.

Interrelating Themes/Descriptions:

The interrelation of themes involved exploring connections and relationships between different coded elements. The researcher identified how themes intersected or complemented, contributing to a more comprehensive understanding of the data. This step added depth to the interpretation of the findings.

Interpreting the Meaning:

The final stage involved synthesising the interpreted meanings derived from the interrelated themes. The researchers concluded, generated insights, and developed a narrative that encapsulated the broader implications of the data. This interpretive process was crucial for extracting the significance and relevance of the findings in addressing the research question and objectives.

The data was stored securely to prevent unauthorised access, use, or disclosure. Participant responses and information were recorded anonymously, with each participant assigned a unique identifier. Secure storage methods, including encryption and password protection, were employed to prevent unauthorised access. Physical documents were stored in locked cabinets for confidentiality.

A data management plan has been established to ensure data accuracy, reliability, and freedom from errors or biases. Results will be shared responsibly and transparently, and access to the data will be limited to authorised research team members. These measures are in place to maintain research integrity, protect data privacy, and facilitate secure data storage and access.

3.6. Participant profiles

This section describes participants' demographic profiles. The participants were mainly healthcare workers, focusing on SRH support for teenagers within the NWDoH. A strategic participant selection process was employed to gain comprehensive insights, emphasising expertise and contextual relevance. Expert sampling targeted individuals directly involved in health promotion and prevention initiatives within the NWDoH, covering various roles such as Community Health Workers, Health Educators, and Programme Managers. The participant profiles were designed to ensure a nuanced exploration of teenage SRH support, considering professional expertise and contextual factors. Table 3.1 includes information on participants' roles, locations, age groups, interview dates, and durations.

Table 3. 1. Participants' Demographic Profiles and Interview Details

Participant	**Role**	**Location**	**Age group in years**	**Date of the interview**	**Duration (min)**
Participant 1	Programme Manager	Urban Area	30-40	22/12/23	58
Participant 2	Professional Nurse (Primary Health Care)	Rural Area	30-40	11/01/24	56
Participant 3	Professional Nurse (Health Care Clinical Programme Coordinate)	Semi-Urban Area	40-50	11/01/ 24	33
Participant 4	Professional Nurse (Health Promotion Officer)	Remote Area	30-40	12/12/24	37
Participant 5	Programme Manager	Urban Area	30-40	20/12/23	35
Participant 6	Professional nurse	Rural Area	20-40	01/01/29	26
Participant 7	Professional nurse (AYFS)	Semi-Urban Area	30-40	08/01/24	40
Participant 8	Professional nurse	Remote Area	20-30	08/01/24	28
Participant 9	Health Specialist (AYFS)	Semi-Urban Area	30-40	08/01/24	28
Participant 10	Professional nurse	Rural Area	30-40	27/12/23	35

3.7. *Realisation of the data*

This section presents the thematic analysis derived from the data. As detailed in the preceding section, the data was gathered via semi-structured interviews. The presentation of results follows a thematic approach, focusing on the research objectives and themes derived from the data. The chosen themes align with the study's objectives, specifically examining current strategies for delivering health promotion services to adolescent girls in the NWP. Table 3.2 illustrates a selection of participant responses for illustrative purposes. Not all participant responses are included in this table. For a comprehensive understanding of the participant feedback, please refer to the corresponding section in the text.

Table 3. 2. Overview of Thematic Analysis of Health Promotion Services for Adolescent Girls in the North-West Province

Theme	Categories	Code	Direct Quotes
Health Promotion Strategies Implemented By The NWDoH	Adolescent Maternal and Reproductive Health Support Programmes	Preconception, Antenatal and Postnatal Care	*"During pregnancy, we offer antenatal care services until they reach delivery. We also do a survey where we do a questionnaire to determine the support the teenagers need from us during their early days of motherhood. After giving birth, we offer postnatal care services, and encourage them to participate in the youth zone space which offers them family planning." P9*
			"At the moment, no support is given to teen mothers. We need support from the Department of Education because we don't receive the stats of how many teenagers came back to school after delivery." P3
			"Before the teenagers fall pregnant, we do health education with them to tell them about different types of family planning to choose from. Our clinics offer all different types of family planning." P6
		Comprehensive Engagement and Support Services (Psychological and Social Support)	*"We encourage family planning and then allow the teenagers to have a choice contraceptive method that they want to use. We explain them about a variety of options..." P1*
			"When there is a need for psychology and social workers, we book appointments for them. Social workers are closely involved with those who are underage, who are 15 years and below, and they are stationed at the hospital." P4
	Prevention of sexually transmitted diseases.	Prevention of HIV and PrEP Awareness for teenagers	*"We incorporate HIV and PrEP awareness into our education efforts to empower teenagers with preventive knowledge." P4* *"We also have sex education and talk to them regarding the use of PrEP and PEP to prevent HIV and other methods for STIs." P7*
		Prevention of STI	*"We focus on STI awareness as a crucial component of our health education campaigns." P2* *"A programme which is the STI condom week and healthy lifestyle promotion. So, the services that we are rendering are to do the health education through the health talks, and then we do commemoration of these activities according to the health calendar." P5*
		Scheduled Awareness Campaigns	*"We have campaigns and roadshows twice a year to give access to data and information and AYFS." P9* *"A programme which is the STI condom week and healthy lifestyle promotion" P5*
		Community outreach, Mobile clinic and school nurse	*"We link the newly teen mothers to Outreach team leaders (OTL), which visit the homes to ensure that the baby and the mother are taken care of and ensures that any other health-related issue is addressed." P2*

	SRH Awareness and Outreach		*"We have two sisters who are designated to attend the schools in the sub-district who, after consulting with the teenagers, write referral letters to the clinic with whatever concern or help is needed." P1*
			"There's a mobile clinic which reaches out to disadvantaged communities because they are quite far, they're able to give them education and family planning." P4
Challenges in Providing Healthcare Services	Teenagers SRH Behaviour Influences	Contraceptive Misconceptions And Ignorance of Teenagers	*"Their main reason is that their parents tell them that family planning is going to damage them. They are not going to be able to have children when they get older. They feel like they are not ready to start taking family planning." P4* *"Most of them lack information although we give them information." P4*
		Cultural Beliefs (Stigmas) Hindering Family Planning	*"Others made mention of family being against their family culture/belief as parents do not approve of it." P10*
			"Three main ones, peer pressure, lack of knowledge, and the parental lack of guidance from the parents, or lack of communication on social sexual issues from the parent." P2
		Concerns About Side Effects of Family Planning	*"Mostly they don't want it because of side effects, they say it makes them gain weight." P7*
		Peer Pressure In Teenagers' SRH	*"It's mainly due to side effects like gaining body weight and peer pressure. Our facilities now have young and friendly nurses who can relate better to the youth."*
			"Peer pressure" P3 and P7
	School-Based SRH Service Challenges	Need For Supplementing Limited Content Of SRH Education In Schools	*"Also, when we do sexual reproductive health education at school, parents raise concerns saying we are teaching kids to engage in sex." P3*
		School Constraints On SRH Services	*"Some say due to school, they do not have time to come to the clinic. Although DoH approved the policy to give the contraceptive at school, the Department of Education hasn't approved that yet. So we are not able to implement it." P10*
		Fear Of Embarrassment And Negative Treatment By Healthcare Workers	*"The other one, I think the embarrassment that comes with taking family planning and people from their neighboring places will recognise them. They also have fear due to lack of knowledge." P1*
			"Some are also not comfortable to access our facilities due to the bad attitude or treatment they receive from us health workers. They do it out of fear of being embarrassed." P10
			"Working long hours can be stressful for us health workers." P10

	Operational Challenges In Healthcare To Provide SRH	Healthcare Workers' Workload And Staff Shortages	*"Sometimes we experience staff shortages to be able to accommodate the general public and give attention to teenagers." P4*
		Medication Stock Shortages	*"We also have a challenge of running short of stock, especially for family planning."P7* *"Shortage of family planning medicine. This is the reason most of the teenagers pull out from the family planning programme because of no stock availability and they do not want to use alternative options." P2*
		Difficulty In Providing Age-Appropriate SRH Education	*"We also have a challenge on how to break down the content of SRH for a different range of age because we are dealing with teenagers as young as 10 years old and different intellect levels." P10*
		Infrastructure Challenges Of Nwdoh	*"Our infrastructure is not conducive enough for privacy and confidentiality." P10* *"The other challenges that we have infrastructure the is no access to privacy due to infrastructure challenges." P1*
		Knowledge And Understanding Of Policies By Health Care Workers	*"Adolescent youth policy (2017)." P1* *"Sexual reproductive right policy (2020)." P1* *"Integrated sexual reproductive health policy 2019, Choice on termination of pregnancy guideline, National contraceptive guideline, Post-exposure prophylaxis guidelines, Pre-exposure prophylaxis (PrEP) guidelines." P2* *"AYFS policy." P8* *"No, not that I know of." P6*
		Monitoring Indicators Of SRH Within Nwdoh	*"We monitor the teenage pregnancy rate, by stock availability, record of visitations to the clinic, and delivery rates as one of our indicators in the Department of Health." P10* *"We have two mobile clinics which are used to access rural areas and remote areas which go to these areas on a daily basis, 5 days a week. P1*
		Access, Transparency In Data Dissemination And Inclusivity Of Information Regarding SRH	*"Not accessible and transparent." P2* *"Pamphlets are available, but there are no billboards. Even the pamphlets are very minimal that talked to us." P3* *"We have pamphlets on the prevention of pregnancy, nothing that necessarily provides the statistics. The is a gap. No billboards available." P2*
		Confidentiality And Privacy In Youth-Friendly Services	*"Should a teenager not feel comfortable queueing with parents or be seen going to the facilities, they make use of this facility. We have a trained professional nurse that is trained on AYFS who adheres to confidentiality and privacy." P10*

			"Not really maintained." P9 *"Not accessible and transparent." P2*
		Social Media Utilisation And Information Access	*"No social media or forums available targeting at promoting or educating teenagers about SRH." P6* *"We do not have an active Facebook page" P5*
			"We have a provincial Facebook and NWDoH website which covers general health topics. Nothing specific related to teenage pregnancy or SRH." P10
Proposed Innovative Solutions	Proposed Adolescent Reproductive Health Strategies According To Health Care Workers	Future-Focused Strategies	*"Governments need to build youth centres, have computers and other interesting things which youth can relate to and educate about sexual health. These centres should be youth-friendly and accommodate both girls and boys." P3*
		Use Of Media And Social Media To Promote Health	*"We need to improve on our promotions, especially when coming to the media where most kids are able to access. A TV clip/advert will help," P10*
		Introduction Of Virginity Testing	*"Maybe government should introduce virginity testing in all the provinces. This will encourage the teenagers not to rush into sexual activities." P8*
		Grants Or Vouchers For Family Planning	*"Government should try giving vouchers or parcels to the teenagers that come for family planning. This way we will attract a lot of teenagers should we go this way." P9*
		Collaboration	*""At the moment, no support is given to teen mothers. We need support from the Department of Education because we don't receive the stats of how many teenagers came back to school after delivery." P3*
		Engagement Of Boy Teenagers	*"I feel like you should have asked about the involvement of boy teenagers in the programme" P7*
		Compulsory Family Planning	*"I think the Government should make it compulsory for all teenage girls to use family planning." P2*
		Age Group Consideration For Health Promotion Workers	*"I think the age group for professional nurses that deal with AYFS should be considered, and only use young nurses that will relate better to these teenagers" P8*

3.7.1. Theme 1: Health Promotion Strategies in NWP: Insights from Healthcare Workers

Health promotion services are integral to addressing the unique needs of adolescent girls, especially in SRH. This theme encompasses the health promotion strategies implemented by the NWDoH, the challenges healthcare workers face in providing healthcare services, and the proposed innovative solutions.

3.7.1.1. Category 1: Adolescent maternal and reproductive health support programmes

As the global landscape of healthcare evolves, the imperative to address the unique needs of adolescents within maternal and reproductive health programmes becomes increasingly evident. Theme one delves into the available strategies currently implemented by the NWDoH.

- **Adolescent Youth and Friendly Services (AYFS)**

AYFS refers to dedicated services that provide SRH education and services specifically designed for adolescents. According to Vukapi (2020:1), the primary goal of AYFS is to establish a safe and friendly environment where teenagers can access crucial information and support related to their SRH. According to a participant in the study:

> *"AYFS offers sexual and reproductive health education and services, teaching about abstinence and family planning." P8*

This statement highlights the comprehensive nature of AYFS, encompassing education and services related to abstinence and family planning to address a range of needs and concerns among adolescents. Moreover, another participant mentioned:

> *"Also, these services are offered after hours, allowing the teenagers to go to school and access them after school. "P5*

This quote emphasises the accessibility and convenience of AYFS, with services provided outside regular school hours, ensuring that teenagers can attend school and still access essential SRH services. The after-hours availability enhances the flexibility and reach of AYFS, catering to the diverse schedules and needs of adolescents.

- **Discussing family planning options (Preconception)**

Family planning involves the use of various methods and devices to prevent pregnancy. Access to family planning services is considered a fundamental right and is promoted globally as a critical component of public health programmes (Simmons & Jennings, 2020:68). Family planning education in schools involves integrating AYFS nurses into school programmes, addressing topics such as abstinence and family planning. This integration ensures that adolescents receive comprehensive information in an accessible setting. A participant highlighted the proactive approach:

> *"Before the teenagers fall pregnant, we do health education with them to tell them about different types of family planning to choose from. Our clinics offer all different types of family planning."* P6

This approach emphasises the importance of providing education on family planning options before pregnancy, offering a range of choices to suit individual needs. However, challenges were also noted by other participants, with one mentioning:

> "*We also have a challenge of running short of stock, especially for family planning."* P7

This challenge raises concerns about the availability and consistent supply of contraceptive options, potentially impacting the choices and accessibility of family planning methods. Research supports these concerns, indicating that the use of effective contraceptive methods is relatively low among sexually active African youth (Mathibela & Skhosana, 2021:1). Addressing challenges related to contraceptive stock shortages and promoting awareness about the diverse options available is crucial for improving family planning outcomes among adolescents.

- **Antenatal care services**

Antenatal care services refer to healthcare provided to pregnant teenagers, ensuring their well-being throughout the pregnancy. This healthcare is crucial for facilitating a smooth transition to motherhood and ensuring positive health outcomes for the teenager and the baby. A participant emphasised the comprehensive approach:

> *"We offer antenatal care services, postnatal care, and encourage youth participation in family planning. "P9*

This statement reflects the commitment to providing general care, including prenatal and postnatal services, while promoting family planning participation among pregnant teenagers. In 2016, the WHO issued a global guideline on routine antenatal care, focusing on person-centred health and well-being with a human rights-based approach. The guideline prioritises a positive pregnancy experience and includes recommendations on health promotion, nutritional interventions, and prevention of concurrent diseases such as malaria, HIV, and tuberculosis.

- **Postnatal Care and Contraceptive Advising**

Postnatal care and contraceptive advising involve providing healthcare services after pregnancy, including guidance on long-term family planning. These components are critical in supporting teenage mothers to manage their reproductive health and plan for the future. A participant emphasised the importance of advising on long-term family planning after pregnancy:

> "*After pregnancy, we advise on long-term family planning and refer them for additional support from social development."* P2

This quote highlights the significance of addressing contraceptive options and offering additional support to teenage mothers for their reproductive health. However, research indicates that South African teenagers often prefer injectable contraceptives over other forms of contraception (Ntini *et al*., 2023:1).

In contradiction, another participant highlighted a lack of support for teenage mothers after giving birth due to insufficient data:

> *"At the moment, no support is given to teen mothers. We need support from the Department of Education because we have not received the stats on how many teenagers came back to school after delivery." P3*

A study on the sexual and reproductive well-being of teenage mothers in a South African township school indicated a gap in focus on the sexual health of young mothers who have been back in school for a more extended period (Keogh *et al*., 2020:119).

- **Linking to mentor mothers using MomConnect**

Linking teen moms through MomConnect involves leveraging technology to connect new mothers with mother mentors, providing continuous support. This technological approach aims to create a supportive network for teenage mothers, offering ongoing guidance and assistance. The adoption of mobile health technologies has proven advantageous for healthcare recipients and individuals worldwide (Muthelo *et al*., 2023:1842). A participant emphasised the positive aspect of using MomConnect:

> *"We link new mothers with mother mentors through MomConnect, providing ongoing support."* P8

MomConnect establishes connections between experienced and new mothers, creating a network for support and advice. However, challenges were noted regarding the usability of MomConnect, with one participant expressing difficulties:

> *"The MomConnect is struggling to use because now it depends on the kind of phone and is using data. The MomConnect service has been bad due to that."* P3

The effectiveness of MomConnect as a tool for connecting and supporting teenage mothers is potentially compromised due to accessibility issues, such as device compatibility and data usage. In a recent study conducted in Limpopo by Muthelo *et al*. (2023:1842) on MomConnect, participants highlighted data limitations as a significant barrier to accessing apps that require data to operate. Additionally, participants in the same study noted network connectivity as another obstacle to accessing the app. Nevertheless, those who managed to access the app reported finding it valuable and beneficial.

- **Comprehensive Engagement and Support Services (Psychological and Social Support)**

Psychological and social support for teenage mothers involves providing rehabilitation support, including referrals to psychologists and social workers. This support is vital for addressing teenage mothers' emotional and mental well-being, contributing to better overall health outcomes. A participant highlighted the importance of involving parents if the teenager was less than 16 years old:

> *"If the teenager is less than 16 years, we involve a parent because there could be a possibility of rape. However, consent will be given by the teenager first before we involve the parent."* P1

This approach ensures that legal and ethical considerations are considered, especially in cases of very young adolescents. However, it was noted in the study that the NWP faced challenges related to a shortage of social workers and psychologists:

> "*Our district does not have psychologists to offer professional counselling. We also did not have social workers for the longest time."* P2

This shortage of mental health professionals poses a significant obstacle to providing adequate psychological and social support for teenage mothers in the region. In other sub-districts where these professionals were available, their services were limited:

> *"Our psychologist and social workers are scheduled for once a month unless there is a need, then they come."* P8

This limited availability of psychological and social support resources may hinder the frequency and accessibility of these crucial services for teenage mothers.

3.7.1.2. Category 2: Prevention of sexually transmitted diseases

- **Prevention of HIV and PrEP Awareness for teenagers**

HIV and PrEP awareness involves integrating preventive knowledge about HIV and PrEP into educational efforts aimed at teenagers (Moche, 2022:1). Participant 4 emphasised the integration of HIV and PrEP awareness into education efforts:

> *"We incorporate HIV and PrEP awareness into our education efforts to empower teenagers with preventive knowledge."* P4.

Participant 7 mentioned the inclusion of sex education and discussions about the use of PrEP and PEP to prevent HIV, along with other methods for preventing STIs:

> *"We also have sex education and talk to them regarding the use of PrEP and PEP to prevent HIV and other methods for STIs."* P7

In South Africa, family planning services have been integrated into HIV services to ensure planned pregnancies and prevent mother-to-child transmission of HIV. Women seeking reproductive health services receive counselling on HIV and the use of family planning methods (Adeniyi *et al*., 2018:1). However, a study by Duby *et al.* (2023:134) highlighted a significant factor contributing to constrained community acceptance of PrEP. It observed difficulty in distinguishing between PrEP, designed to prevent HIV infection in HIV-negative individuals, and antiretrovirals, used to treat individuals already diagnosed with HIV.

- **STI prevention and awareness**

STI awareness involves conducting campaigns to educate adolescents about the risks, prevention, and management of sexually transmitted infections. These campaigns are essential in equipping adolescents with knowledge about the importance of sexual health and strategies to protect themselves.

Participants in the interviews highlighted the focus on STI awareness as a crucial component of health education campaigns. Participant 2 emphasised the importance of STI awareness:

> *"We focus on STI awareness as a crucial component of our health education campaigns."* P2

Participant 5 mentioned specific programmes such as STI condom week and healthy lifestyle promotion as part of their services. They conduct health education through talks and commemorate these activities according to the health calendar.

> *"A programme which is the STI condom week and healthy lifestyle promotion. So, the services that we are rendering are to do the health education through the health talks, and then we do commemoration of these activities according to the health calendar."* P5

Research by Govender *et al.* (2020:1) indicates that the regular use of contraceptives, predominantly male and female condoms, is highly effective in reducing the spread and transmission of HIV and STDs. Despite an increase in contraceptive use, a significant percentage of sexually active individuals, particularly teenagers, still do not consistently use contraceptives, especially condoms (Govender *et al.,* 2020:1).

3.7.1.3. Category 3: SHR awareness and outreach

- **Quarterly district campaigns, monthly sub-district campaigns and school nurse education**

Health education awareness involves conducting campaigns and educational talks to raise awareness about SRH. These campaigns are particularly crucial for teenage mothers, aiming to disseminate information, dispel myths, and promote healthy behaviours.

Interview responses highlighted ongoing efforts to conduct health education awareness campaigns, primarily targeted at teenage mothers. Participant 9 mentioned quarterly campaigns organised by NWDoH in partnership with the Department of Social Development specifically for teenage mothers.

