

A comprehensive sexual and reproductive health programme for secondary school learners in Capricorn and Mopani Districts of Limpopo Province, South Africa

by

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DECLARATION

I Matete Enia Dilebo hereby declare that the thesis titled ***DEVELOPING A COMPREHENSIVE SEXUAL AND REPRODUCTIVE HEALTH PROGRAMME FOR SECONDARY SCHOOL LEARNERS IN CAPRICORN AND MOPANI DISTRICTS LIMPOPO PROVINCE, SOUTH AFRICA*** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

SIGNED:

DATE:

MATETE ENIA DILEBO

DEDICATION

This study is dedicated to my father, Abelang Julius Mokgope, my mother Renta Mokgope who encouraged me to complete this study.

My late brother Tylon Mokgope who did not live to see me completing this study.

My family, who has been my pillar of strength throughout the study, especially my last born Donia Dilebo who will always ask me how far am I with writing of the book.

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LIST OF ACRONYMS

AIDS:	Acquired Immune Deficiency Syndrome
DOH:	Department of Health
HCT:	HIV counselling and testing
HIV:	Human Immunodeficiency Virus
ICPD:	International Conference on Population and Development
ISHP:	Integrated School Health Policy
LO:	Life Orientation
MEC:	Member of Executive Council
NAFCI:	Adolescent Friendly Clinic Initiative
NGO:	Non-Governmental Organisation
NSHP:	National School Health Policy
PHC:	Primary Health Care
PS:	Primary School
SA:	South Africa
SD:	Standard Deviation
SRH:	Sexual and Reproductive Health
SS:	Secondary School
STI:	Sexually Transmitted Infections
TOP:	Termination of Pregnancy
USA:	United States of America
WHO:	World Health Organization

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ABSTRACT

Sexual and reproductive health services include family-planning or contraception, pre-natal care, safe births and post-natal care, safe and accessible post-abortion care and where legal, access to safe abortion services, prevention and treatment of sexually transmitted infections and cervical cancers, sexual health information, and counselling. Adolescents face many sexual and reproductive health risks, ranging from teenage pregnancy, early unprotected sex, and sexually transmitted infections. Every year one in twenty young people worldwide contracts sexually transmitted infections, and currently, fifty percent of HIV infections occur in young people aged 15-24 years. Teenage pregnancy is at alarming rate among school girls.

The overall aim of this study was to develop a comprehensive sexual and reproductive health programme for secondary school learners in Capricorn and Mopani Districts of Limpopo Province, South Africa. Three objectives which guided programme development were: 1. to assess the knowledge of secondary school learners about SRH issues, 2. to assess teachers' views about the impact of the existing SRH programmes for adolescents and 3. to explore the perceptions of parents towards the provision of SRH services in schools.

Sequential mixed methods approach was used where the initial quantitative phase was followed by qualitative phase. Three steps were used as the basis for developing the programme. Step 1 used quantitative descriptive survey to assess the knowledge of learners about sexual and reproductive health issues. Step 2 also used quantitative descriptive survey to assess teachers' views about the impact of the existing sexual and reproductive health programmes provided in schools. An exploratory qualitative method was used in step 3 to explore the perceptions of parents towards the provision of sexual and reproductive health services in schools. The study population comprised of learners, teachers and parents. Probability and non-probability sampling methods were used. Self-administered questionnaires were used to collect quantitative data from learners and teachers, while in-depth face-to-face interviews were used to collect qualitative data from parents. Quantitative data was analysed using Statistical Package for the Social Sciences

version 23. Qualitative data was analysed using Techs' technique. Reliability and validity as well as trustworthiness were ensured. Ethical principles were adhered to throughout the study.