> *"Quarterly campaigns run by NWDoH in partnership with the Department of Social Development for teenage mothers."* P9

Participant 2 highlighted the existence of campaigns and roadshows, which the department does twice a year.

> *"We have campaigns and roadshows twice a year to give access to data and information and AYFS."* P2

While the existing initiatives are commendable, the government could consider enhancing its impact by exploring additional campaigns or alternative strategies throughout the year. This approach could lead to a more continuous and sustained effort, ensuring a consistent presence and engagement with the community Erwin and Brownson (2017:1227) observed that increasing the frequency of awareness campaigns could better cater to the changing and evolving requirements of adolescents and youth, promoting a more robust and flexible support system for AYFS.

- **Community Engagement through Outreach Team Leaders (OTL) and Mobile Clinics for SRH**

Community engagement involves actively interacting with communities to raise awareness and provide healthcare services outside traditional facility settings, ensuring broader access to SRH information. A participant described the approach:

> *"We have community outreach and ground-breaker teams that go to the disadvantaged communities. There is also a dedicated professional nurse who goes to these communities using a mobile clinic."* P7

This strategy aims to extend healthcare services to communities that may face barriers to accessing traditional health facilities, enhancing the reach of SRH information. The characteristics of a youth-friendly structure, as highlighted in a study by Vukapi (2020:1), include a convenient location accessible to local community members, which is particularly crucial in overcoming barriers to healthcare, especially in rural communities where clinics are often located at a distance. This initiative focuses on delivering healthcare services, including SRH, through mobile units strategically stationed near schools or disadvantaged areas. Specialised nurses cater to the needs of teenagers, emphasising the importance of convenience and accessibility. However, challenges were noted, such as the condition of mobile clinics in rural districts:

> *"We organise outreach services through our mobile clinics for the disadvantaged so that they can access those that are staying far from the clinic, staying in the farms. However, the main problem here is sometimes our mobiles are broken because we are in a rural district."* P2

The practical difficulties in maintaining mobile clinics, particularly in rural areas, impact their reliability and effectiveness. This situation is echoed in a study conducted in the Eastern Cape province of South Africa, where inadequate use of maternal healthcare services among adolescents was reported due to challenges related to the accessibility of healthcare clinics (Tsawe, 2014:1).

3.7.2. *Theme 2: Challenges in providing healthcare services*

3.7.2.1. Teenagers' SRH behaviour influences

- **Contraceptive misconceptions and ignorance among teenagers**

Contraceptive misconceptions and ignorance among teenagers reflect situations where teenagers lack accurate information about contraceptives, leading to misconceptions and misunderstandings. These misconceptions are often fuelled by myths and ignorance within the community. Myths and misconceptions serve as significant barriers preventing adolescents and young women from accessing contraception services, as evidenced by a study conducted by Jonas *et al.* (2020:1). Participant 9 highlighted the existence of myths and ignorance surrounding family planning:

> *"Mainly is the myth in the community that family planning is not good, and some is the ignorance."* P9

This perception can deter teenagers from seeking contraceptive services and accessing accurate information about family planning methods. A study in Limpopo, South Africa, highlighted the adverse effects of lacking comprehensive and accurate SRH information. It indicated that uninformed young people may not recognise their need for SRH services, doubt the effectiveness and safety of such services, and be unwilling to utilise contraceptive methods (Mulaudzi, 2022:1).

- **Cultural Beliefs (Stigma) hindering family planning**

Cultural beliefs exert a significant influence on teenagers' attitudes toward SRH, shaping their perceptions and behaviours. This influence can result in resistance to certain practices, such as family planning, due to deeply ingrained cultural values and the associated stigma (Vongxay *et al*., 2019:1). The impact of cultural norms on adolescents' sexual behaviour has been observed negatively in South African studies (Garland-Levett, 2017:121). Participants, particularly Participant 10, highlighted instances where family planning was discouraged due to cultural beliefs:

> *"Others mentioned family planning being against their family culture/belief as parents do not approve of it."* P10

This finding aligns with research by Vukapi (2020:1) in KwaZulu-Natal, which identified cultural and traditional constraints as factors influencing teenage pregnancy. The

stigma surrounding family planning within cultural contexts can make adolescents feel hesitant or ashamed to discuss and consider these practices (Makola *et al*., 2019:158). Participant 4 shed light on parental misinformation contributing to resistance against family planning:

> "*Their main reason is that their parents tell them that family planning will damage them. They will not be able to have children when they get older. They feel like they are not ready to start taking family planning."* P4

Long-standing myths and misconceptions persist in African populations, such as the belief that contraception affects future fertility (Sedlander *et al*., 2022:1). Adolescents, fearing strong disapproval from parents, may avoid contraceptive methods, as revealed in a study on reasons for non-adoption of contraceptives (Boamah-Kaali *et al.,* 2021:173). The associated stigma with family planning perpetuates misinformation, creating barriers to informed decision-making.

Religious beliefs also play a role, with adolescents equating contraception with performing an abortion in predominantly Christian communities (Ojiambo, 2021:1). A study conducted in Mahikeng revealed that religious concerns hinder SRH education, underscoring the impact of cultural and religious beliefs on shaping attitudes towards these services (Osuafor *et al*., 2018:1).

- **Peer Pressure**

Peer pressure is identified as a significant factor influencing teenagers' decisions regarding SRH. The impact of peer pressure on contraceptive choices and behaviours is highlighted in the study. One participant mentioned:

> *"Three main ones, peer pressure, lack of knowledge, and the parental lack of guidance from the parents, or lack of communication on social sexual issues from the parent."* P10.

Peer pressure is indicated as one of the critical factors influencing teenagers' SRH decisions, along with the lack of knowledge and guidance from parents. A study in Cape Town reported that adolescents often perceive their peers as sexually active, contributing to their engagement in sexual activities (Vukapi, 2020:1).

The study found that participants learn a lot about hormonal contraceptives through conversations with friends. The opinions and stories shared by peers have a considerable influence on their decisions to use contraceptives (Boamah-Kaali *et al.,*

2021:173). Peer interactions, therefore, play a crucial role in shaping teenagers' perceptions and choices related to SRH.

The study also aligns with findings from a study conducted in Brazil, emphasising that teenagers often turn to peers, the internet, and social media for advice when parents fail to provide sexual reproductive health information at home (Magno *et al*., 2023:409).

- **Concerns About Side Effects**

Teenagers have concerns related to the potential adverse effects of contraceptives, particularly fears regarding issues such as weight gain or other perceived health risks. One participant in the study mentioned:

> *"It is mainly due to side effects like gaining body weight and peer pressure. Our facilities now have young, friendly nurses who can better relate to the youth."* P7

These concerns about side effects, particularly weight gain, contribute to teenagers' hesitancy in utilising contraceptives. The mention of having young and friendly nurses suggests an effort to create a more supportive environment for addressing these concerns. Additionally, the study found that some girls expressed an intense fear of the side effects of hormonal contraceptives, which may stem from negative experiences reported by others. The fear of perceived side effects acted as a deterrent, preventing them from using hormonal contraceptive methods (Boamah-Kaali, 2021:173).

3.7.2.2. School-based SRH services challenges

- **School constraints on SRH services**

School constraints refer to the challenges faced by teenagers in accessing SRH services due to academic commitments or limitations imposed by the educational system. The data highlights a participant's mention of the unavailability of access to family planning at schools:

> "*The unavailability of access to family planning at schools".* P3

Research by Jonas *et al.* (2022:1) conducted in rural settings in South Africa revealed that teenagers perceived challenges in accessing contraception services due to the

need to be absent from school. Many adolescents expressed the belief that having contraception services offered within school premises would be beneficial, potentially overcoming these challenges.

The pressure felt by Life Orientation (L.O.) teachers to align with community values and moral positions, as indicated by Pieterse (2019:1), can create an environment where comprehensive SRH education is hindered within the school setting. Additionally, the perceived lack of expertise among L.O. teachers and learners' potential fatigue with their handling of sensitive topics may lead to a preference for external speakers for specific subjects (Keogh *et al*., 2020:119).

- **Need for supplementing limited content of SRH education in schools.**

Limited SRH education in schools denotes insufficient or constrained information to students within the educational system, impacting their understanding and awareness of these matters. A successful school-based sexuality education programme aims to cultivate a secure learning environment that promotes gender equity and equips adolescents with the knowledge and skills to make well-informed decisions about their sexuality (Ogolla & Ondia, 2019:110). According to the findings in the study, despite the inclusion of SRH education in schools, there are noted limitations in the content provided.

> *"Although schools do offer SRH education, their content is limited. We also have to bridge the gap by doing awareness and also do demonstrations, especially for teenage boys, on how to use condoms. During school hours, we cannot do our awareness because the academic activities take priority."* P10

A comparable study involving teenagers in South African townships revealed a shared sentiment among participants. Many teenagers expressed dissatisfaction, noting that the information received from schools needed more practical details (Gillespie *et al.,* 2022:1014).

3.7.2.3. Operational challenges in healthcare to provide SRH

- **Fear of embarrassment and negative treatment of teenagers by healthcare workers**

Healthcare workers' attitudes significantly impact teenagers' willingness to seek SRH services. A negative attitude from healthcare workers can create discomfort or reluctance among teenagers, affecting their utilisation of these essential services (McGorry *et al*., 2022:61). A study participant expressed this concern:

> *"Some are also not comfortable accessing our facilities due to the bad attitude or treatment they receive from us health workers. They do it out of fear of being embarrassed."* P10

Fostering a positive and supportive environment within healthcare facilities is crucial to encourage teenagers to seek care without fear of judgment or embarrassment.

Healthcare workers' cultural beliefs also play a role in shaping their attitudes toward adolescents. Beliefs such as the notion that women should not have sex before marriage can influence how healthcare workers interact with young individuals (Kivunja & Kuyini, 2017:26). Addressing these cultural beliefs and ensuring a respectful and non-judgmental approach within youth-friendly SRH and HIV prevention services is crucial for fostering the effective use of these services among young South Africans (Boulanger-Lapointe *et al*., 2019:81).

- **Infrastructure challenges**

Infrastructure encompasses the physical facilities, equipment, and resources for SRH services. Adequate infrastructure may help service delivery. One participant mentioned these challenges:

> "*The other challenges that we have infrastructure there is no access to privacy due to infrastructure challenges."* P1

A crucial issue is highlighted concerning the infrastructure's impact on privacy in the delivery of SRH services. A study by Vukapi (2020:1) noted that teenagers expressed discomfort about being observed by community members during consultations at the clinic, indicating a lack of privacy.

- **Healthcare workers' workload and staff shortage**

The workload among healthcare workers in providing SRH services is included in the study. The following statement reflects the acknowledgement of the impact of workload on healthcare professionals:

> "*Working long hours can be stressful for us health workers."* P10

The issue of healthcare workers experiencing stress and leaving their positions due to workload pressure is a global concern. In 2021, the International Council of Nurses highlighted that many nurses worldwide were leaving their positions because of workload pressure (International Council of Nurses, 2021). This global challenge is further compounded by structural shortages of qualified nurses, creating a bottleneck that affects healthcare services on a large scale.

Staff shortages indicate an insufficient number of healthcare workers available to meet the demand for SRH services, resulting in increased workload and potential service gaps (Glover *et al*., 2016:53). Nurses in the clinic highlighted the impact of staff shortages on service delivery, affecting their ability to accommodate the general public adequately and provide focused attention to teenagers.

> *“Sometimes we experience staff shortages to accommodate the general public and give attention to teenagers. We also experience medication stock shortages, which make it difficult to offer teenagers family planning of their choice.”* P4

The global guidelines from the WHO emphasise the importance of healthcare nurses allocating sufficient time to work effectively with adolescent clients.

- **Medication Stock Shortages**

Stock shortages refer to the insufficient availability of contraceptives and other necessary supplies needed for providing SRH services, impacting the continuity and quality of care. Participants in the study mentioned a common and consistent shortage of medication.

> *"We also have a challenge of running short of stock, especially for family planning."* P7

Shortages of essential medicines are a daily occurrence in many South African public health facilities (Hodes *et al*., 2017:738). More significantly, there are no pharmacies in rural clinics, and the medicines are managed by a nurse who serves as the clinic's operations manager. It was noted from the study that the nurses at the clinic would

often contact other clinics in the district and borrow certain medications to avoid turning patients away without their medicines. A study by Hodes *et al.* (2017:738) found a similar trend where community healthcare workers advised patients at the clinic to travel to other facilities presumed to have more stock.

- **Difficulty in providing ageappropriate SRH education for a diverse range of ages**

The need for healthcare workers to receive education and training suitable for different age groups is highlighted. The importance of tailored professional development is emphasised. One participant stated that,

> *"We also have a challenge on how to break down the content of SRH for a different range of age because we are dealing with teenagers as young as ten years old and different intellect levels."* P10

Acknowledging challenges in breaking down SRH content for a range of ages reflects the complexities of catering to the diverse needs of teenagers.

- **Monitoring indicators of SRH within NWDoH**

Monitoring teenage pregnancy rates allows for the assessment of educational programmes and the implementation of interventions. The oversight of stock availability ensures optimal inventory levels, preventing shortages or excess stock. Assessment of delivery rates evaluates the efficiency of product delivery, impacting customer satisfaction and operational efficiency. Participants in the study reported various monitoring practices in their clinics. One participant stated,

> *"We maintain records of statistics, including teenage facility visits, delivery rates, HIV and AIDS statistics, and records of teenagers seeking family planning. These statistics aid in planning and enhancing our services."* P8

Another participant mentioned,

> "*We set monthly targets and assess our performance against them regularly. This helps us determine if we are meeting our goals and allows us to recommend improvements based on the statistics."* P6

Notably, while stock availability is monitored, clinic nurses handle this responsibility as there is no dedicated pharmacist. A study by Hodes *et al.* (2017:738) also found that rural clinics lacked pharmacists, and nurses managed medicines as the clinics' operations managers.

- **Knowledge and Understanding of Policies by health care workers**

Since the establishment of democracy, South Africa has undergone significant policy reforms in SRH, gaining acknowledgement for its progressive approach. This study delves into key policies for advancing SRH, including the Sexual Reproductive Health Policy, School Health Policies, AYFS Policies, and the Choice of Termination of Pregnancy Act. While not all participants mentioned every applicable policy, most were familiar with at least a few.

> "*We have a knowledge hub, which integrates sexual knowledge for teens. We have sexual reproductive health policy, school health policies, AYFS policies."* P 10

> *"Choice of Termination of Pregnancy Act. Adolescent and youth health policy*." P 4

The term *lack of awareness of policies* among public healthcare workers denotes a situation wherein individuals in the public healthcare sector are not sufficiently informed or knowledgeable about the existing policies and guidelines governing their professional conduct and responsibilities. In the study, one participant acknowledged the lack of awareness of policies regulating SRH when asked if they knew of any policies:

> *"No, not that I know of."* P 6

A study focused on identifying and overcoming barriers to adolescent SRH in the Solomon Islands highlighted a similar issue among health workers. One notable concern was the absence of specific training tailored for adolescents (Raman *et al*., 2015:1). Despite being a registered professional nurse, one participant in the current study emphasised her need for more training in AYFS. This deficiency in training could potentially account for the limited knowledge regarding existing policies governing the SRH of teenagers.

- **Access, transparency in data dissemination and inclusivity**

Data transparency involves making healthcare information, such as teenage pregnancy rates and clinic visitation records, accessible to the public and stakeholders, fostering transparency and accountability (Southwell *et al.,* 2010:55). However, the study highlights limited access and transparency, as indicated by Participant 2.

> *"There is limited access and transparency. We have pamphlets on pregnancy prevention, but there is nothing that provides statistics. There is a gap, and there are no billboards available."* P2

While statistics might not be shared with the general public, other information is disseminated, as mentioned in the study.

> *"There are numerous pamphlets, including those on HIV and family planning, available in the clinic and easily accessible. Additionally, there is a notice board at the clinic."* P2

Information dissemination involves raising awareness about SRH through various channels, such as pamphlets, posters, and digital media, effectively reaching teenagers and the general public. Another aspect highlighted in the study is the use of mobile cars by two school nurses to reach teenagers in disadvantaged communities, showcasing an effort to make information more accessible.

> "*Also, the two school nurses have access to mobile cars, which assist in reaching teenagers in disadvantaged communities."* P1

Comprehensive sex education seeks to boost awareness and empower young individuals, enabling them to make well-informed choices regarding SRH and improving their proper utilisation of services (Pillay, 2021:349). As per the WHO youth-friendly guidelines from 2012, healthcare clinics are advised to offer information and education through diverse communication channels.

- **Confidentiality and Privacy in Youth-Friendly Services**

The emphasis on safeguarding the personal information and privacy of teenagers seeking SRH services underlines the importance of ensuring consultations and treatments are conducted confidentially and privately within health facilities. However, the study findings reveal that privacy is challenged due to infrastructure limitations.

> *"Most of our facilities are very small, and the consultant rooms are tiny and not conducive for privacy. Although we have trained nurses on Adolescent Youth and Friendly Services, most of the nurses are not trained."* P2

In a study conducted in Tanzania, participants identified the lack of privacy as a significant factor hindering pregnant adolescent girls from seeking SRH services (Makola *et al*., 2019:158). Another study by Vukapi (2020:1) highlighted teenagers expressing discomfort about being seen by community members while consulting at the clinic. The issue of space was directly linked to the lack of privacy experienced.

Despite the privacy and confidentiality challenges, healthcare workers strive to maintain compliance with legislation to ensure privacy and confidentiality, keeping records securely accessible only to staff.

> "*We maintain compliance with legislation in ensuring privacy and confidentiality and keeping the records safe. Our records are kept safely, with access given to staff only."* P2

- **Social utilisation and information access**

Employing television clips, billboards, and strategic timing for health promotion entails strategically using television clips and billboards to communicate health-related messages. This approach acknowledges the influential power of visual and audio-visual mediums in disseminating health information.

It capitalises on popular and widely accessible platforms to promote public health messages effectively. Participants in the study noted the absence of social media within their sub-districts.

> *"We don't have any social media platform or website at Dr RSM district targeted at any SRH."* P2

However, participants did recognise the potential impact of leveraging media platforms for communication. One participant expressed,

> *"I believe it would be effective if the government engages with media, particularly radio stations, securing a TV slot if possible. Creating a Facebook account or any presence on social media and maintaining activity is crucial. There should be someone in charge of managing their account."* P3

Another participant highlighted the need to enhance promotions, primarily through media channels accessible to most kids. They suggested,

> *"A simple yet educational TV clip or advert, along with billboards, would be beneficial. Investing in advertising during evening TV or radio shows, which are favourites among the youth, can effectively promote sexual reproductive health."* P10

Online or digital presence refers to an entity's visibility and engagement across digital platforms and the internet, including websites, social media, and other online channels. The NWDoH has developed the *Be Wise* website, which serves as a

dedicated platform for teenagers to access SRH information through the app and website, as mentioned by Participant 2:

> "*We have the 'Be Wise' website, a valuable resource for teenagers to access information on SRH."* P2

Participant 3 highlighted the reliance on local radio stations for SRH promotion but expressed the need for more robust support and funding:

> *"We do not have any platforms or groups; we just use platforms in the media on local radio stations, but now it is not that strong and still needs support. We also need funding to pay for the slots on the radio."* P3

Using online resources for adolescents' information needs is crucial due to their low cost, availability, ease of use, and confidentiality. Adolescents may find the internet beneficial for exploring sensitive topics they may not feel comfortable discussing with parents, physicians, or school officials (Ogolla & Ondia, 2019:110).

3.7.3. Theme 3: Proposed innovative solutions in SRH promotion: Insights from healthcare workers

- **Parental involvement**

Parental involvement refers to the active engagement and participation of parents in SRH education as well as decision-making processes for their teenage children. A 2023 study conducted in Brazil reveals a lack of parental provision of sexual reproductive health information to teenagers. Consequently, teenagers are seeking guidance on sexual health matters from peers, the internet, and social media (Magno *et al*., 2023:409). This study also highlights a communication gap between parents and teenagers, expressing concerns about the quality of information obtained from alternative sources. As a result, the suggestion emerges that health workers and parents collaborate to address this issue. One participant emphasised this need for collaboration:

> *"I think health workers, parents, and the child, together, we need to come up with a solution to reduce teenage pregnancy."* P1

This suggestion aligns with findings from Achen *et al*., (2022:5052), who asserts that programmes enhancing family connections, fostering positive peer relationships, and establishing secure environments for youth interaction provide adolescents with

opportunities to form meaningful connections, thereby positively impacting SRH outcomes (Achen *et al*., 2022:5052).

- **Engaging teenage boys in SRH discussions**

The educational disparity for teenage boys highlights the unequal distribution of SRH education and awareness, underscoring the necessity for targeted interventions tailored explicitly for male teenagers. In a study conducted in Limpopo, South Africa, Mulaudzi (2022:1) reported that adolescent boys faced challenges in accessing condoms and other medications at general health facilities. Participant P7 in the study also acknowledged the gap in SRH promotions between teenage boys and girls, raising concern regarding the absence of attention given to male teenagers in programmes that aim to combat the issue of teenage pregnancy.

> *"I feel like you should have asked about the involvement of boy teenagers in the programme and what their contribution to the rise of teenage pregnancy. However, at the moment, we do not have a lot that addresses boy teenagers apart from having to give them sexual reproductive health education."* P7

This statement emphasises the need for greater attention to the inclusion and specific needs of male teenagers in initiatives aimed at addressing SRH issues.

- **Age Group Consideration for Health Promotion Workers**

Consideration of age groups in health promotion emphasises the importance of tailoring strategies to be age-appropriate and relevant, mainly when targeting the teenage demographic. A study conducted in KZN, South Africa, revealed that participants preferred healthcare services delivered by nurses close to their age group.

Teenagers expressed reluctance to access HIV or SRH services if they felt judged, subjected to moral scrutiny, or lectured by older individuals. Participants in the study specifically noted that consulting with older nurses at the clinic felt akin to consulting with their mothers (Vukapi, 2020:1).

In alignment with these sentiments, Participant 8 in the study emphasised the need for age-appropriate professional nurses when dealing with AYFS:

> *"I think the age group for professional nurses that deal with AYFS should be considered, and only use young nurses that will relate better to these teenagers."* P8

This participant's quote shows the significance of having healthcare professionals who can establish relatable connections with teenagers, promoting a more inclusive and practical approach to health promotion.

- **Considering the introduction of virginity testing**

The proposal to introduce virginity testing implies a potential intervention aimed at addressing SRH issues, with a specific focus on cultural perspectives and practices. In the study, Participant 8 suggested that implementing virginity testing could serve as a solution to discourage teenagers from hastily engaging in sexual activities.

> "*Maybe the government should introduce virginity testing in all the provinces. This will encourage the teenagers not to rush into sexual activities*." P8.

The suggestion made by Participant 8 implies the belief that incorporating virginity testing into cultural practices could act as a constraint, influencing teenagers to delay involvement in sexual activities. It is important to note that introducing such practices raises ethical and human rights considerations, and any potential intervention should be approached with sensitivity to cultural contexts and the well-being of the individuals involved. Public health interventions should be evidence-based, respectful of human rights, and considerate of diverse cultural perspectives to ensure their effectiveness and ethical implementation.

- **Exploring grants or vouchers for family planning**

Incentives for teenagers involve providing rewards or benefits to encourage and motivate their active participation in SRH programmes and services. According to a study by Adekola and Mavhandu-Mudzusi (2021:1), some adolescent girls may be motivated to disregard SRH messages in pursuit of monthly child-support grants, seeing them as a financial incentive for having children.

If this finding holds, incentives could effectively encourage teenagers to SRH services. In support of this notion, a participant in the study suggested,

> "*The government should try giving vouchers or parcels to the teenagers for family planning. This way we will attract a lot of teenagers should we go this way."* P9

This recommendation underlines the idea of offering tangible incentives, such as vouchers or parcels, to motivate teenagers to participate actively in family planning services. Further supporting this suggestion, emerging evidence indicates that

incentives, when provided based on effort or the successful performance of desired behaviours, can successfully be incorporated into interventions targeting adolescents (Corepal *et al*., 2018:55).

- **Encouraging interdepartmental collaboration**

Collaboration with the Department of Education and Communities underscores the significance of fostering partnerships and joint initiatives between healthcare providers, educational institutions, and local communities to strengthen sexual health education and support (Achen *et al*., 2022:5052). A participant in the study highlighted a constraint within the school setting:

> *"Due to the school policies, there are other issues that we cannot talk about on the school premises."* P5

This comment suggests that specific topics related to sexual health might face restrictions within the school environment, necessitating collaborative efforts beyond school boundaries.

In line with the need for collaboration, another participant suggested expanding the role of an AYFS professional nurse:

> *"I suggest that now that we have an AYFS professional nurse trained to work with teenagers, we should extend her scope to do SRH education at different schools. We do not have a school nurse dedicated to schools."* P6

This recommendation emphasises the potential benefits of extending the reach of healthcare professionals trained in AYFS to provide SRH education in various schools. Such collaborations can bridge gaps in information dissemination and support between healthcare providers and educational institutions.

- **Human resources and infrastructure improvement in healthcare services**

Human resources and infrastructure pertain to the availability of sufficient trained personnel and the necessary facilities to ensure the effective delivery of SRH services (Onvlee *et al*., 2023:1). The study identified a need for more clinic structure, particularly the lack of space accommodating the health needs of teenagers. Participants in the study pointed out that the AYFS programme needed more space in the clinic, affecting its effectiveness. A participant emphasised the need for government intervention:

> "*The government must focus on hiring more people that will be able to focus on teenage pregnancies that will come up with such programmes and also infrastructure, to implement the new policy on adolescence and youth-friendly services effectively, we need proper infrastructure and more staff because currently, there is a lack of staff, human resources, and infrastructure."* P4.

This statement underlines the crucial requirement for both personnel and infrastructure to support and effectively implement policies and programmes targeting SRH among adolescents. Adequate resources, including trained personnel and suitable facilities, are essential for ensuring the success and impact of initiatives focused on teenage pregnancies and youth-friendly services.

- **Social Media Investment**

Social media investment entails dedicating resources and efforts to leverage social media platforms for health promotion, education, and awareness aimed at teenagers (Esmaeilzadeh *et al*., 2018:1). A participant in the study emphasised the significance of this approach:

> "*I think the focus should be investing the promotional services on social media*" P7.

This perspective emphasises the idea of directing promotional efforts toward social media as an effective means to reach and engage teenagers. Supporting this viewpoint, UNICEF (2019) highlights that social media provides adolescents with appealing platforms to access SRH information. Sex education initiatives can be made more effective by using social media. Integrating social media into health promotion strategies can capitalise on the popularity and accessibility of these platforms among teenagers, fostering a more interactive and engaging approach to disseminating SRH information.

- **Compulsory Family Planning**

Compulsory family planning involves advocating for the implementation of mandatory family planning programmes or interventions to address and reduce teenage pregnancies. In the study, a participant expressed the view that the government should take a more proactive stance:

> *"I think the Government should make it compulsory for all teenage girls to use family planning."* P2.

This perspective suggests an advocacy for a mandatory approach, requiring teenage girls to participate in family planning initiatives. While such a proposal may be made to address the issue of teenage pregnancies, it raises ethical considerations related to individual autonomy and reproductive rights. Compulsory family planning interventions should be cautiously approached, considering the need for informed consent, education, and sensitivity to cultural and ethical concerns. Balancing the goal of reducing teenage pregnancies with the principles of individual choice and human rights is crucial in the development and implementation of such policies.

- **Building Youth Centres with Educational Resources**

The strategy of building youth centres involves creating dedicated spaces equipped with educational resources to provide teenagers with information and support related to SRH. A participant in the study emphasised the importance of such centres, stating:

> "*Governments need to build youth centres, have computers, and other interesting things that youth can relate to and educate about sexual health. These centres should be youth-friendly and accommodate both girls and boys."* P3

This recommendation underlines the idea of establishing inclusive and engaging spaces that cater to the educational needs of young individuals in the context of SRH. Supporting this viewpoint, the research titled "Addressing Learner-Centred Barriers to Sexuality Education in Rural Areas of South Africa" observed that participants highlighted the potential of support clubs to enhance the commitment of young individuals in applying the knowledge gained from sexuality education lessons (Adekola & Mavhandu-Mudzusi, 2021:1). This suggests that creating supportive and resource-rich environments, such as youth centres, can contribute to effectively applying sexual health education among teenagers.

3.8. Discussion of findings concerning the socioecological model

The exploration of study findings through the lens of the SEM reveals a dynamic interplay of factors operating at different levels, each influencing the SRH of adolescents in the NWP. This alignment allows for a comprehensive understanding of the multifaceted challenges faced by teenagers and how various contextual elements shape their SRH experiences. Incorporating SEM, we discover intricate layers of influence that shape adolescent SRH outcomes within the NWP. This model offers a holistic framework that delineates the dynamic interplay between individuals and their

environments, ranging from the micro-level of personal characteristics to the macro-level of societal norms and policies as developed by developed by Bronfenbrenner (Sallis *et al*., 2015:43).

Individual level:

This study revealed that difficulties in customizing SRH content for various age brackets exacerbated individual-level obstacles for healthcare educators, potentially resulting in limited or inadequate knowledge among healthcare workers. The research emphasizes the significance of thorough and age-appropriate education, stressing the need to take individual developmental stages into account when imparting effective SRH information, as noted by Mullinax et al. (2017:143).

Stigma surrounding family planning, deeply rooted in cultural and religious beliefs, emerged as an individual-level factor influencing attitudes and behaviours toward SRH choices among teenagers Osuafor, *et al*., (2018:1). Insufficient comprehensive information at the individual level fosters misconceptions, hindering informed decision-making, a concern also highlighted by Holtman (2022:1).

Insufficient SRH education in schools, as emphasised in the research, leads to a lack of essential information at the personal level, impacting adolescents' awareness and comprehension of SRH issues. The absence of thorough sex education results in knowledge gaps and impedes the formation of a comprehensive understanding of SRH.

The study's results align with another research where young individuals expressed a shortage of information about SRH services, indicating that they acquire SRH knowledge only when actively seeking it (Vongxay *et al*., 2019:1). While the Live Life programme, Integrated School Health Services policy (SRH&R Policy, 2019), and schoolbased L.O., along with other health education campaigns, were mentioned, it is imperative to critically assess and enhance their implementation for these programmes to achieve their intended impact.

Interpersonal level (Social barriers):

The study identifies a communication gap between parents and teenagers, emphasising the importance of interpersonal dynamics. Achen *et al.,* (2022:5052)

suggests that strengthening parental involvement is crucial, highlighting the significant role of family interactions in shaping adolescents' SRH perceptions.

The age of the service provider has also been identified as a contributing factor to whether teenagers can access SRH services. Teenagers tend to perceive older nurses as akin to their parents, leading to discomfort in discussing such matters, given cultural norms that consider it disrespectful to discuss sexuality with one's parents (Vukapi, 2020:1). The study on the perspectives of service providers and adolescents regarding SRH services similarly found that adolescent girls preferred service providers who respected their personal choices (Holtman, 2022:1).

The study's findings reveal disparities in SRH promotions between teenage boys and girls, underscoring interpersonal dynamics and the necessity for targeted interventions based on gender-specific needs (Slabbert, 2018:1).

Community level:

Challenges in clinic structures impacting privacy during SRH consultations point to community-level implications. The study findings suggest that the community's access to and perception of healthcare services are influenced by the physical infrastructure provided by the healthcare system, as highlighted by Tiruneh *et al.* (2021:1).

The recommendation to leverage social media as a health promotion tool reflects the community's reliance on digital platforms for information dissemination, indicating the role of community norms and behaviours in shaping SRH awareness, as noted by Esmaeilzadeh *et al*. (2018:1). The internet and online platforms have become the primary channels for teenagers seeking SRH information, offering benefits such as privacy and easy accessibility, as observed by Pretorius *et al*. (2019:1).

The proposal to establish youth centres, as suggested by the participants, signifies a community-level initiative. This underscores the community's potential role in providing comprehensive SRH resources and support for teenagers, as highlighted by Adekola and Mavhandu-Mudzusi (2021:1).

Institutional Level - Health System Barriers to Accessing SRH Services:

At the institutional level, the study reveals health system barriers that impede adolescents’ access to SRH services. A shortage of healthcare workers, particularly nurses, contributes to an increased workload and service gaps.

In 2021, the International Council of Nurses noted a global trend of nurses leaving their positions due to workload pressures, exacerbating the challenge of a structural shortage of qualified nurses, and impacting healthcare services on a large scale.

Shortages in medication stocks further hinder the continuity and quality of care, with the study highlighting that these health system barriers are a daily occurrence in South African public health facilities, aligning with observations in other studies such as Hodes *et al.* (2017:738). These findings point to systemic challenges affecting the delivery of SRH services.

Barriers to accessing SRH services, including healthcare workers' limited awareness of policies and guidelines, present challenges at the institutional level. The study emphasises the importance of effective policy implementation to ensure comprehensive SRH services for adolescents.

Controversial suggestions, like compulsory family planning, were identified at the policy level, prompting considerations about ethical implications and individual rights within the context of SRH interventions.

The SEM provides a framework to understand how individual, interpersonal, community, health system, and policy-level factors collectively influence adolescent SRH in the NWP. This nuanced analysis facilitates the development of targeted interventions that address challenges at various ecological levels, ultimately contributing to the enhancement of comprehensive SRH information and services for teenagers. The socio-ecological model (SEM) figure, which visually summarises the intricate layers of influences spanning individual, interpersonal, community, and institutional levels, is shown in Figure 3.2.

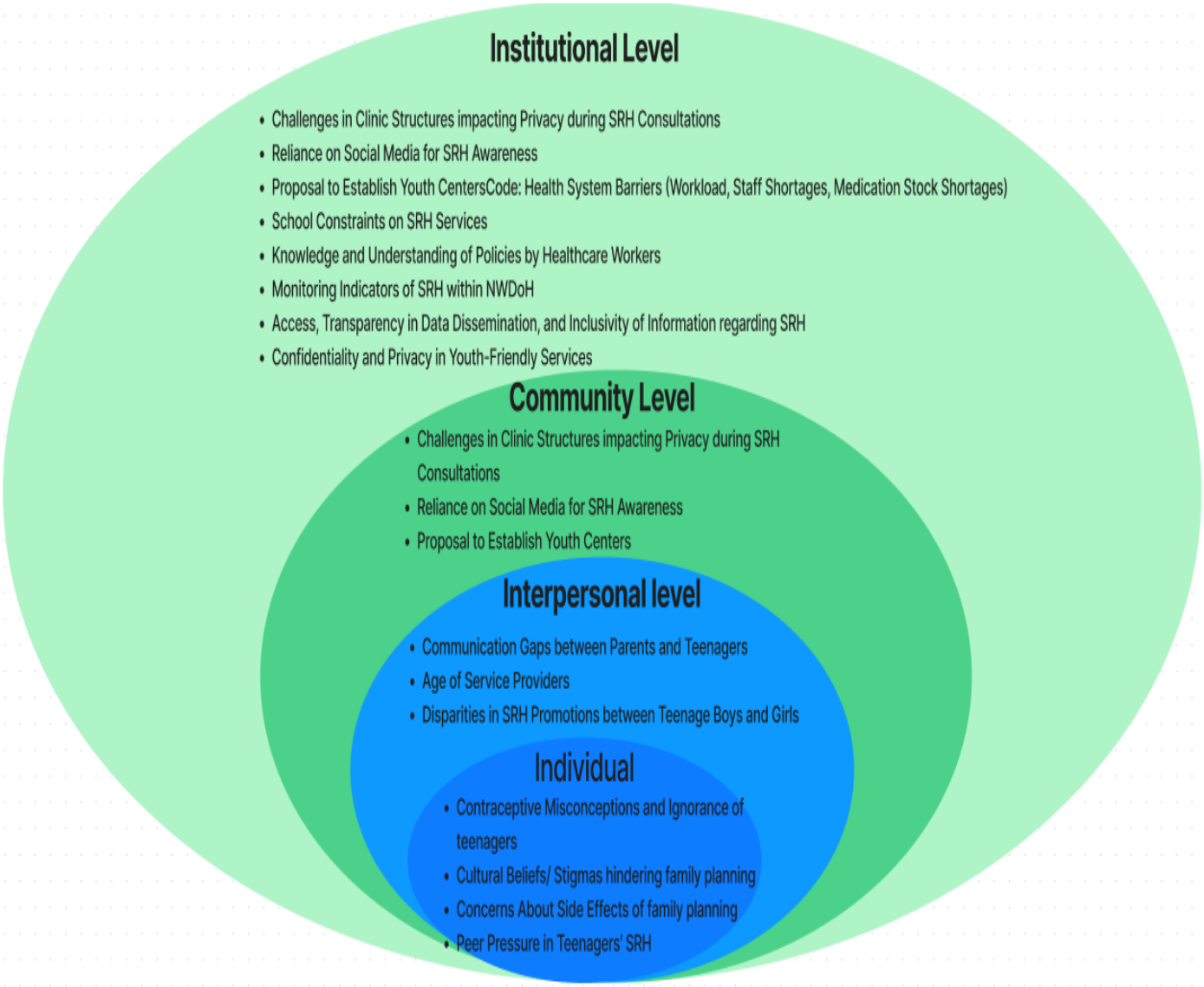


Figure 3. 2. SEM of Adolescent SRH in the NWP

The SEM analysis facilitates the development of targeted interventions that address challenges at various ecological levels, ultimately contributing to enhancing comprehensive SRH information and services for teenagers in the NWP (Mathabela *et al*., 2024:199). At the individual level, the identified challenges, such as misconceptions about family planning and insufficient SRH education, emphasise the need for tailored interventions addressing age-specific educational gaps.

The interpersonal dynamics, including communication gaps and discomfort with healthcare providers, emphasise the crucial role of strengthening relationships between parents, healthcare professionals, and adolescents. These findings align with the SEM's emphasis on the interconnectedness of individual experiences and interpersonal relationships in shaping health outcomes (King *et al*., 2014:681).

On a broader community and institutional level, the SEM sheds light on the impact of clinic structures, reliance on social media, and systemic health barriers. The proposal for youth centres indicates a potential community-driven solution, emphasising the role of community resources in supporting adolescent SRH as indicated by Khanal (2021:1). Systemic challenges, such as shortages in healthcare workers and medication stock, resonate with the SEM's recognition of institutional factors influencing health outcomes. As the SEM provides a holistic framework, interventions targeting multiple ecological levels are recommended, including age-appropriate education, community-driven initiatives, and systemic improvements to healthcare infrastructure. Collaborative efforts among stakeholders, policymakers, and communities are essential for successfully implementing these interventions, aligning with the SEM's emphasis on the interconnectedness of factors influencing adolescent SRH in the NWP.

3.9. Summary of the findings

Healthcare workers in the NWP were interviewed, revealing intricate challenges in tailoring SRH content for diverse age groups, especially addressing the needs of teenagers with varying levels of intellect. Limited SRH education in schools emerges as a significant barrier, highlighting the necessity for more comprehensive and practical details in the provided content.

The persistent stigma surrounding family planning, rooted in cultural and religious beliefs, poses obstacles for adolescents accessing SRH information and services. Infrastructure challenges, notably impacting privacy in healthcare services, are emphasised, along with management strategies of the NWDoH, focusing on monitoring pregnancy rates, stock availability, and adherence to SRH policies. Confidentiality and privacy challenges within AYFS are acknowledged, with efforts to comply with legislation despite infrastructural limitations.

The study outlines various strategies and challenges in adolescent health promotion, emphasising media utilisation, information access, and innovative solutions. Recommendations include parental involvement, engaging boys in SRH discussions, and considering age-appropriate healthcare professionals. Controversial suggestions like virginity testing and compulsory family planning are presented. The study aligns

findings with the SEM, providing a holistic understanding of challenges and strategies in SRH education and services for teenagers and offering valuable insights for policymakers, healthcare professionals, and educators to enhance adolescent well-being.

Analysing the findings through the SEM reveals a dynamic interplay of factors influencing adolescent SRH outcomes in the NWP. At the individual level, challenges in tailoring SRH content for diverse age groups and the stigma surrounding family planning impact adolescents' awareness and decision-making. Interpersonal dynamics, including communication gaps between parents and teenagers, influence SRH perceptions. At the community level, clinic infrastructure challenges affect access to healthcare services, and leveraging social media for health promotion reflects community norms. Institutionally, health system barriers like shortages in personnel and medication impact SRH service delivery. Policy-level considerations, such as controversial suggestions and the need for effective policy implementation, underscore the broader contextual influences. This comprehensive analysis aids in developing targeted interventions that address challenges at various ecological levels, contributing to enhanced SRH information and services for teenagers.

4. CHAPTER 4: DISCUSSION OF RESULTS, CONCLUSION, POLICY BRIEF, LIMITATIONS AND RECOMMENDATIONS.

4.1. Introduction

The previous section summarised the study's results, exploring the strategies for delivering health promotion services to adolescent girls in the NWP. The findings were applied to the SEM, spanning individual, interpersonal, community, health system, and policy levels (Sallis *et al.,* 2008:465) to facilitate a practical application of the results. This chapter aims to evaluate the study findings against the aims and objectives of the study, presenting recommendations, acknowledging limitations, and offering a concise policy brief.

The Choice on Termination of Pregnancy Act (Act 92 of 1996) specifies that termination of pregnancy can be requested by women and girls of any age within the first 12 weeks. The National Health Act (Act 61 of 2003) also mandates the confidentiality of all patient information. The Children's Act (Act 38 of 2005) asserts that children from the age of 12 have the right to an HIV test and cannot be denied condoms and contraceptives; such provisions must be kept confidential (Müller and Moult 2014:1). The significance lies in the comprehensive legal support for reproductive health rights and confidentiality, particularly benefiting women, girls, and children in accessing essential healthcare services.