Results indicated that (63%; n=69) learners were sexually active lacked knowledge about contraception (80%; n=40), STIs (38%; n=32) and (33%; n=37) had been pregnant and the mean age was 17. Eighty six (86%; n= 97) reported inaccessibility to sexual and reproductive health services. About (55%, n= 19) teachers were found to be inadequately trained and lacked training manuals. Most teachers reflected ineffectiveness of the existing programmes as evidenced by high pregnancy rates. Parents reflected difficulty in communicating sexual and reproductive health issues with teenagers and lack of knowledge, thus indicating the importance of the programme in schools. Parents also indicated the relevancy of teachers in facilitating the programme and collaboration between the Department of Education and the Department of Health.

Dickoff's six elements of the survey list was used to develop the programme. Programme validation was done by involving participants to evaluate it by completing questionnaires. The programme will empower learners to deal with sexual and reproductive health issues, resulting in decreased teenage pregnancy and other sexual risks.

Collaboration and support were the recommendations directed to both the Department of Education and the Department of Health. Further research was also recommended.

Key words: Comprehensive, Sexual and reproductive health, programme, learners.

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION AND BACKGROUND INFORMATION

A comprehensive sexual and reproductive health (SRH) service was defined at the 1994 International Conference on Population and Development (ICPD) which was held in Cairo. According to this definition, comprehensive sexual and reproductive health services include family-planning or contraception, pre-natal care, safe births and post-natal care, where legal, access to safe abortion services, prevention and treatment of sexually transmitted infections (STIs) and reproductive system cancers, health education and counselling (UNFPA, 2015). The aim of sexual and reproductive health services is to reduce the rate of risky sexual behaviours, unintended pregnancies, maternal morbidity and mortality and STIs, including HIV/AIDS. At the 1994 ICPD, governments of different countries agreed that these services be made available to all citizens including adolescents to help them understand their sexuality and protect themselves from unwanted sexual ill-health (UNFPA, 2015). This necessitated development of a multisectoral comprehensive SRH programme to enhance implementation of these services.

Adolescence is a time of rapid transition, of significant emotional, physical and psychological changes. These changes influence behaviour, in particular decisions to engage in risky behaviours, including sexual activity, alcohol consumption, smoking and using drugs. Out of the 1.2 billion global adolescents, 88% live in developing countries where access to SRH services are often inadequate and fragmented. Unplanned pregnancies can affect the health and wellbeing of adolescents, increasing their risk for morbidity and mortality related to unsafe abortion and childbirth, as well as limiting their educational and employment opportunities (Beksinska, Pillay, Milford & Smith, 2014).

Adolescents face many sexual and reproductive health risks, ranging from early, unprotected, or unwanted sexual activity to HIV infections. Key factors underlying such risks include the lack of accessible, affordable, and appropriate SRH services and the absence of sexuality-related research to support the development of evidence-based interventions to improve SRH worldwide (WHO, 2017). These challenges reinforce the need for a comprehensive SRH, for societies to have responsible and healthy future leaders.

The WHO recommended that SRH services should include key essential elements such as ensuring contraceptive choice and safety, improving maternal and newborn health, reducing the incidence of STIs, reproductive tract infections and HIV/AIDS. It also included prevention of reproductive tract cancers and menstrual disorders, eliminating unsafe abortions and promoting sexual health (Fentahun & Mamo, 2014).

Report by Alan Guttmacher Institute (2014) indicate that most adolescents have no access to accurate, youth-friendly and age-appropriate information and education about their sexuality and their reproductive health. Young people are extremely vulnerable to STIs, for various reasons, including a lack of information, age-related power differences and power imbalances between women and men, and the greater biological vulnerability of girls (Alan Guttmacher Institute, 2014). Annually one out of twenty young people contracts STIs, and 50% of all new HIV infections occur among young people aged 15-24. The low status of women predispose girls to high risk of sexual exploitation and violence. Up to 60% of the existing HIV infections occur among young women aged 20 or younger. At least one fourth of all unsafe abortions (estimated at 20 million every year) are performed on girls aged 15 to 19 (Alan Guttmacher Institute, 2014). This vulnerability of adolescents necessitates the need for comprehensive SRH services at schools.