Due to a lack of clear understanding of legal requirements and service delivery for teenagers, nurses, influenced by their values and attitudes, including their role as mothers, may shape their interactions with clients. Notably, parental consent is not mandatory for accessing SRH services, a crucial aspect in cases of domestic abuse, or to ensure that a child does not refrain from seeking health services (Strode & Essack, 2017:741).

Policy briefs emerge as an effective tool for bringing essential research to the attention of policy actors due to their brief and concise nature. Their condensed format enables quick consumption, making them accessible to a broad audience through various networks. Studies indicate that a policy actor will likely share a policy brief with colleagues if they perceive its importance.

In this section, the study findings will be discussed according to SWOT analysis and a Business Model Canvas. Therefore, the study will present a policy brief as a summary of the study findings.

4.2. Discussion of results

This study explored strategies for providing health promotion services to adolescent girls in the North-West Province, South Africa. The objectives were to identify existing health promotion services available to teenage girls in the NWP and identify the critical managerial points in the NWDoH regarding SRH management of teenage girls in the NWP. These objectives were fulfilled through conducting semi-structured interviews with healthcare workers. The interviews offered a nuanced understanding of the current health promotion measures and provided valuable insights into the managerial aspects of SRH services for teenage girls. Through a methodical pursuit of the objectives, this discussion reflects on the attained insights and their implications.

At the institutional level, the research disclosed a substantial gap in SRH education within schools. It is evident that South African youth require SRH information and services that are presently unmet (Geary *et al*., 2014:3). The absence of comprehensive and ageappropriate SRH content hinders adolescents' awareness and understanding of SRH issues. Strengthening existing programmes and ensuring accurate and accessible SRH education is crucial for empowering adolescent girls to make informed health decisions.

According to Qolesa (2017:1), a lack of understanding of SRH is a significant factor in teenage pregnancy, with friends and family serving as sources of contraceptive information, as supported by Khurana and Bleakley (2015:157). However, the study revealed that the received information was often misinterpreted, contributing to teenagers avoiding contraception. Cultural and religious beliefs perpetuate family planning stigma, acting as a barrier to adolescent girls' access to SRH services. Addressing stigma necessitates community-level interventions, challenging harmful norms and misconceptions.

Educational campaigns should target dispelling myths and foster positive attitudes towards family planning among adolescents and their communities. The nurse-patient relationship emerged as crucial, influenced by nurses' attitudes, ages, and other factors.

The study shed light on Boamah-Kaali *et al.'s* (2021:173) assertion that reasons for teenage girls not using contraception include fears of stigma and exposure to side effects. Participants reported common myths like weight gain and infertility, aligning with national and global literature (D'Souza *et al.,* 2022:364). Uncertainties about side effects played a pivotal role in females disapproving of contraception effectiveness. Contrary to these misconceptions, Villines (2020:1) highlighted that numerous studies showed that contraception did not cause weight gain.

Family planning programmes for teenagers should focus on the prevention of both pregnancy and disease, especially for those in long-term relationships. Nurses were identified as pivotal in communicating with teenagers and delivering timely services while preserving their privacy and confidentiality, although contextual understanding was sometimes lacking.

Concerns related to infrastructure challenges encompassed restrictions on privacy during consultations for SRH within confined clinic structures. UNICEF (2017) highlighted that the lack of adequate and well-maintained health infrastructure was a significant obstacle to accessing SRH services, particularly for women residing in rural areas. The infrastructure issue was also emphasised, particularly concerning the dysfunction of mobile clinics due to poor road conditions. Gwiji (2022:1), in his study, also observed that deficient road infrastructure rendered shorter routes impassable, leaving alternative, often longer, routes as the only viable option. Investments are urgently needed to establish youth-friendly spaces that prioritise privacy and comfort. This initiative aims to facilitate open communication and build trust between healthcare providers and adolescents, addressing the challenges posed by inadequate infrastructure in the context of SRH.

The scarcity of human resources, particularly nurses, has intensified the difficulties in delivering effective SRH services, aligning with the findings of Onvlee *et al.* (2023:1). Mulaudzi's (2022:1) study further observed that a shortage of facilities placed health workers under significant pressure, leading to underperformance in their roles. Addressing these challenges necessitates government intervention to bridge staffing gaps and offer specialised training for healthcare workers. In addition to the human resources shortage, there is a notable deficit in stock levels, particularly concerning contraceptives, adversely affecting teenagers' access to their preferred methods. Gwiji's (2022:1) study in the Western Cape underscored the widespread occurrence of stock-outs, highlighting the urgent need for comprehensive solutions to ensure the availability of essential resources for effective SRH services.

The MomConnect initiative, initiated by the South African government in 2014 to support pregnant women through free SMS services, faced a decline in effectiveness due to the prevalent shift towards data usage, as revealed by research findings. Participants in the study emphasised the significant role of social media in disseminating SRH information to adolescents, stressing the necessity for strategic investments in targeted campaigns. The inadequacies in the NWDoH's online presence, particularly the diminishing efficacy of the MomConnect initiative due to data requirements, were highlighted. This issue emphasised the urgent need for enhancements in online platforms to optimise engagement. The study also advocated for creating youth-centric spaces, aiming to establish inclusive environments where adolescents can readily access accurate information, receive support, and engage in peer-to-peer learning, aligning with the preferences of adolescent girls.

Participants emphasised the pivotal role of social media in reaching and engaging adolescents with SRH information. Internet resources have become a crucial global tool for disseminating contraception and health information (Esmaeilzadeh *et al*., 2018:1). The potential for strategic investments in targeted social media campaigns to amplify SRH awareness and encourage positive health-seeking behaviours among adolescents was highlighted. Tsebe's (2012:1) conclusions emphasised the far-reaching consequences of healthcare providers' negative attitudes, rendering the healthcare system unfriendly to young women.

Consequently, adolescents prefer seeking information from peers and social media, even though occasional misinformation may arise. Leveraging popular platforms can enhance broader SRH information dissemination and meaningful engagement with adolescent audiences.

During the research period, the NWDoH provincial Facebook page, boasting 54K followers, received less than 20 likes per post, suggesting limited resonance with the conveyed message. The infrequent updates, absence of content in multiple languages, and neglect of cultural sensitivities further hampered the page's effectiveness. A study by Oeldorf-Hirsch (2015:240) highlighted the importance of many reactions and comments on Facebook for effective engagement. The NWDoH home page lacked user-friendliness and online materials addressing teenage pregnancy. It showed a disconnect between the website and social media, hindering seamless content sharing and discussions, as proposed by Luttrell (2018:1). The absence of localised content addressing specific health challenges or resources in the NWP further limited the website's efficacy.

The lack of programmes addressing learner pregnancy within schools was highlighted in a survey conducted by Ramalepa *et al.* (2020:27) in the North-West province. Despite the various forms of education, the study revealed that SRH topics were predominantly discussed in the L.O. class (Maxwell *et al*., 2016:1). To enable school learners to uphold their reproductive well-being and make informed choices, it is essential to provide accurate information and offer secure, affordable, and effective preventive SRH services within educational institutions UNFPA 2021:1). This study indicates that SRH services should also be provided on the school premises, overcoming some barriers to information-seeking behaviour. However, concerns about privacy and confidentiality arose regarding accessing these services at the school. The lack of SRH knowledge was identified as stemming from poor social support and community engagement. This finding is consistent with Narker's (2022:1) findings that governing bodies of high schools often prohibited addressing SRH topics among teenagers due to concerns about promoting promiscuity.

The policy implications of these findings emphasise the need for a multifaceted approach to adolescent health promotion in the NWP. Strategies such as strengthening SRH education, challenging stigma, improving infrastructure and human resources, leveraging social media, creating youth-centric spaces, and ensuring effective policy implementation are essential for advancing adolescent SRH outcomes. The study highlights that collaborative efforts across sectors are imperative to create an enabling environment that empowers adolescent girls to make informed choices about their health and well-being.

4.3. *Evaluation*

I. Evaluation of objective

The objective of the study was to identify current health promotion services available to teenage girls in the NWP and to identify the critical managerial points in the NWDoH regarding SRH management of teenage girls in the NWP. This objective is addressed through a document analysis and interviews with healthcare workers. The document analysis involves scrutinising the available literature on the topic, DoH websites, and social media platforms for health promotion strategies targeted at teenage girls. The results provided insights into the existing health promotion services, highlighting potential strengths and gaps in the strategies deployed.

This objective was also tackled through interviews with health workers to explore their insights and understanding regarding the health promotion measures accessible to adolescent girls. The findings offer valuable perspectives on the managerial aspects within the NWDoH. The interviews provide a qualitative understanding of the challenges, successes, and areas for improvement in managing SRH for teenage girls.

Both objectives are addressed effectively through a mixed-methods approach, combining document analysis and qualitative interviews. The document analysis provides a snapshot of the publicly available health promotion content, while the interviews with healthcare workers offer a more profound, qualitative understanding of the managerial aspects. Integrating multiple data sources enhances the overall reliability and validity of the study's findings.

II. Evaluation of methodology

The research methodology employed in this study demonstrates a robust and systematic approach to explore healthcare workers' perspectives on SRH services and health promotion strategies for adolescent girls in the NWP.

The research design is well-structured, following key steps such as problem identification, literature review, sample selection, data collection, and interpretation of findings. This clarity enhances the overall understanding of the study's purpose and objectives.

Semi-structured interviews are appropriate for acquiring in-depth insights into participants' thoughts and opinions regarding health promotion interventions. The prepared interview guide based on the literature review and preliminary findings demonstrates methodological rigour.

Adopting a qualitative descriptive approach aligns with the research objectives, allowing for a nuanced exploration of health promotion strategies and services for adolescent girls. As Sandelowski (2004: 1366) and Braun and Clarke (2021:328) proposed, thematic data analysis enhances the depth of understanding. The study demonstrates a commitment to qualitative rigour. Credibility is strengthened through frequent revisitation of the data, ensuring coherence with participants' experiences. Detailed descriptions support transferability, while dependability and confirmability are meticulously addressed through thorough documentation and reflexivity. The Creswell *et al*. (2018:1) model provides a clear framework for data analysis, ensuring systematic organisation, coding, and interrelation of themes. This structured approach contributes to the validity and reliability of the study's findings.

The study relies primarily on semi-structured interviews for data collection. While this method is effective for the study's qualitative nature, incorporating additional methods such as surveys or focus groups could have provided a more comprehensive understanding.

III. Evaluation of the analysis

The study explores the challenges and potential solutions for adolescent health of girls in the NWP. The study delves into the multifaceted issues surrounding SRH education, services, and promotion, offering valuable insights for policymakers, healthcare professionals, and educators.

The analysis thoroughly examines various dimensions of adolescent SRH, including challenges in education, social stigma, infrastructure limitations, and innovative solutions. This breadth ensures a holistic understanding of the complex issues involved. By incorporating qualitative data from interviews with healthcare workers, the analysis goes beyond numerical data, providing rich insights into the lived experiences, perceptions, and recommendations of those directly involved in adolescent SRH services.

The analysis effectively applies the SEM, linking findings to individual, interpersonal, institutional, community, and societal levels. This framework enhances the understanding of how factors at different levels influence adolescent SRH. The study not only identifies challenges but also proposes practical and context-specific recommendations. These recommendations — such as parental involvement, engaging boys in SRH discussions, and leveraging social media — have the potential for tangible impact.

While the study acknowledges the cultural aspects influencing SRH, a more in-depth exploration of diverse cultural contexts could enhance the analysis. Cultural nuances play a crucial role, and a deeper understanding would contribute to more targeted recommendations.

Some recommendations, such as virginity testing and compulsory family planning, are controversial and may raise ethical concerns. The analysis could benefit from a more nuanced discussion of these recommendations, weighing potential benefits against ethical considerations.

The analysis holds significant implications for policy development, healthcare practices, and educational strategies in the NWP. It highlights the urgency of tailored interventions, collaborative efforts, and cultural sensitivity in addressing adolescent SRH. Implementing these practical recommendations has the potential to impact adolescent SRH positively.

4.4. Limitation of the study

This study aimed to explore existing strategies for health promotion among adolescent girls in the NWP and contribute positively to the existing body of knowledge on the topic; however, it also presents several significant limitations. Its geographical focus on the NWP may limit the generalisability of its findings to other areas with different socio-economic and healthcare contexts. The study's reliance on a particular population subset may only partially capture all adolescent girls' diverse experiences and needs in the province. While providing in-depth insights, the qualitative nature of this research needs to have the broader representativeness that quantitative data might offer, thus limiting its generalisability.

The findings are also time-bound, reflecting the specific research period, and may not account for the dynamic changes in policy, healthcare infrastructure, and societal attitudes towards adolescent health over time. There is a potential for reporting bias, as participants may have tailored their responses towards what they perceived as socially acceptable. Moreover, while the study sheds light on the gaps in policy awareness and implementation, it needs to delve more into the systemic barriers that hinder the effective translation of policies into practice or the specifics of each intervention's effectiveness and challenges. It becomes clear that while this study offers valuable preliminary insights, there is a significant need for further research.

Future investigations should encompass a broader geographical scope, including a more diverse and representative sample size. It should integrate quantitative measures for enhanced generalisability and provide a more granular analysis of policy portrayal and the practicalities of implementing health promotion strategies. This approach will address the identified limitations and contribute to a more comprehensive understanding of how best to support the health and well-being of adolescent girls across varied contexts.

4.5. *Recommendations*

The research findings shed light on the complex landscape of health promotion services targeting adolescent girls. Understanding the nuances of this demographic's health needs is imperative for developing effective strategies that address their multifaceted challenges. This discussion delves into the results, exploring existing strategies and management practices and identifying barriers. Moreover, it seeks to provide insightful recommendations for practice, future research, and policy based on a comprehensive analysis of the study's outcomes. The goal is to enhance adolescent health promotion initiatives by aligning interventions with the identified gaps and needs.

Recommendation for practice:

I. For teenagers:

Adolescents should actively advocate for comprehensive SRH education within schools. Engaging in discussions with school authorities, parents, and community leaders can contribute to developing and enhancing age appropriate SRH programmes. Teenagers have the right to accessible and comprehensive information tailored to their developmental stages.

The importance of online resources is acknowledged as teenagers are encouraged to utilise digital platforms responsibly for SRH information. Government-established platforms like the *Be Wise* website can be valuable resources. However, it is essential for teenagers to critically evaluate online content and verify information from reliable sources to make informed decisions about their sexual health.

Overcoming the stigma surrounding family planning requires open communication between families and peer groups. Teenagers are encouraged to initiate and participate in respectful dialogues with parents, peers, and community members. Creating an environment where people feel supported to ask questions can promote understanding and dispel misconceptions about SRH issues.

Actively participating in youth-centric initiatives, such as support clubs or youth centres, can provide teenagers with additional resources and support related to SRH. Establishing or joining community-based programmes contribute to a supportive network where teenagers can share experiences, seek guidance, and collectively address SRH challenges.

II. For healthcare workers:

Healthcare workers involved in AYFS should prioritise continuous professional development. Training programmes and workshops focusing on the specific needs of teenagers can enhance healthcare workers' knowledge and skills in delivering age appropriate SRH services. Addressing privacy concerns and fostering a non-judgmental environment are integral components of such programmes.

Healthcare workers should advocate for and actively participate in interdepartmental collaboration, particularly with the Department of Education and Communities. Bridging gaps in information dissemination between healthcare providers and educational institutions is crucial. This goal can be achieved through extended roles for AYFS professionals who can provide SRH education in different schools.

Recognising the influence of social media on teenagers, healthcare workers should leverage these platforms for health promotion. Creating and managing social media accounts dedicated to SRH information allows healthcare workers to reach a broader audience. Regularly updating content, engaging with teenagers online, and addressing FAQs contribute to effective health promotion.

Healthcare workers should advocate for improved infrastructure within healthcare facilities, especially those offering AYFS. Adequate space, privacy-friendly consultation rooms, and necessary resources contribute to a more effective delivery of SRH services. Engaging with healthcare management and government bodies to address these infrastructural challenges is crucial.

III. For the Department of Health in the province:

The DoH should invest in comprehensive SRH programmes tailored to the diverse needs of adolescents. Reviewing and enhancing existing policies, ensuring effective implementation, and addressing knowledge gaps among healthcare workers should

be included. Collaborating with educational institutions and community leaders is vital for a holistic approach.

It is recommended that resources and support be allocated to establishing youth centres equipped with educational resources. These centres should be inclusive, accommodating both girls and boys. Supporting community-based initiatives involving teenagers in SRH awareness and education contributes to a more comprehensive and youth-friendly healthcare approach.

Recognising the critical role of human resources and infrastructure, the DoH should prioritise healthcare workers' recruitment, training, and retention. Addressing shortages and improving clinic structures, especially in AYFS, enhances the overall quality and accessibility of SRH services. Government intervention is necessary to ensure effective policy implementation.

Emphasising evidence-based and ethical interventions is essential. Controversial proposals, such as compulsory family planning, should be approached cautiously, considering individual autonomy and rights. The DoH should prioritise interventions that respect diverse cultural perspectives, ensuring that SRH initiatives are rooted in respect, dignity, and the well-being of adolescents.

Recommendation for future research:

I. Geographical expansion:

Future research endeavours should consider expanding the geographical scope beyond the NWP to encompass diverse regions with varying socio-economic and healthcare contexts. This expansion would enhance the generalisability of findings and provide a more comprehensive understanding of health promotion strategies for adolescent girls in different settings.

II. Comparative analysis:

A comparative analysis between provinces or countries could yield valuable insights into the effectiveness of different health promotion approaches. By examining variations in policies, cultural contexts, and healthcare infrastructures, researchers can identify best practices and areas for improvement, contributing to developing more universally applicable strategies.

III. Quantitative measures:

While this study embraced a qualitative approach, future research should emphasise quantitative measures more strongly. Surveys, focus groups, and statistical analyses can complement qualitative insights, providing a more robust evaluation of the effectiveness of health promotion interventions. Quantifiable data would enhance the ability to draw statistical inferences and assess the impact of strategies on a larger scale.

IV. Longitudinal studies:

It is recommended that longitudinal studies be conducted tracking the implementation and impact of health promotion strategies over an extended period. This approach allows for a nuanced understanding of interventions' sustainability and long-term effectiveness. Researchers can observe changes in policy, healthcare infrastructure, and societal attitudes, providing valuable insights for continuous improvement.

V. Cultural nuances:

A deeper exploration of cultural nuances and their impact on SRH practices is essential. Understanding the diverse cultural contexts within different regions can inform more targeted and culturally sensitive interventions. Future research should employ qualitative methods to delve into the intricacies of cultural beliefs, norms, and values, ensuring that health promotion strategies respect and align with local perspectives.

VI. Technology and social media impact:

Given the evolving landscape of technology and social media, future research should investigate the impact of these platforms on adolescent health promotion. Assessing the effectiveness of digital interventions, social media campaigns, and online health resources can guide the development of innovative strategies that resonate with the preferences and behaviours of the target demographic.

Recommendation for policy:

PROPOSED POLICY BRIEF

Policy Brief: Enhancing Sexual and Reproductive Health (SRH) Promotion for Teenage Girls in the North-West Province (NWP)

Executive Summary: This policy brief addresses the findings from a comprehensive study focusing on health promotion services for teenage girls in the NWP. The study identified key challenges and proposed actionable strategies to enhance sexual and reproductive health (SRH) promotion. The policy recommendations aim to contribute to the well-being of teenage girls by fostering an inclusive, effective, and culturally sensitive approach to SRH services.

Context: The NWP faces distinctive challenges in delivering effective SRH promotion services to teenage girls. The region grapples with gaps in school-based education, infrastructure limitations, and cultural stigmas surrounding family planning. These challenges underline the need for targeted interventions and strategic policy measures to improve the overall SRH landscape for adolescents. This policy brief outlines key findings, recommendations, and implementation strategies from an in-depth study conducted with healthcare workers in the NWP.

Key Findings:

- Limited Health Promotion within Schools: The study reveals a significant gap in SRH education within schools, necessitating more comprehensive and practical details in the provided content.
- Infrastructure Challenges: Privacy concerns in healthcare services impact teenagers seeking SRH services, emphasising the need for infrastructure improvement.
- Stigma Surrounding Family Planning: Cultural and religious beliefs often lead to the stigma around family planning, preventing adolescents from accessing comprehensive SRH information and services.
- Social media as a Crucial Platform: Social media emerges as a critical avenue for effective SRH promotion, providing an accessible and engaging platform for teenagers.

Policy recommendations:

I. Comprehensive School-Based SRH Education:

- Implement comprehensive and age appropriate SRH education within school curricula.
- Establish partnerships with educational institutions to integrate practical SRH content.

II. Infrastructure Improvement in Healthcare Services:

- Allocate resources for improving clinic infrastructure and ensuring privacy and confidentiality.
- Address the shortage of personnel to enhance the effectiveness of AYFS programmes.

III. Addressing Cultural Stigmas:

- Develop culturally sensitive SRH programmes that address and dispel myths surrounding family planning.
- Work with community leaders and religious organisations to promote tolerance and support for SRH services.

IV. Leveraging Social Media for Health Promotion:

- Invest in social media campaigns focused on SRH education and awareness.
- Collaborate with influencers and organisations to amplify the reach of health promotion messages.

Implementation strategies:

I. Interdepartmental Collaboration:

- Establish collaborations between the DoH and Education to ensure holistic SRH education.

II. Youth-Friendly Centres:

- Build dedicated youth centres with educational resources focusing on inclusivity for both genders.

- Expand the reach of AYFS professional nurses to provide SRH education in various schools.

III. Incentivising Family Planning:

- Explore the feasibility of providing vouchers or parcels as incentives for active participation in family planning services.

Monitoring and Evaluation: Establish a robust monitoring and evaluation framework to assess the impact of implemented strategies, involving regular feedback from healthcare workers, educators, and teenagers. Adjust policies based on emerging trends and challenges.

Conclusion: This policy brief advocates for a comprehensive and collaborative approach to address the multifaceted challenges identified in the study. By implementing these recommendations, the NWP can foster an environment conducive to the well-being of teenage girls, ensuring their access to accurate, inclusive, and culturally sensitive SRH services.

SWOT analysis:

SWOT analysis is a crucial strategic management tool extensively used across various healthcare sectors to evaluate internal and external factors impacting an organisation or programme. Based on the findings, SWOT analysis functions are used in this study as a comprehensive evaluation framework.

The ensuing exploration of findings is approached through this strategic lens, illustrated in Figure 4.1, which depicts the SWOT analysis of the current promotional strategy in the NWDoH.

Figure 4. 1. SWOT analysis of the current promotional strategy in the NWDoH

This analysis aims to provide a thorough assessment by scrutinising the strengths and weaknesses intrinsic to the NWDoH and exploring external opportunities and threats. Its objective is to uncover strategic insights and facilitate informed decision-making based on the findings presented in Chapter 3. The significance of the SWOT analysis lies in its capacity to offer a holistic perspective on the current state of strategies within the NWDoH. It provides strategic guidance to improve SRH services for teenagers.

The strengths, weaknesses, opportunities, and threats identified underline the multifaceted challenges and potential avenues for improvement in delivering SRH services to teenagers. While there are notable strengths in the existing programmes for adolescent girls' SRH in the NWP, addressing weaknesses and seizing opportunities can lead to more effective and inclusive health promotion strategies. AYFS programmes and dedicated healthcare personnel emerge as strengths, forming the foundation for strategic initiatives. Collaboration and community outreach present opportunities for enhanced service delivery. However, limited online presence, infrastructure issues, and cultural barriers necessitate targeted strategies. By leveraging strengths to exploit opportunities and fortifying against potential threats, the department can enhance its AYFS programmes, ensuring comprehensive and accessible SRH services for teenagers in the NWP.

Business Model Canvas (BMC)

In managing public health, grasping the complexities associated with service delivery is essential. The SEM provides a lens to examine how individual, interpersonal, institutional, community and societal factors influence health-related behaviours and outcomes. In alignment with this model, this study delves into the findings of existing strategies to provide health promotion services to adolescent girls in the NWP, explicitly focusing on the challenges faced and strategies employed in providing SRH services to teenagers.

To further illuminate the operational landscape, we employ the BMC. This visual representation (Figure 4.2) summarises critical aspects, including customer segments, value propositions, channels, relationships, revenue streams, essential resources, activities, partnerships, cost structure, and strategies. The BMC is a strategic tool to synthesise and analyse the findings, providing insights into the strengths, weaknesses, opportunities, and threats encountered in providing SRH services to teenagers.

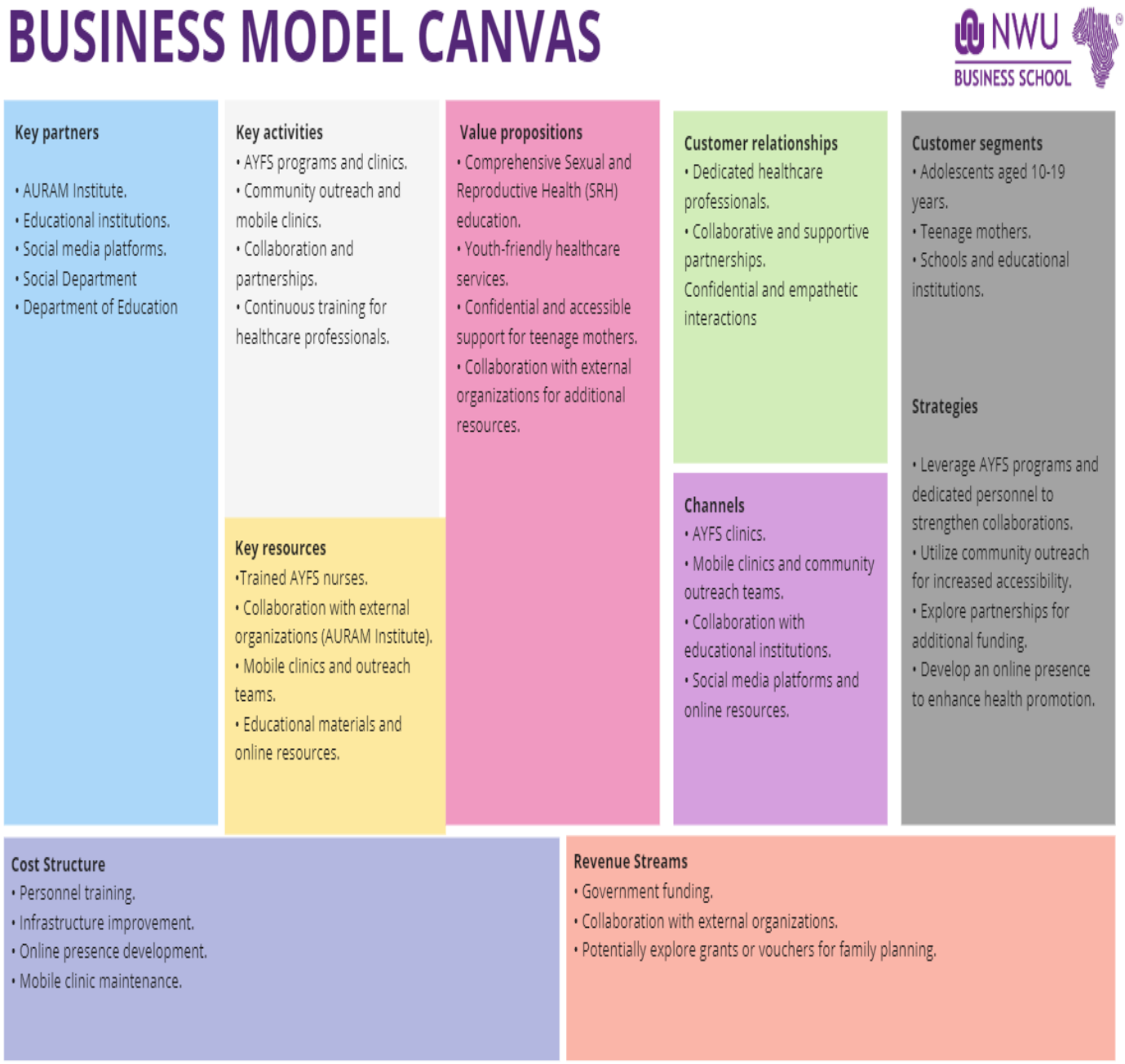


Figure 4. 2. Business Model Canvas (BMC) for NWDoH on SRH promotion services

The findings highlight healthcare workers' multifaceted challenges, such as workload pressures, staff shortages, medication stock inadequacies, and infrastructure limitations impacting privacy. These challenges resonate across individual, institutional, and societal levels, revealing service delivery and education gaps.

The limitations in SRH education within schools and the persistent stigmas rooted in cultural beliefs indicate a need for comprehensive and culturally sensitive interventions. The institutional level highlights barriers within the health system, specifically concerning infrastructure and workforce shortages.

4.6. *Conclusion*

Exploring strategies for providing health promotion services to adolescent girls in the NWP reveals a complex landscape shaped by individual, interpersonal, community, institutional, and policy-level factors. The multifaceted challenges identified in tailoring SRH content, addressing stigma, ensuring privacy, and navigating infrastructural limitations underscore the intricacies involved in adolescent health promotion. The SEM serves as a valuable framework, elucidating the dynamic interplay of these factors and their collective influence on SRH outcomes.

The study highlights critical areas requiring attention, from the limited SRH education within schools to the stigma surrounding family planning deeply rooted in cultural beliefs. The findings emphasise the need for comprehensive, age appropriate SRH education that involves parents, peers, and community leaders beyond the classroom. Overcoming societal barriers, especially those related to cultural norms and age disparities between healthcare providers and teenagers, necessitates collaborative efforts at various levels.

The challenges within the health system, such as shortages in personnel and medication stocks, highlight systemic barriers that hinder the effective delivery of SRH services. This underscores the importance of investing in human resources, infrastructure, and continuous professional development for healthcare workers. Recommendations advocate for interdepartmental collaboration, leveraging social media for health promotion, and creating youth-friendly spaces with educational resources.

Controversial suggestions, including compulsory family planning and virginity testing, present ethical considerations and underscore the importance of evidence-based, rights-respecting interventions. The recommendations aim to empower teenagers to access comprehensive education, responsibly utilise online resources, and engage in open dialogues. Healthcare workers are urged to advocate for improved infrastructure, collaborate across departments, and utilise social media for effective health promotion. The DoH is called upon to invest in comprehensive programmes, support youth-centric initiatives, prioritise human resources, and promote evidence-based, ethical interventions.

Addressing the identified challenges requires a concerted effort from policymakers, healthcare professionals, educators, parents, and the community. A holistic approach, guided by the SEM, is essential for developing targeted interventions that consider the unique needs and contexts shaping the SRH experiences of adolescent girls in the NWP. Implementing these recommendations can create a more supportive environment for adolescent girls, enhancing their well-being and promoting positive SRH outcomes.

4.7. Personal reflection

Conducting research in SRH has been a transformative experience. It marked a significant shift from my engineering background to a more socially oriented focus. This transition has expanded my academic horizons and deepened my understanding of healthcare research's intricate challenges and responsibilities.

Coming from an engineering background, where precision, equations, and technical problem-solving are paramount, delving into the realms of social research presented a paradigm shift. The complexity of human interactions, cultural nuances, and ethical considerations demanded a more nuanced approach. I found myself navigating a landscape where equations could not encapsulate the intricacies of individual beliefs, societal stigmas, and the multifaceted challenges healthcare workers face.

One of the notable mental transitions was the shift from quantitative data to qualitative insights. While engineering projects often rely on numerical precision, the SRH research journey showed me the depth and richness of qualitative data.

The stories, experiences, and voices of healthcare workers and teenagers became the focal point, revealing a narrative that statistical figures alone could not portray. This qualitative lens provided a more holistic understanding of the challenges and potential solutions. Moreover, engaging with sensitive topics like SRH highlighted the importance of empathy, cultural competence, and ethical considerations. These aspects were not merely checkboxes in an engineering project; they became the guiding principles shaping the research process. Navigating through the cultural contexts and respecting the rights and dignity of the participants became integral components of the research journey.

This research experience has contributed to my academic growth and instilled a more profound sense of social responsibility. The study's findings have real-world implications, emphasising the need for strategic interventions to enhance adolescent SRH services. Realising that research can catalyse positive societal impact has been humbling and empowering.

The transition from an engineering background to conducting SRH research has been a journey of intellectual growth, cultural sensitivity, and social consciousness. It has reinforced my belief in the power of research as a tool for positive change and has inspired a continued commitment to contributing meaningfully to societal well-being.

REFERENCES

Abebe, A.M., Fitie, G.W., Jember, D.A., Reda, M.M. & Wake, G.E. 2020. Teenage pregnancy and its adverse obstetric and perinatal outcomes at Lemlem Karl Hospital, Tigray, Ethiopia, 2018. *Biomed Research International*, 2020(2):1-8. https://doi.org/10.1155/2020/3124847

Achen, D., Nyakato, V.N., Akatukwasa, C., Kemigisha, E., Mlahagwa, W., Kaziga, R., Ruzaaza, G.N., Rukundo, G.Z., Michielsen, K., Neema, S. & Coene, G. 2022. Gendered experiences of parent–child communication on sexual and reproductive health Issues: a qualitative study employing community-based participatory methods among primary caregivers and community stakeholders in rural South-Western Uganda. *International Journal of Environmental Research and Public Health*, 19(9): 5052. https://doi.org/10.3390/ijerph19095052

Adeagbo, O., Herbst, C., Blandford, A., McKendry, R., Estcourt, C., Seeley, J. & Shahmanesh, M. 2019. Exploring people's candidacy for mobile health–supported HIV testing and care services in rural KwaZulu-Natal, South Africa: Qualitative study. *Journal of Medical Internet Research*, 21(11): e15681. https://doi.org/10.2196/15681

Adekola, A.P. & Mavhandu-Mudzusi, A.H. 2021. Addressing learner-centred barriers to sexuality education in rural areas of South Africa: Learners' perspectives on promoting sexual health outcomes. *Sexuality Research and Social Policy*, 20(1): 1-17. https://doi.org/10.1007/s13178-021-00651-1

Adeniyi, O.V., Ajayi, A.I., Moyaki, M.G., Goon, D.T., Avramovic, G. & Lambert, J. 2018. High rate of unplanned pregnancy in the context of integrated family planning and HIV care services in South Africa. *BMC Health Services Research*, 18(1): 1-8. https://doi.org/10.1186/s12913-018-2942-z

Ajayi, A.I. & Ezegbe, H.C. 2020. Association between sexual violence and unintended pregnancy among adolescent girls and young women in South Africa. *BMC Public Health*, 20(1): 1-10. https://doi.org/10.1186/s12889-020-09488-6

Apanga, P. A. & Adam, M. A. 2015. Factors influencing the uptake of family planning services in the Talensi District, Ghana. *Pan African Medical Journal*, 20(1): 1-9. https://doi.org/10.11604/pamj.2015.20.10.5301

Asenahabi, B.M. 2019. Basics of research design: A guide to selecting appropriate research design. *International Journal of Contemporary Applied Researches*, 6(5): 76-89. http://www.ijcar.net/assets/pdf/Vol6-No5-May2019/07.-Basics-of-Research-Design-A-Guide-to-selecting-appropriate-research-design.pdf

Aveyard, H., 2018. *Doing a literature review in health and social care: A practical guide*. 4th ed. UK: Open University Press.

Bandura, A. 2013. Health promotion from the perspective of social cognitive theory. In: Norman, P., Abraham, C. & Conner, M., eds. *Understanding and changing health behaviour.* London: Psychology Press. pp. 299-339

Bandura, A., 2014. Social cognitive theory of moral thought and action. In Handbook of moral behaviour and development (pp. 69-128). Psychology Press.

Barron, P., Pillay, Y., Fernandes, A., Sebidi, J. & Allen, R. 2016. The MomConnect mHealth initiative in South Africa: Early impact on the supply side of MCH services. *Journal of Public Health Policy*, 37(2): 201-212. https://doi.org/10.1057/s41271-016-0015-2

Barron, P., Subedar, H., Letsoko, M., Makua, M. & Pillay, Y. 2022. Teenage births and pregnancies in South Africa, 2017-2021– a reflection of a troubled country: Analysis of public sector data. *South African Medical Journal*, 112(4): 252-258. https://pubmed.ncbi.nlm.nih.gov/35587803/

Beksinska, M., Wong, R. & Smit, J. 2020. Male and female condoms: Their key role in pregnancy and STI/HIV prevention. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 66: 55-67. https://doi.org/10.1016/j.bpobgyn.2019.12.001

Blumenthal, P.D., Voedisch, A. and Gemzell-Danielsson, K., 2011. Strategies to prevent unintended pregnancy: increasing use of long-acting reversible contraception. *Human reproduction update*, 17(1), pp.121-137. https://doi.org/10.1093/humupd/dmq026

Boamah-Kaali, E.A., Mevissen, F.E.F., Owusu-Agyei, S., Enuameh, Y., Asante, K.P. & Ruiter, R.A. 2021. A qualitative exploration of factors explaining non-uptake of hormonal contraceptives among adolescent girls in rural Ghana: The adolescent girls' perspective. *Open Access Journal of Contraception*, 2021(12): 173-185. https://doi.org/10.2147/OAJC.S320038

Boulanger-Lapointe, N., Gérin-Lajoie, J., Siegwart Collier, L., Desrosiers, S., Spiech, C., Henry, G.H., Hermanutz, L., Lévesque, E. & Cuerrier, A. 2019. Berry plants and berry picking in Inuit Nunangat: Traditions in a changing socio-ecological landscape. *Human Ecology*, 47(1): 81-93. https://doi.org/10.1007/s10745-018-0044-5

Bradshaw, C., Atkinson, S. & Doody, O. 2017. Employing a qualitative description approach in health care research. *Global Qualitative Nursing Research*, 4: 2333. https://doi.org/10.1177/2333393617742282

Braun, V. & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2): 77-101. http://dx.doi.org/10.1191/1478088706qp063oa

Braun, V. & Clarke, V. 2019. Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4): 589-597. https://doi.org/10.1080/2159676X.2019.1628806

Braun, V. & Clarke, V. 2021. One size fits all? What counts as quality practice in (reflexive) thematic analysis?. *Qualitative Research in Psychology*, 18(3): 328-352. https://doi.org/10.1080/14780887.2020.1769238

Breuner, C.C., Adelman, W.P., Alderman, E.M., Garofalo, R., Marcell, A.V., Powers, M.E. & Upadhya, K.K., 2016. Sexuality education for children and adolescents. *Pediatrics*, 138(2): e20161348. https://doi.org/10.1542/peds.2016-1348

Bronfenbrenner, U. 1975. Reality and research in the ecology of human development. *Proceedings of the American Philosophical Society*, 119(6): 439-469. http://www.jstor.org/stable/986378

Bryman, A., Bell, E., Hirschsohn, P., Dos Santos, A., Du Toit, J., Masenge, A., Van Aardt, I. & Wagner, C. 2014. *Research methodology: Business and management contexts*. Cape Town: Oxford University Press.

Budin-Ljøsne, I., Ayuandini, S., Baillergeau, E., Bröer, C., Helleve, A., Klepp, K.I., Kysnes, B., Lien, N., Luszczynska, A., Nesrallah, S. & Rito, A., 2023. Ethical considerations in engaging young people in European obesity prevention research: The co-create experience. *Obesity Reviews*, 24(1): e13518. https://doi.org/10.1111/obr.13518

Carcary, M. 2020. The research audit trail: Methodological guidance for application in practice. *Electronic Journal of Business Research Methods*, 18(2): 166-177. https://doi.org/10.34190/JBRM.18.2.008

Chersich, M.F., Wabiri, N., Risher, K., Shisana, O., Celentano, D., Rehle, T., Evans, M. & Rees, H. 2017. Contraception coverage and methods used among women in South Africa: A national household survey. *South African Medical Journal*, 107(4): 307-314. https://doi.org/10.7196/SAMJ.2017.v107i4.12141

Chiang, L., Howard, A., Stoebenau, K., Massetti, G.M., Apondi, R., Hegle, J., Kyatekka, M., Stamatakis, C., Wasula, L. & Aluzimbi, G. 2021. Sexual risk behaviors, mental health outcomes and attitudes supportive of wife-beating associated with childhood transactional sex among adolescent girls and young women: Findings from the Uganda Violence Against Children Survey. *PLoS One*, 16(3): e0249064. https://doi.org/10.1371/journal.pone.0249064

Chimphamba Gombachika, B., Fjeld, H., Chirwa, E., Sundby, J., Malata, A. & Maluwa, A., 2012. A social ecological approach to exploring barriers to accessing sexual and reproductive health services among couples living with HIV in southern Malawi. *ISRN Public Health*, 2012: 1-13. https://doi.org/10.5402/2012/825459

Christin-Maitre, S. 2022. Worldwide contraception. *Medecine Sciences: M/S*, 38(5): 457-463. https://doi.org/10.1051/medsci/2022058

Coates, A., 2021. The prevalence of philosophical assumptions described in mixed methods research in education. *Journal of Mixed Methods Research*, 15(2): 171-189. https://doi.org/10.1177/1558689820958210

Cook, S.M.C. & Cameron, S.T. 2017. Social issues of teenage pregnancy. *Obstetrics, Gynaecology & Reproductive Medicine*, 27(11): 327-332. https://doi.org/10.1016/j.ogrm.2017.08.005

Coovadia, H., Jewkes, R., Barron, P., Sanders, D. & McIntyre, D. 2009. The health and health system of South Africa: historical roots of current public health challenges. *The Lancet*, 374(9692): 817-834. https://doi.org/10.1016/S0140-6736(09)60951-X

Corepal, R., Tully, M.A., Kee, F., Miller, S.J. & Hunter, R.F. 2018. Behavioural incentive interventions for health behaviour change in young people (5–18 years old): A systematic review and meta-analysis. *Preventive Medicine*, 110: 55-66. https://doi.org/10.1016/j.ypmed.2018.02.004

Cresswell, P. & Gilmour, J. 2014. The informed consent process in randomised controlled trials: A nurse-led process. *Nursing Praxis in New Zealand*, 30(1): 17-28. https://pubmed.ncbi.nlm.nih.gov/24839744/

Creswell, J. W. 2017. *Qualitative inquiry and research design: Choosing among five approaches.* 3rd ed. Thousand Oaks, California: Sage Publications.