Many countries have agreed to implement the 1994 ICPD agreements on SRH. However, some countries did not comply with these agreements. The United States of America (USA) has not yet fully complied with the Cairo 1994 ICPD. During the course of his administration, the then President George Bush imposed an anti-abortion gag rule policy which prevented the funding of family planning and safe abortion programmes

(Woo, Soon, Thomas, Kaneshiro & Zolo, 2016). The USA SRH policies and programmes provide abstinence and abstinence-only sex education as a behavioural strategy to prevent HIV and other STIs and pregnancies among adolescents. Most schools incorporate topics such as puberty, HIV/AIDS, effects of alcohol and drugs on sexual behaviour in their sex education programmes (Woo et al., 2016). However, topics such as sexual orientation, abortion, contraception and condom use are not included because some schools are restricted from providing sex education. Few Americans remain abstinent until marriage while many do not marry. Most initiate sexual intercourse and other sexual behaviours during adolescence (Woo et al., 2016). As a result, larger social and economic objectives, as espoused by the ICDP and the Millennium Developmental Goals (MDGs), replaced by Sustainable Development Goals (SDGs), proved to be ineffective. In the USA, the maternal mortality rate (MMR) increased to 38%, the teenage pregnancy rate was 71%, which is the highest rate among developed countries, STIs and HIV infection rates were also high. President Obama showed enthusiasm in complying with the 1994 ICPD agreement, but no policies were developed (Santeli, Ott, Lyon, Rogers, Summers & Scheifer, 2016). This strategy denies adolescents access to SRH services.

In Texas, Catholic schools follow church teachings with regard to SRH education which emphasises abstinence. Some opponents of sex education in Catholic schools believe that SRH programmes are doing more harm than good to the young people. They maintain that children might not be mentally and emotionally ready for this type of instruction, and believe that exposing the young people to SRH programmes might encourage the learners to become preoccupied with sex. The Catholic Church believes that parents are the first educators and should rightfully fight for their duty as such (DiCenso, Guyart, Wasiam & Griffith, 2013). Globally, Catholic schools do not provide any SRH education, resulting in unsafe abortions among school girls (DiCenso et al, 2013). This constitutes a violation of young people's rights to access SRH services.

France, Germany and the Netherlands are committed to taking care of the SRH needs of their adolescents. Research comprised the basis of their public health policies to reduce the number of unintended pregnancies, abortions, and STIs including HIV. Their national

health policies provide easy access to contraception, condoms and consistent sex education at schools. Governments of these countries support massive, consistent long-term public sex education campaigns. Youth have convenient access to free or low-cost contraception through the country's national health insurance (Hamilton, 2013). Sex education is integrated across school subjects in all grades. Educators provide accurate and complete sex education. This commitment to adolescents' SRH has resulted in fewer teenage sexual health problems: a lower teenage pregnancy rate (4.1%), teen birth rate (7.1%), HIV prevalence (0, 4%), abortions (7.2%), and contraceptive and condom use (88%) (Hamilton, 2013). The commitment of these countries has resulted in well informed, healthy youth.

Santhya and Jejeebhoy (2017) reported that India lacks policies that ensure adolescents' access to SRH information, counselling and affordable services. India's National Youth Policy, developed during 2003, addresses the needs of youth aged 20-35, but ignored to recognise adolescents aged 13-19 as a special group requiring appropriate SRH interventions. Although this policy recommends that adolescents should have access to SRH information, counselling and affordable services, these services remain limited. It also underscores the need to strengthen primary health care (PHC) centres and sub-centres to provide counselling to adolescents and to newly-weds, as marriage might be forced on underage girls (Santhya & Jejeebhoy, 2017). These recommendations have not yet been adopted. This continue to put young people's health at risk, with increased morbidity and mortality. Therefore it is recommended that India should have SRH programmes that will include adolescents.