Creswell, J. W. 2018. *Research design: qualitative, quantitative, and mixed methods approaches*. 5th ed. Los Angeles: Sage publications.

Damian, J.U., Hlungwane, E. & Tshitangano, T.G. 2024. Barriers and mythical practices of teenagers regarding the prevention of sexually transmitted infections in rural areas of Limpopo Province, South Africa. *Healthcare,* 12(3): 355. https://doi.org/10.3390/healthcare12030355

Daniel, B.K. 2019. Using the TACT framework to learn the principles of rigor in qualitative research. *Electronic Journal of Business Research Methods*, 17(3): 118-129. https://doi.org/10.34190/JBRM.17.3.002

Denno, D.M., Plesons, M. & Chandra-Mouli, V. 2020. Effective strategies to improve health worker performance in delivering adolescent-friendly sexual and reproductive health services*. International Journal of Adolescent Medicine and Health*, 33(6): 269-297. https://doi.org/10.1515/ijamh-2019-0245

Department of Basic Education (South Africa). 2018. National policy on the prevention and management of learner pregnancy in schools. (Regulation Gazette No. 128). *Government Gazette*, 41456:15, 23 February.

Department of Health. 2002. *Saving Mothers: second report on the Confidential Enquiries into Maternal Deaths in South Africa 1999-2001.* https://www.gov.za/sites/default/files/gcis_document/201409/interimrep0.pdf Date of access: 13 March 2024.

Department of Health, 2015. *mHealth Strategy 2015–2019.* https://www.hst.org.za/publications/NonHST%20Publications/mHealth%20Strategy%202015.pdf Date of access: 13 March 2024.

Department of Health. 2019. *Ideal Clinic Components and definitions. South Africa: National Department of Health*. https://knowledgehub.health.gov.za/elibrary/ideal-

clinic-frameworks-and-manual-version-19-updated-april-2022 Date of access: 13 March 2024.

Department of Health and Department of Basic Education 2012. *Integrated school health policy.* Pretoria: Government Printer. https://serve.mg.co.za/content/documents/2017/06/14/integratedschoolhealthpolicydbeanddoh.pdf Date of access: 13 March 2024.

Dlamini, B.R., Mabuza, P., Thwala-Tembe, M., Masangane, Z., Dlamini, P. & Simelane, E. 2017. Are adolescents and youth programs missing the real targets? Analysis of socio-cultural factors influencing use of sexual reproductive health services by young people in Swaziland. *Journal of AIDS and Clinical Research*, 8(4): 1-8. https://doi.org/10.4172/2155-6113.1000684

D'Souza, P., Bailey, J.V., Stephenson, J. & Oliver, S. 2022. Factors influencing contraception choice and use globally: a synthesis of systematic reviews. *The European Journal of Contraception & Reproductive Health Care*, 27(5): 364-372. https://doi.org/10.1080/13625187.2022.2096215

Duby, Z., Bunce, B., Fowler, C., Jonas, K., Bergh, K., Govindasamy, D., Wagner, C. & Mathews, C. 2023. “These girls have a chance to be the future generation of HIV negative”: experiences of implementing a PrEP programme for adolescent girls and young women in South Africa. *AIDS and Behavior,* 27(1), 134-149. https://doi.org/10.1007/s10461-022-03750-1

Duby, Z., Verwoerd, W., McClinton Appollis, T., Jonas, K., Maruping, K., Dietrich, J.J., LoVette, A., Kuo, C., Vanleeuw, L. & Mathews, C. 2021. “In this place we have found sisterhood”: Perceptions of how participating in a peer-group club intervention benefited South African adolescent girls and young women. *International Journal of Adolescence and Youth, 26*(1): 127–142. https://doi.org/10.1080/02673843.2021.1898423

Ehlers, V.J., Maja, T., Sellers, E. & Gololo, M. 2000. Adolescent mothers' utilisation of reproductive health services in the Gauteng province of the Republic of South Africa. *Curationis*, 23(3): 43-53. https://doi.org/10.4102/curationis.v23i3.695

Errico, M. 2018. *The Choice of Effective Contraception for Women in Latin America: Inspecting the Role of Education, Empowerment and Religious Affiliation*. Sweden: Lund University. (Dissertation – Master's).

Erwin, P.C. & Brownson, R.C. 2017. The public health practitioner of the future. *American Journal of Public Health*, 107(8): 1227-1232. https://doi.org/10.2105/AJPH.2017.303823

Esmaeilzadeh, S., Ashrafi-Rizi, H., Shahrzadi, L. & Mostafavi, F. 2018. A survey on adolescent health information seeking behavior related to high-risk behaviors in a selected educational district in Isfahan. *PLoS One*, 13(11): e0206647. https://doi.org/10.1371/journal.pone.0206647

Feroz, A.S., Ali, N.A., Khoja, A., Asad, A. & Saleem, S. 2021. Using mobile phones to improve young people sexual and reproductive health in low and middle-income countries: a systematic review to identify barriers, facilitators, and range of mHealth solutions. *Reproductive Health*, 18(1): 1-13. https://doi.org/10.1186/s12978-020-01059-7

Frasso, R., Keddem, S. & Golinkoff, J.M., 2018. Qualitative methods: tools for understanding and engaging communities. In: Cnaan, R.A. & Milofsky, C., eds. *Handbook of community movements and local organizations in the 21st century*. Springer, Cham. pp.527-549.

Fujii, L.A. 2012. Research ethics 101: Dilemmas and responsibilities. *PS: Political Science & Politics*, 45(4), pp.717-723. https://doi.org/10.1017/S1049096512000819

Garland-Levett, S., 2017. Exploring discursive barriers to sexual health and social justice in the New Zealand sexuality education curriculum. *Sex Education*, 17(2), pp.121-134. https://doi.org/10.1080/14681811.2016.1233396

Geary, R.S., Gómez-Olivé, F.X., Kahn, K., Tollman, S. & Norris, S.A., 2014. Barriers to and facilitators of the provision of a youth-friendly health services programme in rural South Africa. *BMC health services research*, 14(1): 1-8. https://doi.org/10.1186/1472-6963-14-259

Gillespie, B., Balen, J., Allen, H., Soma-Pillay, P. & Anumba, D. 2022. Shifting social norms and adolescent girls' access to sexual and reproductive health services and information in a South African township. *Qualitative Health Research*, 32(6): 1014-1026. https://doi.org/10.1177/10497323221089880

Giordano, J., O'Reilly, M., Taylor, H. & Dogra, N., 2007. Confidentiality and autonomy: the challenge(s) of offering research participants a choice of disclosing their identity. *Qualitative health research*, 17(2): 264-275. https://doi.org/10.1177/1049732306297884

Glover, J., Friedman, H. & Van Driel, M. 2016. Cultural dilemmas and sociocultural encounters: An approach for understanding, assessing, and analyzing culture. In: Wildman, J., Griffith, R. & Armon, B., eds. *Critical issues in cross-cultural management.* Switzerland: Springer, Cham. pp. 53-60.

Govender, D., Naidoo, S. & Taylor, M. 2020. "I have to provide for another life emotionally, physically and financially": understanding pregnancy, motherhood and the future aspirations of adolescent mothers in KwaZulu-Natal South Africa, *BMC Pregnancy and Childbirth*, 20(620): 1-21. https://doi.org/10.1186/s12884-020-03319-7

Granić, A. & Marangunić, N., 2019. Technology acceptance model in an educational context: A systematic literature review. *British Journal of Educational Technology*, 50(5): 2572-2593. https://doi.org/10.1111/bjet.12864

Gunawardena, N., Fantaye, A.W.; & Yaya, S. 2019. Predictors of pregnancy among young people in sub-Saharan Africa: a systematic review and narrative synthesis. *BMJ Global Health*, 4(3): 1-8. https://doi.org/10.1136/bmjgh-2019-001499

Gwiji, P.N. 2022. *Barriers in accessing sexual and reproductive health services for young women in a rural clinic in Alfred Nzo district, Eastern Cape, South Africa*. Western Cape: University of Western Cape. (Mini-Thesis – master's).

Hammack, P.L., Toolis, E.E., Wilson, B.D.M, Clark, R.C. & Frost, D.M., 2019. Making meaning of the impact of pre-exposure prophylaxis (PrEP) on public health and sexual culture: Narratives of three generations of gay and bisexual men. *Archives of sexual behaviour*, 48(4): 1041-1058. https://doi.org/10.1007/s10508-019-1417-6

Harrison, R.L., Reilly, T.M. & Creswell, J.W. 2020. Methodological rigour in mixed methods: An application in management studies. *Journal of Mixed Methods Research*, 14(4): 473-495. https://doi.org/10.1177/1558689819900585

Havill, N.L., Leeman, J., Shaw-Kokot, J., Knafl, K., Crandell, J.& Sandelowski, M. 2014. Managing large-volume literature searches in research synthesis studies. *Nursing Outlook*, 62(2): 112-118. https://doi.org/10.1016/j.outlook.2013.11.002

Hayes, N., O'Toole, L. & Halpenny, A.M., 2022. *Introducing Bronfenbrenner: A guide for practitioners and students in early years education*. 2nd ed. London: Taylor & Francis. https://doi.org/10.4324/9781003247760

Hirose, M. & Creswell, J.W. 2023. Applying core quality criteria of mixed methods research to an empirical study. *Journal of Mixed Methods Research*, 17(1): 12-28. https://doi.org/10.1177/15586898221086346

Hodes, R., Price, I., Bungane, N., Toska, E. & Cluver, L., 2017. How front-line healthcare workers respond to stock-outs of essential medicines in the Eastern Cape Province of South Africa. *South African Medical Journal*, 107(9): 738-740. https://doi.org/10.7196/SAMJ.2017.v107i9.12476

Holtman, N. 2022. *Exploring the sexual and reproductive health information needs and barriers of teenage girls at a high school in the Western Cape*. Western Cape: University of the Western Cape. (Dissertation – Master's).

Huerta, S. 2019. *Revenge Porn: The influence of gender biases and Just World Beliefs on victim blaming among adults*. Dublin: National College of Ireland. (Thesis - Undergraduate).

International Council of Nurses, 2021. *COVID-19 pandemic one year on: ICN warns of exodus of experienced nurses compounding current shortages.* https://www.icn.ch/news/covid-19-pandemic-one-year-icn-warns-exodus-experienced-nurses-compounding-current-shortages Date of access: 13 March 2024

Iruka, I.U., DeKraai, M., Walther, J., Sheridan, S.M. & Abdel-Monem, T. 2020. Examining how rural ecological contexts influence children's early learning opportunities. *Early Childhood Research Quarterly*, 52(3): 15-29. https://doi.org/10.1016/j.ecresq.2019.09.005

Jonas, K., Crutzen, R., Van den Borne, B., Sewpaul, R. & Reddy, P., 2016. Teenage pregnancy rates and associations with other health risk behaviours: a three-wave cross-sectional study among South African school-going adolescents. *Reproductive health*, 13(1): 1-14. https://doi.org/10.1186/s12978-016-0170-8

Jonas, K., Duby, Z., Maruping, K., Dietrich, J., Slingers, N., Harries, J., Kuo, C. & Mathews, C. 2020. Perceptions of contraception services among recipients of a combination HIV-prevention interventions for adolescent girls and young women in South Africa: a qualitative study. *Reproductive health*, 17(1): 1-14. https://doi.org/10.1186/s12978-020-00970-3

Jonas, K., Duby, Z., Maruping, K., Harries, J. & Mathews, C. 2022. Rumours, myths, and misperceptions as barriers to contraceptive use among adolescent girls and young women in South Africa. *Frontiers in Reproductive Health*, 4: 960089. https://doi.org/10.3389/frph.2022.960089

Kantorová, V., Wheldon, M.C., Ueffing, P. & Dasgupta, A.N.Z. 2020. Estimating progress towards meeting women's contraceptive needs in 185 countries: A Bayesian hierarchical modelling study. *PLoS Medicine*, 17(2): e1003026. https://doi.org/10.1371/journal.pmed.1003026

Kaushik, V. & Walsh, C.A., 2019. Pragmatism as a research paradigm and its implications for social work research. *Social sciences*, 8(9): 255. https://doi.org/10.3390/socsci8090255

Keogh, S.C., Stillman, M., Leong, E., Awusabo-Asare, K., Sidze, E., Monzón, A.S. & Motta, A. 2020. Measuring the quality of sexuality education implementation at the school level in low-and middle-income countries. *Sex Education*, 20(2): 119-137. https://doi.org/10.1080/14681811.2019.1625762

Khanal, G.N., Khatri, S., Pryor, S. & Yahner, M. 2021. Research of scalable solutions (R4S). Adolescent and Youth Family Planning and Reproductive Health: landscape analysis in Nepal. Durham (NC): FHI 360. https://research4scalablesolutions.com/wp-content/uploads/2022/02/R4S-Adolescent-and-Youth-FPRH-Landscape-Analysis-in-Nepal_Final_12.2.2021.pdf Date of access: 13 March 2024.

Khurana, A. & Bleakley, A., 2015. Young adults' sources of contraceptive information: variations based on demographic characteristics and sexual risk behaviors. *Contraception*, 91(2): 157-163. https://doi.org/10.1016/j.contraception.2014.09.012

King, M.F., Renó, V.F. & Novo, E.M., 2014. The concept, dimensions and methods of assessment of human well-being within a socioecological context: a literature review. *Social Indicators Research*, 116(3): 681-698. https://doi.org/10.1007/s11205-013-0320-0

Kivunja, C. & Kuyini, A.B., 2017. Understanding and applying research paradigms in educational contexts. *International Journal of Higher Education*, 6(5): 26-41. https://doi.org/10.5430/ijhe.v6n5p26

Korstjens, I. & Moser, A., 2018. Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1): 120-124. https://doi.org/10.1080/13814788.2017.1375092

Kumar, R. 2018. *Research methodology: A step-by-step guide for beginners*. 3rd ed. Thousand Oaks, California: Sage Publications.

Kusheta, S., Bancha, B., Habtu, Y., Helamo, D. & Yohannes, S. 2019. Adolescent-parent communication on sexual and reproductive health issues and its factors among secondary and preparatory school students in Hadiya Zone, Southern Ethiopia: Institution based cross-sectional study. *BMC Pediatrics*, 19(1): 1-9. https://doi.org/10.1186/s12887-018-1388-0

Lara, L.A.S. & Abdo, C.H.N. 2016. Age at time of initial sexual intercourse and health of adolescent girls. *Journal of Pediatric and Adolescent Gynecology*, 29(5): 417-423. https://doi.org/10.1016/j.jpag.2015.11.012

Lee, A.M., Chavez, S., Bian, J., Thompson, L.A., Gurka, M.J., Williamson, V.G. & Modave, F. 2019. Efficacy and effectiveness of mobile health technologies for facilitating physical activity in adolescents: Scoping review. *JMIR mHealth and uHealth*, 7(2): 11847. https://doi.org/10.2196/11847

Lentz, J., Kennett, M., Perlmutter, J. & Forrest, A. 2016. Paving the way to a more effective informed consent process: Recommendations from the Clinical Trials Transformation Initiative. *Contemporary Clinical Trials*, 49: 65-69. https://doi.org/10.1016/j.cct.2016.06.005

Luttrell, R. 2018. *Social media: How to engage, share, and connect*. 3rd ed. Lanham, Maryland: Rowman & Littlefield.

Luvuno, Z.P.B., Ncama, B. & Mchunu, G. 2019. Transgender population's experiences with regard to accessing reproductive health care in Kwazulu-Natal, South Africa: A

qualitative study. *African Journal of Primary Health Care & Family Medicine*, 11(1): 1-9. https://doi.org/10.4102/phcfm.v11i1.1933

Macutkiewicz, J. & MacBeth, A., 2017. Intended adolescent pregnancy: A systematic review of qualitative studies. *Adolescent Research Review*, 2: 113-129. https://doi.org/10.1007/s40894-016-0031-2

Magno, L., Marinho, L.F.B., Zucchi, E.M., Amaral, A.M.S., Lobo, T.C.B., Paes, H.C.D.S., Lima, G.M.D.B., Nunes, C.C.S., Pereira, M. & Dourado, I. 2023. School-based sexual and reproductive health education for young people from low-income neighbourhoods in Northeastern Brazil: The role of communities, teachers, health providers, religious conservatism, and racial discrimination. *Sex Education*, 23(4): 409-424. https://doi.org/10.1080/14681811.2022.2047017

Makola, L., Mlangeni, L., Mabaso, M., Chibi, B., Sokhela, Z., Silimfe, Z., Seutlwadi, L., Naidoo, D., Khumalo, S., Mncadi, A. & Zuma, K. 2019. Predictors of contraceptive use among adolescent girls and young women (AGYW) aged 15 to 24 years in South Africa: results from the 2012 national population-based household survey. *BMC Women's Health*, 19(1): 158. https://doi.org/10.1186/s12905-019-0861-8

Malakoane, B., Heunis, J.C., Chikobvu, P., Kigozi, N.G. & Kruger, W.H. 2020. Public health system challenges in the Free State, South Africa: a situation appraisal to inform health system strengthening. *BMC Health Services Research*, 20: 1-14. https://doi.org/10.1186/s12913-019-4862-y

Manyathi, G.D. 2014. *Secondary school teachers' experiences with learner teenage pregnancies and unexpected deliveries at school*. Potchefstroom: North-West University. (Dissertation – Master's).

Mathibela, F. & Skhosana, R.M. 2021. I just knew that something was not right! Coping strategies of parents living with adolescents misusing substances. *Journal of Substance Abuse Treatment*, 120: 108178. https://doi.org/10.1016/j.jsat.2020.108178

Mathabela, B., Madiba, S. & Modjadji, P. 2024. Exploring barriers to accessing sexual and reproductive health services among adolescents and young people with physical disabilities in South Africa. *International Journal of Environmental Research and Public Health*, 21(2): 199. https://doi.org/10.3390/ijerph21020199

Matswetu, V.S. & Bhana, D. 2023. Zimbabwean teenagers are learning sexuality and negotiating abstinence. *Sex Education*, 24(1) 1-14. https://doi.org/10.1080/14681811.2023.2182280

Maxwell, G.M., Radzilani-Makatu, M. & Takalani, J.F. 2016. Awareness of prevention of teenage pregnancy amongst secondary school learners in Makhado municipality. *African Journal of Primary Health Care & Family Medicine* 8(2): 1–5. https://doi.org/10.4102/phcfm.v8i2.967

McCambridge, J., Witton, J. & Elbourne, D.R. 2014. Systematic review of the Hawthorne effect: new concepts are needed to study research participation effects. *Journal of Clinical Epidemiology*, 67(3): 267-277. https://doi.org/10.1016/j.jclinepi.2013.08.015

McGorry, P.D., Mei, C., Chanen, A., Hodges, C., Alvarez-Jimenez, M. & Killackey, E. 2022. Designing and scaling up integrated youth mental health care. *World Psychiatry*, 21(1): 61-76. https://doi.org/10.1002/wps.20938

Melnikovas, A. 2018. Towards an explicit research methodology: adapting research onion model for futures studies. Journal of Futures Studies, 23(2): 29–44. https://doi.org/10.6531/JFS.201812_23(2).0003

Middleberg, M.I. 2006. *Promoting reproductive security in developing countries*. 2nd ed. Germany: Springer Science & Business Media.

Mkhwanazi N. 2010. Understanding teenage pregnancy in a post-apartheid South African township. *Culture, Health & Sexuality*, 12(4):347–358. https://doi.org/10.1080/13691050903491779

Moche, B. 2022. Assessing the knowledge of, attitudes to and stigma towards PrEP among South African women. Western Cape: University of the Western Cape. (Mini-Dissertation – Master's).

Morgan, H. 2022. Conducting a qualitative document analysis. *The Qualitative Report*, 27(1): 64-77. https://doi.org/10.46743/2160-3715/2022.5044

Morgan, M.A.J., Coates, M.J., Dunbar, J.A., Reddy, P., Schlicht, K. & Fuller, J. 2013. The TrueBlue model of collaborative care using practice nurses as case managers for depression alongside diabetes or heart disease: a randomised trial. *BMJ Open*, 3(1): e002171. https://doi.org/10.1136/bmjopen-2012-002171

Moroole, M.A. 2021. *An exploration of indigenous contraception among the Batswana of Ngaka Modiri Molema District Municipality, North-West Province, South Africa.* Potchefstroom: North-West University. (Thesis – PhD).

Mullinax, M., Mathur, S. & Santelli, J., 2017. Adolescent sexual health and sexuality education. In: Cherry, A.,Baltag, V. & Dillon, M., eds. *International handbook on adolescent health and development: The public health response*. Switzerland: Springer, Cham. pp.143-167. https://doi.org/10.1007/978-3-319-40743-2_8

Muka, T., Glisic, M., Milic, J., Verhoog, S., Bohlius, J., Bramer, W., Chowdhury, R. & Franco, O.H., 2020. A 24-step guide on how to design, conduct, and successfully publish a systematic review and meta-analysis in medical research. *European Journal of Epidemiology*, 35(1): 49-60. https://doi.org/10.1007/s10654-019-00576-5

Mulaudzi, V. 2022. *Utilisation of sexual and reproductive health services in rural South Africa: Knowledge, perceptions and experiences of youths in Mutale Village in Limpopo Province.* Kimberley: Sol Plaatje University. (Dissertation – Master's).