In China, since the document on Adolescent Sexual Health Education in High Schools was jointly released by the Ministry of Education and the Ministry of Health, adolescent sexual health education has become a compulsory component of school education (Tu, Lou & Gao, 2016). It mainly covers knowledge about sexual physiology and psychology, HIV/AIDS prevention and sexual morality. It also include contraception, treatment of reproductive system diseases, abortion and hotlines for counselling. However, studies show that the teaching methods and curriculum content did not meet adolescents' needs, resulting in poor utilisation of these services. Services are not accessible as only two

hospitals in Beijing and Shanghai provide these SRH services. Of the adolescents, 80% had limited knowledge about SRH, 50% knew about self-induced abortions, only 16% knew about emergency contraceptives, 56% knew about HIV infections (Tu et al., 2016). This shows that China is still lacking behind with the implementation of the 1994 ICPD agreement, hence the need for a comprehensive SRH programme to improve the health status of adolescents.

Policies on SRH that exist in Ghana, include an Adolescent Reproductive Health Policy, a National HIV/AIDS and STI Policy and a National Youth Policy. The Ghanaian government used a multi-sectoral approach to implement the 1994 ICPD agreement. All ministries are mandated to incorporate SRH issues in their programmes. The Ministry of Health has developed protocols and standards for adolescent SRH which encouraged private and public sectors, NGOs and individuals involved in health delivery to provide youth-focused, reliable and accurate information and quality services (Republic of Ghana, 2015). The Ministry of Health also provided training to these sectors to ensure that services meet the set standards and specified quality. SRH services include counselling, family planning, prevention of STIs (including HIV/AIDS), human development, relationships and gender equity. The Ministry of Finance budgets specifically for SRH services for adolescents (Republic of Ghana, 2015).

Implementation of these policies and programmes has resulted in:

- Increasing the age of marriage from 17 to 19 years
- Declined unsafe abortions, teenage pregnancies, STIs and HIV/AIDS infections
- Mothers' age of first time pregnancy increased age from 19 to 20 years (Republic of Ghana, 2015).

These policies indicate that the Ghanaian government is committed to the promotion of a healthy environment for adolescents, which meets the ICPD objectives.

Even though the Ghanaian government has tried to comply with the 1994 ICPD agreement, the following gaps were identified:

- Programmes focus on information rather than on practice
- Services are more concentrated in urban than in rural areas

- The use of contraceptive services remain limited (Republic of Ghana, 2015).

Ghana has to revisit its policies and programmes to pay attention on the identified gaps.

The Egyptian policy makers consented to the 1994 ICPD agreements with reservations, indicating that they would implement the recommendations within the framework of Islamic laws. Currently, young Egyptians receive limited SRH information through formal schooling because of cultural and political sensitivity. A few short lessons on SHR were introduced into the school curriculum after the 1994 ICPD. The only genital diseases discussed are puerperal sepsis and syphilis. In addition, teachers do not present these lessons, instead, they ask pupils to read at home or discuss with their parents. If a lesson is given in class, no questions are allowed (Roudi-Fahimi & El Feki, 2014). Traditional religious and family values, designed to protect young people, restrict SRH education for youth. Egyptians commonly assume that young people do not need to know about SRH issues until they are married. Egyptian policies might impact negatively on young people's rights to access SRH services. Egyptian young people are vulnerable to coercion, abuse, unintended pregnancies and STIs, including HIV (Roudi-Fahimi & El Feki, 2014). This necessitates the need for Egyptian government to provide an environment that will protect youth from sexual risks and enhance healthy reproductive health.