Müller, A. & Moult, K. 2014. *Sexual and Reproductive Health Care for Teens: Guidelines for Health Care Workers. GHJRU, UCT. https://www.researchgate.net/profile/Alex-Mueller-*

11/publication/275965969_Sexual_and_Reproductive_Health_Services_for_Teens_-_Guidelines_for_Health_Care_Workers/links/554c6eb80cf29752ee7ee39d/Sexual-and-Reproductive-Health-Services-for-Teens-Guidelines-for-Health-Care-Workers.pdf Date of access: 13 March 2024.

Mumah, J.N., Mulupi, S., Wado, Y.D., Ushie, B.A., Nai, D., Kabiru, C.W. & Izugbara, C.O., 2020. Adolescents' narratives of coping with unintended pregnancy in Nairobi's informal settlements. *Plos One*, 15(10): e0240797. https://doi.org/10.1371/journal.pone.0240797

Munhall, P.L. 1988. Ethical considerations in qualitative research. *Western Journal of Nursing Research*, 10(2): 150-162. https://doi.org/10.1177/019394598801000204

Murigi, M.W., Mogale, R.S. & Moagi, M.M. 2020. Youth's perspectives on a sustainable model for the provision of youth friendly sexual and reproductive health services in Kenya: a quantitative approach. *Journal of Biosciences and Medicines*, 8: 100-115. https://doi.org/10.4236/jbm.2020.88010

Muthelo, L., Mbombi, M.O., Bopape, M.A., Mothiba, T.M., Densmore, M., van Heerden, A., Norris, S.A., Dias, N.V., Griffiths, P. & Mackintosh, N. 2023. Reflections on digital maternal and child health support for mothers and community health workers in rural areas of Limpopo Province, South Africa. *International Journal of Environmental Research and Public Health*, 20(3): 1842. https://doi.org/10.3390/ijerph20031842

Naidoo, K., Adeagbo, O. & Pleaner, M., 2019. Sexual and reproductive health needs of adolescent girls and young women in Sub-Saharan Africa: research, policy, and practice. *SAGE Open*, 9(3): 21. https://doi.org/10.1177/2158244019859951

Narker, T. 2022. *Adolescent girls' experiences of sexual and reproductive health services in public clinics in the Western Cape*. Stellenbosch: Stellenbosch University. (Dissertation – Master's).

Ngubane, N. & Maharaj, P. 2018. Childbearing in the context of the child support grant in a Rural Area in South Africa. *Sage Open*, 8(4). https://doi.org/10.1177/2158244018817596

Njogu, R.W. 2019. *The Prevalence and factors associated with teenage pregnancy in Kenya; A cross-sectional survey*. Nairobi: University of Nairobi (Dissertation – Master's).

Ntini, A.M., Rabie, T., Froneman, K. & Swart, A.T. 2023. Teenagers' perceptions of contraception use and support requirements to prevent teenage pregnancies: a South African study. *The Open Public Health Journal*, 16(1). https://doi.org/10.2174/18749445-v16-e231005-2022-194

Oeldorf-Hirsch, A. & Sundar, S.S. 2015. Posting, commenting, and tagging: Effects of sharing news stories on Facebook. *Computers in Human Behavior*, 44: 240-249. https://doi.org/10.1016/j.chb.2014.11.024

Ogolla, M.A. & Ondia, M. 2019. Assessment of the implementation of comprehensive sexuality education in Kenya. *African Journal of Reproductive Health*, 23(2): 110-120. https://doi.org/10.29063/ajrh2019/v23i2.11

Ojiambo, C.A. 2021. *"I don't agree with the church, I agree with the Bible": Roman Catholic teenage girls' perceptions on premarital sex and contraceptive use in the contemporary rural Busia, Kenya*. Groningen, Netherlands: Protestant Theological University. (Dissertation – Master's).

Onvlee, O., Kok, M., Buchan, J., Dieleman, M., Hamza, M. & Herbst, C. 2023. Human resources for health in conflict-affected settings: a scoping review of primary peer-reviewed publications 2016–2022. *International Journal of Health Policy and Management*, 12(1): 1-16. https://doi.org/10.34172/ijhpm.2023.7306

Onyensoh, O., Govender, I. & Tumbo, J., 2013. Knowledge of, attitudes towards, and practices of contraception in high school pupils in Tswaing subdistrict, North-West

province. *Southern African Journal of Epidemiology and Infection*, 28(4): 227-232. https://doi.org/10.1080/10158782.2013.11441555

Onyi, H.Y. 2013. Teaching reading comprehension in large multilingual classrooms at the basic education level in Nigeria: the present scenario. *Sokoto Educational Review*, 14(1), 10. https://www.researchgate.net/publication/334450367

Osuafor, G.N., Maputle, S.M. & Ayiga, N., 2018. Factors related to married or cohabiting women's decision to use modern contraceptive methods in Mahikeng, South Africa. *African Journal of Primary Health Care and Family Medicine*, 10(1): 1-7. https://doi.org/10.4102/phcfm.v10i1.1431

Oyston, C., Rueda-Clausen, C.F. & Baker, P.N. 2017. Current challenges in pregnancy-related mortality. *Obstetrics, Gynaecology & Reproductive Medicine*, 27(7): 199-205. https://doi.org/10.1016/j.ogrm.2017.04.005

Pieterse, C.E. 2019. *Life orientation lecturers' experiences of sexuality education: implications for curriculum development.* Potchefstroom: North-West University. (Dissertation – Master's).

Pillay, Y. 2021. Towards an AIDS-free generation by 2030: how are South African children, adolescents, caregivers and health care workers coping with HIV? *South African Journal of Psychology*, 51(3): 349-355. https://doi.org/10.1177/0081246321992175

Pretorius, C., Chambers, D. & Coyle, D. 2019. Young people's online help-seeking and mental health difficulties: systematic narrative review. *Journal of Medical Internet Research*, 21(11): e13873. https://doi.org/10.2196/13873

Qolesa, S.K. 2017. *Factors influencing teenage pregnancy in Heidedal Location, Mangaung District.* Western Cape: University of the Western Cape. (Mini-Dissertation – Master's).

Ramalepa, T.N., Ramukumba, T.S. & Masala-Chokwe, M.E. 2020. Views of learners on prevention and management of pregnancies in schools of Madibeng municipality, North-West province of South Africa. *African Journal of Reproductive Health*, 24(4): 27-40. https://doi.org/10.29063/ajrh2020/v24i4.4

Raman, S., Nicholls, R., Pitakaka, F.Z.F., Gapirongo, K. & Hou, L. 2015. Identifying and overcoming barriers to adolescent sexual and reproductive health: perspectives and practices of health, education and welfare workers. *Pacific Journal of Reproductive Health.* 1: 4-13. *https://www.researchgate.net/publication/310460396*

Reddy, P., Resnicow, K., Omardien, R. & Kambaran, N. 2007. Prevalence and correlates of substance use among high school students in South Africa and the United States. *American Journal of Public Health*, 97(10): 1859-1864. https://doi.org/10.2105/AJPH.2006.086330

Rid, A. & Wendler, D. 2011. A framework for risk-benefit evaluations in biomedical research. *Kennedy Institute of Ethics Journal*, 21(2) 141-179. https://doi.org/10.1353/ken.2011.0007

Sah, S. & Feiler, D. 2020. Conflict of interest disclosure with high-quality advice: the disclosure penalty and the altruistic signal. *Psychology, Public Policy, and Law*, 26(1): 88-104. https://doi.org/10.1037/law0000215

Sallis, J.F., Owen, N. & Fisher, E. 2008. Ecological models of behavioral health. In: Glanz, K., Rimer, B.K. & Viswanath, K., eds. *Health behavior and health education: Theory, research and practice.* San Francisco, CA: Jossey-Bass. pp. 465-486.

Sallis, J.F., Owen, N. & Fisher, E. 2015. Ecological models of health behavior. In: Glanz, K., Rimer, B.K.& Viswanath, K., eds. *Health behavior: Theory, research, and practice*. San Francisco, CA: Jossey-Bass/Wiley. pp.43-64

Sandelowski, M., 2000. Whatever happened to qualitative description? *Research in Nursing & Health*, 23(4): 334-340. https://doi.org/10.1002/1098-240X(200008)23:4<334::AID-NUR9>3.0.CO;2-G

Sandelowski, M. 2004. Using qualitative research. *Qualitative Health Research*, 14(10): 1366-1386. https://doi.org/10.1177/1049732304269672

Sandelowski, M. 2008. Justifying qualitative research. *Research in Nursing & Health*, 31(3): 193-195. https://doi.org/10.1002/nur.20272

Sandelowski, M. & Barroso, J. 2003. Toward a meta-synthesis of qualitative findings on motherhood in HIV-positive women. *Research in Nursing & Health*, 26(2): 153-170. https://doi.org/10.1002/nur.10072

Saunders, B., Kitzinger, J. & Kitzinger, C. 2015. Anonymising interview data: challenges and compromise in practice. *Qualitative Research*, 15(5): 616-632. https://doi.org/10.1177/1468794114550439

Save the Children Web. 2021. *Teen pregnancies in South Africa jump to 60% during the COVID-19 pandemic.* https://reliefweb.int/report/south-africa/teen-pregnancies-South-Africa-jump-60-during-covid-19-pandemic. Date of access: 13 March 2024.

Schaaf, M. & Khosla, R. 2021. Necessary but not sufficient: a scoping review of legal accountability for sexual and reproductive health in low-income and middle-income countries. *BMJ Global Health*, 6(7): e006033. https://doi.org/10.1136/bmjgh-2021-006033

Sedgh, G., Finer, L.B., Bankole, A., Eilers, M.A. & Singh, S. 2015. Adolescent pregnancy, birth, and abortion rates across countries: levels and recent trends. *Journal of Adolescent Health*, 56(2): 223-230. https://doi.org/10.1016/j.jadohealth.2014.09.007

Sedlander, E., Yilma, H., Emaway, D. & Rimal, R.N. 2022. If fear of infertility restricts contraception use, what do we know about this fear? An examination in rural Ethiopia. *Reproductive Health*, 19(1): 1-10. https://doi.org/10.1186/s12978-021-01267-9

Shangase, N., Kharsany, A.B.M, Ntombela, N.P., Pettifor, A. & McKinnon, L.R. 2021. A systematic review of randomised controlled trials of school-based interventions on sexual risk behaviours and sexually transmitted infections among young adolescents in Sub-Saharan Africa. *AIDS and Behavior*, 22(11): 3669-3686. https://doi.org/10.1007/s10461-021-03242-8.

Shefer, T., Bhana, D. & Morrell, R., 2013. Teenage pregnancy and parenting at school in contemporary South African contexts: Deconstructing school narratives and understanding policy implementation. *Perspectives In Education*, 31(1): 1-10. https://doi.org/10.38140/pie.v31i1.1789

Shisana, O., Rehle, T., Simbayi, L.C., Zuma, K., Jooste, S., Zungu, N., Labadarios, D. & Onoya, D., 2014. *South African national HIV prevalence, incidence and behaviour survey*, *2012*. Cape Town: HSRC Press. pp 57–60.

Silva, C.F., Silva, I., Rodrigues, A., Sá, L., Beirão, D., Rocha, P. & Santos, P. 2022. Young people awareness of sexually transmitted diseases and contraception: a Portuguese population-based cross-sectional study. *International Journal of Environmental Research and Public Health*, 19(21): 13933. https://doi.org/10.3390/ijerph192113933

Simmons, R.G. & Jennings, V. 2020. Fertility awareness-based methods of family planning. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 66: 68-82. https://doi.org/10.1016/j.bpobgyn.2019.12.003

Sithole, S.L. & Mathonsi, N.S. 2015. Local governance service delivery issues during Apartheid and post-Apartheid South Africa. *Africa's Public Service Delivery & Performance Review*, 3(3): 5-30. https://doi.org/10.4102/apsdpr.v3i3.87

Skinner, D., Delobelle, P., Pappin, M., Pieterse, D., Esterhuizen, T.M., Barron, P. & Dudley, L. 2018. User assessments and the use of information from MomConnect, a mobile phone text-based information service, by pregnant women and new mothers in South Africa. *BMJ Global Health*, 3(2): 000561. https://doi.org/10.1136/bmjgh-2017-000561

Slabbert, A.M. 2018. *Identity, self-regulation, and gender inequality: Sexual and reproductive health and rights of Adolescent girls and Female sex workers In South Africa.* The Netherlands: Utrecht University. (Thesis – PhD).

Soriano, V. & Del Romero, J. 2018. Rebound in sexually transmitted infections following the success of antiretrovirals for HIV/AIDS. *AIDS Reviews*, 20(4): 187-204. http://doi.org/10.24875/AIDSRev.18000034

South African National AIDS Council. 2017. *South Africa's national strategic plan for HIV, TB and STIs 2017–2022.* https://www.gov.za/sites/default/files/gcis_document/201705/nsp-hiv-tb-stia.pdf Date of access: 13 March 2024.

Southwell, D., Gannaway, D., Orrell, J., Chalmers, D. & Abraham, C. 2010. Strategies for effective dissemination of the outcomes of teaching and learning projects. *Journal of Higher Education Policy and Management*, 32(1): 55-67. https://doi.org/10.1080/13600800903440550

Sovacool, B.K., Axsen, J. & Sorrell, S., 2018. Promoting novelty, rigor, and style in energy social science: Towards codes of practice for appropriate methods and research design. *Energy Research & Social Science*, 45: 12-42. https://doi.org/10.1016/j.erss.2018.07.007

Stats SA. 2022. Statistical release – mid-year population estimates, July 2022. Pretoria: Statistics South Africa https://www.statssa.gov.za/publications/P0302/P03022022.pdf Date of access: 13 March 2024.

Staunton, C., Tschigg, K. & Sherman, G. 2021. Data protection, data management, and data sharing: Stakeholder perspectives on the protection of personal health information in South Africa. *PLoS One*, 16(12): e0260341. https://doi.org/10.1371/journal.pone.0260341

Strode, A. & Essack, Z. 2017. Facilitating access to adolescent sexual and reproductive health services through legislative reform: Lessons from the South African experience. *South African Medical Journal*, 107(9): 741-744. https://doi.org/10.7196/SAMJ.2017.v107i9.12525

Tacon, R. & Vainker, S. 2017. Fantasy sport: A systematic review and new research directions. *European Sport Management Quarterly*, 17(5): 558-589. http://dx.doi.org/10.1080/16184742.2017.1347192

Tamang, L., Raynes-Greenow, C., McGeechan, K. & Black, K. 2017. Factors associated with contraceptive use among sexually active Nepalese youths in the Kathmandu Valley. *Contraception and Reproductive Medicine*, 2: 13. https://doi.org/10.1186/s40834-017-0040-y

Tiruneh, G.T., Demissie, M., Worku, A. & Berhane, Y. 2021. Community's experience and perceptions of maternal health services across the continuum of care in Ethiopia: A qualitative study. *Plos One*, 16(8): e0255404. https://doi.org/10.1371/journal.pone.0255404

Tisdall, E.K.M., Davis, J.M. & Gallagher, M. 2008. *Researching with children and young people: Research design, methods and analysis*. London: Sage

Tsawe, M. 2014. *Utilization of health care services and maternal education in South Africa*. Western Cape: University of the Western Cape. (Dissertation – Master's)

Tsebe, N. L. 2012. *Factors contributing to teenage pregnancy as reported by learners at Mpolokang High School in the North-West Province*. Polokwane:University of Limpopo, Medunsa Campus. (Dissertation – Master's)

Tshililo, A.R. Mangena-Netshikweta, L., Nemathaga, L.H. & M. 2019. Challenges of primary healthcare nurses regarding the integration of HIV and AIDS services into primary healthcare in Vhembe district of Limpopo province, South Africa. *Curationis,* 42(1): 1-6. https://doi.org/10.4102/curationis.v42i1.1849

Tzafestas, S.G. 2018. *Energy, information, feedback, adaptation, and self-organization: the fundamental elements of life and society*. 1st ed. Switzerland: Springer, Cham.

UNAIDS Country Report: South Africa. 2015. *Joint United Nations Programme on HIV/AIDS*. http://www.unaids.org/en/regionscountries/countries/southafrica/ Date of access: 13 March 2024.

UNAIDS. 2020. *Global Factsheet 2019*. https://www.unaids.org/en/resources/fact-sheet Date of access: 13 March 2024.

UNFPA (United Nations Population Fund). 2021. *Sexual and reproductive health.* https://www.unfpa.org/sexual-reproductive-health Date of access: 13 March 2024.

UNICEF. 2019. *An unfair start: Inequality in children's education in rich countries.* https://www.unicef-irc.org/publications/995-an-unfair-start-education-inequality-children.html Date of access: 13 March 2024.

UNICEF. 2021. *Schoolgirl births 'unacceptably high' in South Africa.* https://www.dailymaverick.co.za/article/2021-09-07-schoolgirl-births-unacceptably-high-in-south-africa/ Date of access: 13 March 2024.

UNICEF. 2023. *Data companion and scorecard to the UNICEF Gender Action Plan: selected indicators from the UNICEF Strategic Plan, 2022–2025.* https://www.unicef.org/executiveboard/media/16181/file/2023-GAP-Data-companion-EN-2023-05-23.pdf Date of access: 13 March 2024

Vanwesenbeeck, I., Westeneng, J., De Boer, T., Reinders, J. & Van Zorge, R. 2016. Lessons learned from a decade implementing comprehensive sexuality education in resource poor settings: the world starts with me. *Sex Education*, 16(5): 471-486. https://doi.org/10.1080/14681811.2015.1111203

Villines, Z. 2020. *Debunking common birth control myths*. *Medical News Today*. https://www.medicalnewstoday.com/articles/birth-control-myths#hormones Date of access: 13 March 2024.

Vongxay, V., Albers, F., Thongmixay, S., Thongsombath, M., Broerse, J.E.W., Sychareun, V. & Essink, D.R. 2019. Sexual and reproductive health literacy of school adolescents in Lao PDR. *PloS One*, 14(1): e0209675. https://doi.org/10.1371/journal.pone.0209675

Vukapi, Y. 2020. *Exploring the role of adolescent youth-friendly services (AYFS) in primary health care clinics that offer HIV and sexual reproductive health (SRH) services for adolescent girls and young women in Vulindlela, KwaZulu-Natal, South Africa.* Kwazulu – Natal: University of Kwazulu – Natal. (Thesis - PhD).

Walliman, N. 2021. *Research methods: the basics*. 3rd ed. New York: Routledge.

WHO (World Health Organization). 2016. *Linkages between sexual and reproductive health and HIV/Aids*. https://www.who.int/teams/sexual-and-reproductive-health-and-research-(srh)/areas-of-work/hiv-linkages-with-sexual-and-reproductive-health Date of access: 13 March 2024.

WHO (World Health Organization). 2016. *WHO recommendations on antenatal care for a positive pregnancy experience*. https://www.hsph.harvard.edu/wp-content/uploads/sites/2413/2018/02/ANC-OverviewBriefer-letter.pdf Date of access: 13 March 2024.

WHO (World Health Organization). 2018. *WHO recommendations on adolescent sexual and reproductive health and rights.* https://www.who.int/publications/i/item/9789241514606 Date of access: 13 March 2024.

WHO (World Health Organization). 2019. Adolescent-*friendly health services for adolescents living with HIV: from theory to practice*. https://www.who.int/publications/i/item/adolescent-friendly-health-services-for-adolescents-living-with-hiv Date of access: 13 March 2024.

WHO (World Health Organization). 2022. *Global health sector strategies on, respectively, HIV, viral hepatitis, and sexually transmitted infections for the period 2022-2030.* https://cdn.who.int/media/docs/default-source/hq-hiv-hepatitis-and-stis-library/who_draft_ghss_hiv_hep_stis_2022-2030_for-comments.pdf?sfvrsn=d49c7b49_7 Date of access: 13 March 2024.

WHO (World Health Organization). 2023 *Sexually transmitted infections Fact Sheets.* https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis) Date of access: 13 March 2024.

Woldesenbet, S., Kufa, T., Lombard, C., Manda, S., Morof, D., Cheyip, M., Ayalew, K. & Puren, A. 2021. The prevalence of unintended pregnancy and its association with HIV status among pregnant women in South Africa, a national antenatal survey, 2019. *Scientific Reports*, 11(1): 23740. https://doi.org/10.1038/s41598-021-03096-z

Woollett, N., Bandeira, M., Marunda, S., Mudekunye, L. & Ebersohn, L. 2021. Adolescent pregnancy and young motherhood in rural Zimbabwe: findings from a baseline study. *Health & Social Care in the Community*, 29(6): e377-e386. https://doi.org/10.1111/hsc.13362

Zanoni, B.C., Archary, M., Buchan, S., Katz, I.T. & Haberer, J.E. 2016. Systematic review and meta-analysis of the adolescent HIV continuum of care in South Africa: the cresting wave. *BMJ global health*, 1(3): e000004. https://doi.org/10.1136/bmjgh-2015-000004

Zuma, K., Simbayi, L., Zungu, N., Moyo, S., Marinda, E., Jooste, S., North, A., Nadol, P., Aynalem, G., Igumbor, E. & Dietrich, C., 2022. The HIV epidemic in South Africa: key findings from 2017 national population-based survey. *International Journal of Environmental Research and Public Health*, 19(13): 8125. https://doi.org/10.3390/ijerph19138125

APPENDIX A: INTERVIEW SCHEDULE

1. What healthcare promotion services do you provide to teenagers before, during and after pregnancy? (Main Question)
   - What are the available NWDoH forums, awareness, websites and social media health promotion platforms targeted at teenage girls (Probing question)
   - What are the barriers to teenage girls using family planning services? (Probing question)
   - How do you support teenage mothers in improving their situation? (Probing question)
   - What challenges do you experience as a health worker when rendering Sexual and Reproductive Health (SRH) services? (Probing question)
   - How can health promotion strategies targeted at teenage girls be identified through document analysis of the Department of Health (DoH) websites and social media? (Probing question)
2. What critical managerial points must be considered when managing SRH services for teenage girls in the North-West Department of Health (NWDoH)? (Main Question)
   - How does the NWDoH approach the management of Sexual and Reproductive Health (SRH) of teenage girls? (Probing question)
   - What are the current policies and guidelines at the NWDoH regarding SRH management of teenage girls? (Probing question)
   - How do health workers ensure their SRH services are inclusive and accessible to all teenage girls, including those from disadvantaged communities? (Probing question)
   - How does the NWDoH maintain confidentiality and privacy when providing SRH services to teenage girls? (Probing question)
   - What are some of the most effective strategies for promoting SRH among teenage girls, and how can these strategies be incorporated into the NWDoH's management approach? (Probing question)

- How does the NWDoH monitor and evaluate the effectiveness of its SRH programs for teenage girls? (Probing question)
- What recommendations do you have for improving the SRH management of teenage girls in the NWDoH? (Probing question)

3. Are there publicly available reports, dashboards, or other channels where teenagers and the general public can access information about SRH programs and outcomes? (Main Question)
   - How accessible and transparent is the NWDoH with sharing relevant data and information, mainly aimed at teenagers? (Probing question).
   - Can you elaborate on disseminating this information to the public and relevant stakeholders? (Probing question).
4. Do you think I should have asked any questions or information you need to share with me regarding teenage pregnancy? (Main Question)

APPENDIX B: WORKING RELATIONSHIP BETWEEN NWDoH AND NWU

health
Department
Health
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

1st Floor, Health Office Park
Private Bag X 2068
MMABATHO
2735

RESEARCH, MONITORING & EVALUATION

Tel: +27 (18) 391 4501
Email: MbuleloT@nwpg.gov.za
www.nwhealth.gov.za

Name of Researcher: **Mr. D. Mahlangu**
North West University

Physical Address: _____

(Work/ Institution) NWU

HEAD OF DEPARTMENT
2023 -11- 24
NORTH WEST DEPARTMENT OF HEALTH
PRIVATE BAG X 2068, MMABATHO, 2735

Subject: **Research Approval Letter – Exploring current strategies to provide health promotion services to adolescent girls in the North West Province.**

This letter serves to inform the Researcher that permission to undertake the above mentioned study has been granted by the North West Department of Health The Researcher must arrange in advance a courtesy meeting with the District Chief Director and the Chairperson of the District Health Research Committee (DHRC) (as per their details below), to introduce their research team/members on the proposed research to be undertaken The researcher can thereafter proceed to the identified institution/s and/or facility and produce this letter to the Management as proof that the research was approved by the NWDoH.

This letter of permission should be signed and a copy returned to the department. By signing, the Researcher agrees, binds him/herself and undertakes to furnish the Department with an electronic copy of the final research report Alternatively, the Researcher can also provide the Department with an electronic summary highlighting recommendations that will assist the Department in its planning to improve some of its services where possible Through this, the Researcher will not only contribute to the academic body of knowledge but also contributes towards the bettering of health care services and thus the overall health of citizens in the North West Province

Below are the contact details.

Office of the Chief Director: Bojanala District	**Chairperson of the DHRC**
Dr K Segwai	Dr C D Kabongo
Contact person: Goitsemang Khumalo	**Contact person:** Obakeng Masango
014 592 8906 KhumaloG@nwpg.gov.za	014 592 8906 NMasango@nwpg.gov.za

Office of the Chief Director: Dr Kenneth Kaunda District	**Chairperson of the DHRC**
Ms. Dineo Moromane	Dr C Cachet
Contact person: Mr Calvin Mmisele	clcachet@gmail.com
018 462 5744 CMmisele@nwpg.gov.za	

Office of the Chief Director: Dr Ruth Segomotsi Mompati	**Chairperson of the DHRC**
Mr A. Mvula	Dr S Abizu
Contact person: Ms Kesaobaka Monchwe	**Contact person:** Tlotlo
053 928 0506/7 (072 679 6440) KMonchwe@nwpg.gov.za	053 927 0458 OSefako@nwpg.gov.za

Office of the Chief Director: Ngaka Modiri Molema District	**Chairperson of the DHRC**
Ms M Mokhutswane-Kaudi	Dr. M Nong
Contact person: Ms Boitumelo Sethaiso	**Contact person:** Ms Wame Makara
018 384 0240 BSethaiso@nwpg.gov.za	018 384 0240 WNtlhaile@nwpg.gov.za

Kindest regards,

Dr. FRM Reichel
Director: RM&E
Date: 24/11/2023

Researcher D Mahlangu
Date: 27/11/2023

APPENDIX C: ETHICAL PROCESS

Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 086 016 9698
Web: http://www.nwu.ac.za/

North-West University Health Research Ethics Committee (NWU-HREC)

Tel: 018 299-1206
Email: Ethics-HRECApply@nwu.ac.za (for human studies)

4 December 2023

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the North-West University Health Research Ethics Committee (NWU-HREC) on 04/12/2023, the NWU-HREC hereby approves your study as indicated below. This implies that the NWU-HREC grants its permission that, provided the general conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: Exploring current strategies to provide health promotion services to adolescent girls in the North West Province
Principal Investigator/Study Supervisor/Researcher: Dr CM Niesing
Student: DE Mahlangu - 43618596

Ethics number: N W U - 0 0 1 4 6 - 2 3 - A 1
Institution Study Number Year Status

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

Application Type: Single study
Commencement date: 04/12/2023
Expiry date: 28/02/2024

Risk: Minimal

Approval of the study is provided for a year, after which continuation of the study is dependent on receipt and review of an annual monitoring report and the concomitant issuing of a letter of continuation. A monitoring report is due at the end of February annually until completion of the study.

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:

- *The principal investigator/study supervisor/researcher must report in the prescribed format to the NWU-HREC:*
  - *Annually on the monitoring of the study, whereby a letter of continuation will be provided annually, and upon completion of the study; and*
  - *without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.*
- *The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the principal investigator/study supervisor/researcher must apply for approval of these amendments at the NWU-HREC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.*
- *Annually a number of studies may be randomly selected for active monitoring.*
- *The date of approval indicates the first date that the study may be started.*
- *In the interest of ethical responsibility, the NWU-HREC reserves the right to:*

- *request access to any information or data at any time during the course or after completion of the study;*
- *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;*
- *withdraw or postpone approval if:*
  - *any unethical principles or practices of the study are revealed or suspected;*
  - *it becomes apparent that any relevant information was withheld from the NWU-HREC or that information has been false or misrepresented;*
  - *submission of the annual monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and/or*
  - *new institutional rules, national legislation or international conventions deem it necessary.*
- *NWU-HREC can be contacted for further information via Ethics-HRECApply@nwu.ac.za or 018 299 1206*

The NWU-HREC would like to remain at your service and wishes you well with your study. Please do not hesitate to contact the NWU-HREC for any further enquiries or requests for assistance.

Yours sincerely,

Chairperson NWU-HREC

Current details:(23239522) G:\My Drive\9. Research and Postgraduate Education\9.1.5.4 Templates\9.1.5.4.2_NWU-HREC_EAL.docm
20 August 2019
File Reference: 9.1.5.4.2

APPENDIX D: BS GM SCIENTIFIC COMMITTEE APPROVAL LETTER

NWU® | Africa Unit for Transdisciplinary Health Research

BS GM SCIENTIFIC COMMITTEE APPROVAL LETTER

Dear Chair and members of the BS GM Committee

Please find herewith the approval letter to acknowledge that the below-mentioned study underwent critical quality review by members of the BS GM Scientific Committee and have been granted approval for review by the HREC.

Study title	**Exploring current strategies to provide health promotion services to adolescent girls in the North West Province**
Student Name / Researcher	D Mahlangu
Supervisor / Promoter	Dr Christi Niesing
Co-supervisor / Co-promoter	
Date of the meeting	7 June 2023
Members present at the meeting	1. Prof Christo Bisschoff 2. Prof Hein Prinsloo 3. Prof Nelda Mouton 4. Prof Stephan van der Merwe 5. Prof Ronnie Lotriet 6. Prof Jan Meyer 7. Prof Wim Roestenburg
Reviewers assigned	Prof Hein Prinsloo Prof Christo Bisschoff
Final date of approval	13 June 2023

2023/07/17 — **Signature: Committee Chair**

2023/07/17 — **Signature: Research Director**

APPENDIX E: CONSENT FORM

NWU
BUSINESS SCHOOL

DEAR PARTICIPANT

INFORMED CONSENT LETTER TO INTERVIEW PARTICIPANTS

You are invited to take part in a research study that forms part of a Master of Business Administration (MBA) degree. Please take some time to read the information presented here, which will explain the details of this study. Please ask the researcher or person explaining the research to you any questions about any part of this study that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research is about and how you might be involved. Also, your participation is entirely voluntary, and you are free to say no to participating. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part now.

This study has been approved by the NWU Economic and Management Sciences Research Ethics Committee (EMS-REC) and will be conducted according to the ethical guidelines and principles of the North-West University and other international ethical guidelines applicable to this study.

Title of the project: Exploring current strategies to provide health promotion services to adolescent girls in the North West Province

Institution: NWU Business School
Ethics Reference Number
NWU-00146-23-A1
Names and contact details of project staff

	Supervisor	Researcher
Title, name & surname	Dr Christi Niesing	Mr Dumisane Mahlangu
Full Names		
Function in Project	Principle Investigator	Researcher
Telephone		0761859965

What is this research study all about?

Exploring current strategies to provide health promotion services to adolescent girls in the North West Province

- To identify current health promotion services available to teenage girls in the North West Province
  - Document analysis on the DoH websites and social media of health promotion strategies targeted at teenage girls
- To identify the critical managerial points in the NWDoH in terms of Sexual and Reproductive Health management of teenage girls in the NW province.

AABS ASSOCIATION AMBA ACCREDITED SABSA

- Interviews will be held with Community Health Workers to explore their insights and understanding regarding the health promotion measures accessible to adolescent girls.

Why have you been invited to participate?
You have been invited to participate in this research study because you fall into at least one of the following categories:

- Health care worker

What will be expected of you?
You will be expected to:

- Participate in a 15 – 30min semi-structured interview with the researcher at a suitable time and private area without interruptions that is convenient for both parties via an online platform. This will be scheduled by the researcher once approved by the NWU ethics committee.
- Respond to the questions in an open and honest manner.
- Inform the supervisor should you feel or experience any form of discomfort or distress during the research process and inform the supervisor if you at times feel the need to terminate your involvement in the research process.

Will you gain anything from taking part in this research?
This research study intends to give you a voice to reveal, explain and reflect on health promotion regarding teenage pregnancy and available strategies currently employed by NWDoH. No monetary reward shall be made available for participation in the study. You will however be furnished with a two-page communique on the outcomes of the study that you can utilize to should you require.

Are there risks involved in your taking part in this research and what will be done to prevent them?
Participation in this study does not create any physical risk to you as the study does not involve any physical activities or experiments. We, however, have identified certain ethical principles that shall be always maintained to prevent any damage to you. The focus of these principles will be to protect your dignity and keep all records provided private and confidential.

How will we protect your confidentiality and who will see your findings?
You will be assigned a unique participant ID. Our interview will be recorded and saved with reference to the ID, but data collected shall be regarded as confidential and will not be shared with any 3rd party that is not directly involved in the research process. Personal details of participants and their direct input to the research study shall not be made public. All records of the research shall be kept for a retention period and destroyed by an appropriate means. The findings of the study will be made public however will not contain any raw data that might incriminate certain individuals.

What will happen with the findings or samples?
The findings concluded in the study will be for academic purposes and will only be utilized to add to the current body of available knowledge.

How will you know about the results of this research?
Participants in the study, should they require, will be made aware of the results of the research, through a two-page communique, by means of electronic mail. The electronic final version of the dissertation will also be made available if requested.

Will you be paid to take part in this study and are there any costs for you?
Participation in this study will not yield monetary value to you. There is no cost envisaged to you except the time that you spend participating in this study. This study will be funded by the researcher himself.

Is there anything else that you should know or do?
You may contact the supervisor, [Dr Christi Niesing], on [Christi.Niesing@nwu.ac.za] if you have any further questions or problems. You will receive a copy of this information and consent form for your own purposes.

DECLARATION
Declaration by participant
By signing below, I (PARTICIPANT ID) agree to take part in the research study titled: [xxx].

I declare that:
I have read this information/it was explained to me by a trusted person in a language with which I am fluent and comfortable in. The research was clearly explained to me. I have had a chance to ask questions to both the person getting the consent from me, as well as the researcher and all my questions have been answered. I understand that taking part in this study is voluntary and I have not been pressured to take part. I may choose to leave the study at any time and will not be handled in a negative way if I do so. I may be asked to leave the study before it has finished if the researcher feels it is in the best interest, or if I do not follow the study plan, as agreed to.

Signed at: _____ On: _____

Signature of participant Signature of witness

_____ _____

Declaration by researcher
I [xxx] declare that:

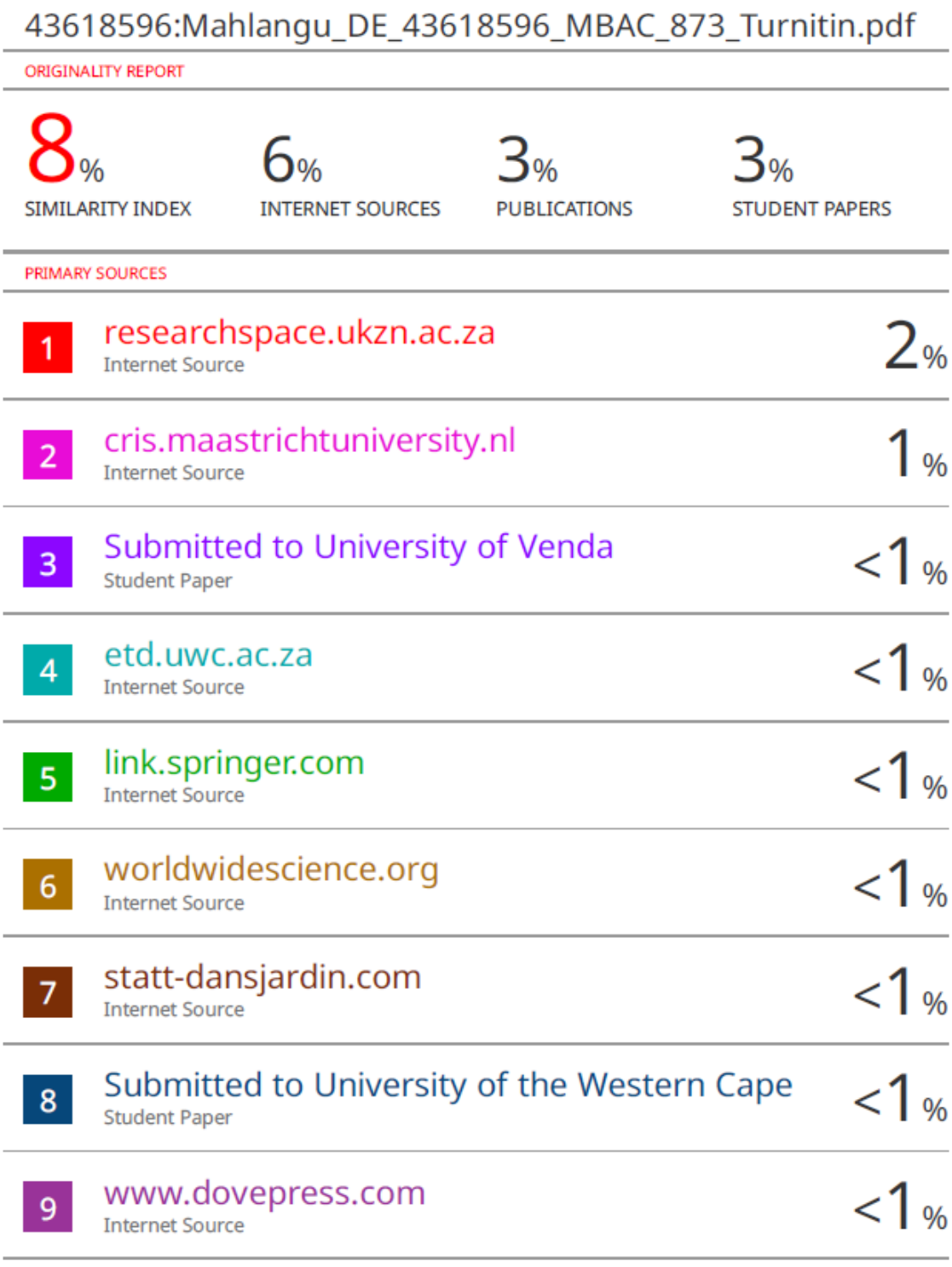
- I explained the information in this document to (PARTICIPANT ID)
- I did/did not use an interpreter
- I encouraged them to ask questions and took adequate time to answer them or I was available should they want to ask any further questions.
- I am satisfied that they adequately understand all aspects of the research, as described above.
- I am satisfied that they had time to discuss it with others if they wished to do so.

Signed at: _____ On: _____

Signature of researcher Signature of supervisor

_____ _____

APPENDIX G: TURNITIN CERTIFICATES



43618596:Mahlangu_DE_43618596_MBAC_873_Turnitin.pdf

ORIGINALITY REPORT

8%	6%	3%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	researchspace.ukzn.ac.za Internet Source	2%
2	cris.maastrichtuniversity.nl Internet Source	1%
3	Submitted to University of Venda Student Paper	<1%
4	etd.uwc.ac.za Internet Source	<1%
5	link.springer.com Internet Source	<1%
6	worldwidescience.org Internet Source	<1%
7	statt-dansjardin.com Internet Source	<1%
8	Submitted to University of the Western Cape Student Paper	<1%
9	www.dovepress.com Internet Source	<1%

NWU®

Faculty of Economic and Management Sciences

DECLARATION WITH REGARDS TO SIMILARITY REPORT

Turnitin (TII) is the plagiarism- prevention service of choice for the North-West University. A thesis/dissertation/mini-dissertation/article is submitted to the TII website, to be checked for similarities in the document by comparing submitted papers to several databases/repositories on the World Wide Web. It is important to note that TII does NOT identify plagiarism – only similarities. The aim is to draw students' attention to these similarities so that they improve their academic writing style and reporting of sources before submission for examination.

The undersigned declares that the thesis/dissertation/mini-dissertation/article with the title mentioned below, was submitted, assessed and that the issues (if any) have been addressed, and that a satisfactory report has been obtained.

Exploring current strategies to provide health promotion services to adolescent girls in the North West Province

Title of dissertation/mini-dissertation\thesis

DE MAHLANGU — Dr C Niesing

Student (Initials and surname) — Supervisor/Promoter (Initials and surname)

43618596

Student number and degree

APPENDIX F: LANGUAGE EDITOR

CM

Certificate of Editing

This serves to confirm that copy-editing and proofreading services were rendered to

DE MAHLANGU

for

Exploring existing strategies to provide health promotion services to adolescent girls in the North West Province

on

15 March 2024

I am a member of the Professional Editors' Guild (member number MYB001; receipt IN106492 for the current financial year) and commit to the following codes of practice (among others):

- I kept to the agreed deadlines and/or communicated changes within reasonable time frames
- I treated all work as confidential and maintained objectivity in editing
- I did not accept work that could be considered unlawful, dishonest or contrary to public interest

The author requested the following:

- proofreading for mechanical errors such as spelling, punctuation, grammar
- copy-editing that includes commenting on, but not correcting, structure, organisation and logical flow of content, flagging unnecessary repetition
- returning the document with track changes for the author to accept/reject.
- checking citation style is correct, punctuating as needed and flagging missing or incorrect references

Excluded: basic document styling: page numbers, headings, tables of content.

I confirm that I have edited and proofread this dissertation. As the language editor, I am not accountable for any changes made to this document by the author or any other party after my edit. The content of the work edited remains that of the author.

Charné Myburgh