The Ugandan government complied with the 1994 ICPD agreements. Their National Policy Guidelines for Reproductive Health Services include safe motherhood (including post-abortion care), family planning, counselling, adolescent SRH, gender equity, STIs including HIV/AIDS, and cancer of the reproductive system. The policy focuses on improving the provision of quality and accessible SRH services. Training of health care providers to implement the SRH care package, as agreed at 1994 ICPD, is also included in the policy guideline (Republic of Uganda, 2016). Information, education and communication for adolescent health programmes address: adolescent sexuality, contraception including emergency contraception, preventing unwanted pregnancies, avoiding unsafe abortions, the pros and cons of early marriages, gender-based domestic and sexual violence, care during pregnancy, prevention of STI's/HIV/AIDS, risky sexual behaviours, and special SRH for adolescents with disabilities. Uganda's compliance with

the 1994 ICDP agreement on SRH resulted in a decline in infant and maternal mortality rates from 38% to 29%. Teenage pregnancies and STIs, including HIV/AIDS also declined (Republic of Uganda, 2016).

A study, conducted in Ethiopia on intervention strategies for the reduction of sexual risk practices among adolescents, revealed that adolescents had limited knowledge and access to reproductive health services. Inadequate knowledge about young peoples' sexual behaviour, cultural influences, and the limited capacity of implementers impacted negatively on the provision of reproductive health education and services for these adolescents (Abdisa, 2014). Ethiopia needs to improve on the sexual and reproductive health services for youth.

In many parts of sub-Saharan Africa (SSA), SRH-related challenges have not been addressed satisfactorily. Consequently, pregnancy and childbirth-related complications remain one of the leading causes of death of young women. Some young women who survive pregnancy drop out of school due to early motherhood. Mackintosh, president of the SSA Society of Sexual Health Advisors, emphasised that SRH services, contraception and counselling enable young people to identify effective ways of managing and dealing with their feelings regarding sex (Sheffield & Shawa, 2013). This necessitates the need for comprehensive SRH programmes for young people.

Zambian adolescents are excluded and under-served through the current health service delivery system. Family life education has been widely promoted, although it is encountering problems (Republic of Zambia, 2015). Most adolescents depend on their peers for SRH information as these services are inaccessible. The inaccessibility of SRH information has resulted in increased teenage pregnancies, early sexual debuts, explaining why one out of five (20%) young people are HIV-positive and 17% have STIs, which might be associated with infertility. In addition, high rates persist of obstetric complications, perinatal mortality, unsafe induced abortions and maternal mortality. Increased HIV infections plus inadequate cancer screening facilities have contributed to increased mortality rates from breast and cervical cancers (Republic of Zambia, 2015). These challenges stir up an urgent need for a comprehensive SRH programme.

The South African Constitution (South Africa, 2006) established the right for everyone to access health care services, including reproductive health care services. The Bill of Rights (Chapter 2 of the Constitution of the Republic of South Africa) proclaimed the right to bodily and psychological integrity, which includes the right to make decisions concerning reproduction. The major strategy of South African Population Policy (1998) cited by Allotey, Dinz, De Jong, Delvaus, Gruskinand & Fonn (2013), is to promote responsible and healthy reproductive and sexual behaviour among adolescents youth to reduce the prevalence of high risk teenage pregnancies, abortions and STIs, including HIV/AIDS, through the provision of life skills, sexuality and gender sensitive education. The South African Department of Education has launched an integrated health programme which aims at promoting good health and providing the necessary services to school children in KwaZulu Natal, Mpumalanga and Limpopo Provinces where a dire need exists (Tshehle, 2014). A comprehensive SRH programme is necessary in all South African Provinces to curb the scourge of teenage pregnancies.

In 2012 South Africa recognised the need for PHC re-engineering to improve and strengthen the PHC system. PHC re-engineering included the strengthening of school health services under the Integrated School Health Policy 3 (Health-E News, 2013). This policy aims to provide a more comprehensive package of services addressing not only barriers to learning but also conditions which contribute to morbidity and mortality amongst learners during childhood, adolescence and adulthood. Programmes, based on this policy, emphasise the provision of health services in schools, including reproductive health. Previously school health services only provided health screenings and referrals (Health-E News, 2013). The researcher's observations indicate that these programmes are not comprehensive and are not well-coordinated.

South Africa's Minister of Health considered school-based comprehensive SRH as being important. The Minister identified the need for all health professionals, teachers and members of the community to protect children while ensuring the children's educational attainment (Makhubela-Nkondo, 2015).

Learners in schools might be vulnerable to sexual abuse by teachers as it happened at Reiger Park High School in the Gauteng Province, where the school principal was reportedly involved in sex with learners and making video recordings of these activities (Head, 2018). In another incident, a 17-year old girl was raped by a doctor in a consulting room in the Limpopo Province (Times LIVE, 2017). The girl was brave enough to report the incident to the police. In another rape incident involving the same doctor, the teenager cancelled the charge. This may be due to the fact that the girl lacked support and knowledge. A comprehensive SRH programme will empower youth to be able to deal with sexual abuse without fear.

South Africa's Policy Guidelines for Youth and Adolescent Health specify the following components of reproductive health: family planning information, prevention and management of infertility and sexual dysfunction in both men and women. The policy also includes prevention and management of reproductive tract infections, promotion of healthy maturation from pre-adolescence to responsible adulthood, elimination of harmful practices such as female genital mutilation, premature marriage, domestic and sexual violence as well as management of non-infectious reproductive conditions such as cancers (South Africa, 2016). Irrespective of these available guidelines, programmes to implement them remain ineffective as evidenced by the high teenage pregnancy rate which was at 27.1% and HIV infections among youth which was at 26.8% in 2017. Therefore, a comprehensive SRH programme is crucial to enhance the implementation of this policy.

The Department of Health of the Limpopo Province have a wide range of specialist SRH services for men, women and children younger than 16 years of age. Services include all methods of contraception, advice and support on condom use, tests and treatments for STIs, treatment of non-sexual genital infections, screening for people younger than 25, rapid HIV testing, advice and support, pregnancy tests, advice and counselling about unplanned pregnancies, psychological problems, fertility awareness such as teaching about natural family planning methods (DOH,2017). Irrespective of these specialist services, programmes remain limited to guide the implementation of these services, hence the need for a comprehensive SRH programme for school learners.

Comparative studies indicate that in developing countries the rates and trends of using SRH services by adolescents is higher than in developing and underdeveloped countries (Hamilton, 2013). The most frequently used services include contraception, condoms and abortion. The rates of using these services in poor countries is very low due to their inaccessibility or unavailability. Conditions resulting from limited use of SRH services include teenage pregnancies, STIs including HIV/AIDS, unsafe and complicated abortions. Socio-economic conditions such as unemployment, child abuse, depression, single motherhood are common among adolescents who do not have access or do not utilise SRH services. Adolescent mothers' children have a higher risk of being born prematurely and/or with low birth weights than adult women's children (Floyd & Latimer, 2013). Hence the researcher sought to develop a comprehensive SRH programme for secondary school learners where adolescents spend most of their time.

1.2 PROBLEM STATEMENT

Studies have shown that adolescents' SRH is given less attention. Finer and Zolna (2015) report that one million teenagers become pregnant each month worldwide, and 33% of these teenagers terminate their pregnancies. A total of 663 learners at Limpopo schools became pregnant during 2015, among them was a grade 4 pupil at a farm school outside Polokwane Limpopo Province (Moloto, 2015). Maternal deaths among the teenagers was at 7.7% and contributory factors to these deaths included physical underdevelopment of teenage mothers and financial costs due to poverty at home (Tshehle, 2014).

Mavalani Secondary School, in the Mopani District of the Limpopo Province, reported 57 pregnancies in 2015, where some of the pregnant pupils were 14 years. In the previous year the same school reported 50 pregnancies. Mulaudzi Secondary School in Capricorn District reported 27 pregnant girls by midyear in 2018 (Thobela FM, 2018). The Department of Education, blamed the parents for the high pregnancy rate at schools indicating that parents do not guide children, while parents blamed the Department of Education, claiming that the education department teaches Life Orientation, without addressing sex, HIV/AIDS or teenage pregnancies. Pregnancy rates among school girls remain at 29.5% in the Capricorn and 31.2% in Mopani Districts of the Limpopo Province, hence the current study focused on these two Districts (Matlala, 2015).

Limpopo Province reported 21,9% HIV infection rates. The highest infection rates occur among 15-19 year olds at 14%, 20-24 year olds at 26,7%, and 25-29 year olds at 37,3% (Shilumani, 2014). Incidents of learners' sexual abuse by teachers and other older people have increased to 33%, where the school principal was caught on camera having sex with a school girl (Head, 2018).

These alarming incidents of sexual ill health might indicate that learners lack knowledge and access to SRH services.

The then MEC for Health in the Limpopo Province in 2015 promised to send nurses to schools to assist pregnant learners in case they give birth. Since then, the promise never materialised. Currently parents or caretakers of pregnant learners report to schools every day with buckets of water, scissors and towels to help their children if they should give birth while at school because SRH services are not accessible. The MEC of Education promised that his department would visit Mavalani high school to see how, collectively with the Department of Health, they could prevent the situation from escalating (Matlala, 2015). There appears to be a lack of coordination of adolescent SRH services among different Department of health and Department of Education in Limpopo Province.

Based on this statistics and the researcher's observation, a comprehensive SRH programme for secondary school learners in Capricorn and Mopani Districts of the Limpopo Province was necessary.

1.3 PURPOSE OF THE STUDY

The purpose of the study was to develop a comprehensive SRH programme for secondary school learners in the Capricorn and Mopani Districts of the Limpopo Province in South Africa.

1.4 OBJECTIVES OF THE STUDY

The objectives for this study were to:

- assess the knowledge of secondary school learners in the Capricorn and Mopani Districts about SRH issues

- assess teachers' views about the impact of the existing SRH programmes for adolescents in the Capricorn and Mopani Districts in the Limpopo Province
- explore the perceptions of parents towards the provision of SRH services in schools in the Capricorn and Mopani Districts of the Limpopo Province
- develop a comprehensive SRH programme for secondary school learners in the Capricorn and Mopani Districts in the Limpopo Province.

Results for the first three objectives were used to develop the programme.

1.5 RESEARCH QUESTIONS

The current study sought to answer the following questions:

- What knowledge do secondary school learners in the Capricorn and Mopani Districts have about SRH?
- What are teachers' views about the impact of the existing SRH programmes for adolescents in the Capricorn and Mopani Districts of the Limpopo Province?
- What are the perceptions of parents regarding the provision of SRH services in schools in the Capricorn and Mopani Districts?
- How to develop a comprehensive SRH programme for secondary school learners?

1.6 SIGNIFICANCE OF THE STUDY

The study might influence policy makers to take cognisance of the SRH needs of school learners. A programme, developed on the basis of the current study's findings, might provide significant guidelines to curriculum developers, for including comprehensive SRH information in the curriculum. Teachers might acquire more knowledge about SRH when trained to facilitate the programme's implementation. Information obtained from the current study's findings, could provide insight into the SRH needs of learners, enabling the design of a programme that addresses the reproductive health needs and problems of learners. Such a programme might enhance adequate coordination of SRH services between the Department of Education (DOE) and the Department of Health (DOH).

Full-time school health nurses might be appointed and allocated to schools where they would care for the wellbeing of the learners. Parents might benefit as they could be notified in advance about the content of the curriculum, their right to review study materials, programmes and activities to support and collaborate with teachers for implementing effective SRH education at schools. This might help parents who are uncomfortable discussing SRH-related issues with their children.

The current study's findings might create awareness about SRH services among learners, reducing the rate of new HIV infections, STIs, teenage pregnancies and teenage maternal deaths, school dropouts, school absenteeism and the vicious poverty cycle as well as other health risks. These will assist the government to save money, which might be used for providing other services. The results of the current study might give rise to further research.

1.7 THEORETICAL FRAMEWORK

A framework is the overall conceptual underpinning of a study. It is a theory on which a study is based (Polit & Beck, 2017). In this study Orem's Self-Care Model was applied.

1.7.1 Orem's Self-Care Model

According to Masters (2013), each individual has the ability to perform self-care, and is responsible for his/her health and the health of his/her dependents. Self-care is "the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health, and well-being". Orem's general theory of self-care deficit states that a self-care demand exists when the person and/or his/her family members are unable to provide care for him/herself and such self-care demands can be met by the nurse (Masters, 2013).

The purpose of Orem's Self Care Model is to allow individuals and their families to maintain control of their health care. Self-care is on-going throughout the continuum of life and is forever evolving.

1.7.2 Assumptions underlying Orem's Self-Care Model

- Health, well-being, and human development are dependent on self-care as a necessity in life
- Individuals are influenced by culture and education
- Communication and human interaction foster and teach self-care
- Deliberate and systematic actions are performed to meet self-care needs
- Each person possesses interests, powers, talents, values, capabilities, and personal dispositions influencing his/her self-care activities
- Each individual is self-reliant and responsible for his or her own care and for others' care in his or her family requiring such care (Masters, 2013).

1.7.3 Application of Orem's Self-Care Model and the nursing process to comprehensive sexual and reproductive health services for school learners

Orem's Self-Care Model may be used to assess the patient's/client's condition by using various methods to identify the needs of the patient/client, to demonstrate effective communication and interaction with the patient/client, to select a theory for the application according to the need of the patient/client, to apply the theory to solve the identified problems of the patient/client and to evaluate the extent to which the process was fruitful (Moore, 2013).

The self-care deficit theory proposed by Orem is a combination of three theories, namely the Theory of Self-Care, the Theory of Self-Care Deficit and the Theory of Nursing Systems. In the Theory of Self-Care, Orem defines self-care as the activities carried out by the individuals to maintain their own health. Self-care is the ability to perform activities and meet personal needs to maintain health and wellness of mind, body and spirit. Self-care is influenced by the metaparadigm of the person, environment, health and nursing. The self-care agency is the acquired ability to perform self-care and this will be affected by the basic conditioning factors such as age, gender, and the health care system. Therapeutic self-care demand is the totality of the self-care measures required. Self-care is carried out to fulfill the person's self-care requisites (Moore, 2013).

There are mainly three types of self-care requisites, namely universal, developmental and health deviation. The elements include social interactions, prevention of harm, and promotion of normality. Universal self-care actions include activities which are essential to health and vitality. Developmental self-care needs include interventions and teachings designed to return a person to or sustain a level of optimal health and wellbeing (Moore, 2013). Comprehensive SRH will enable school children to maintain optimal SRH and wellbeing, therefore reducing adolescents' SRH problems/challenges.

Whenever there is an inadequacy of any self-care requisite, the person will be in need of self-care, implying a self-care deficit. Such a deficit is identified by the agency through thorough assessment of the patient/client. Once the need has been identified, the agency has to select the required systems to provide care: wholly compensatory, partly compensatory or supportive and educative system (Cardinal & Stritch, 2014).

The care will be provided according to the recipient's degree of experiencing the deficit. Once care has been provided, applied activities and systems should be evaluated to determine whether or not the mutually planned goals had been met. Thus the theory could be successfully applied to nursing practice (Cardinal & Stritch, 2014). The current study developed a comprehensive SRH programme to provide a supportive educative system and to promote optimal health and wellbeing for secondary school learners.

Orem's Self-Care Model was appropriate for the current study because findings for this study reflected SRH knowledge deficit among learners, teachers and parents, which resulted undesirable consequences. Each person possesses the ability and responsibility to care for him/herself and for his/her dependents provided necessary self-care demands are available.

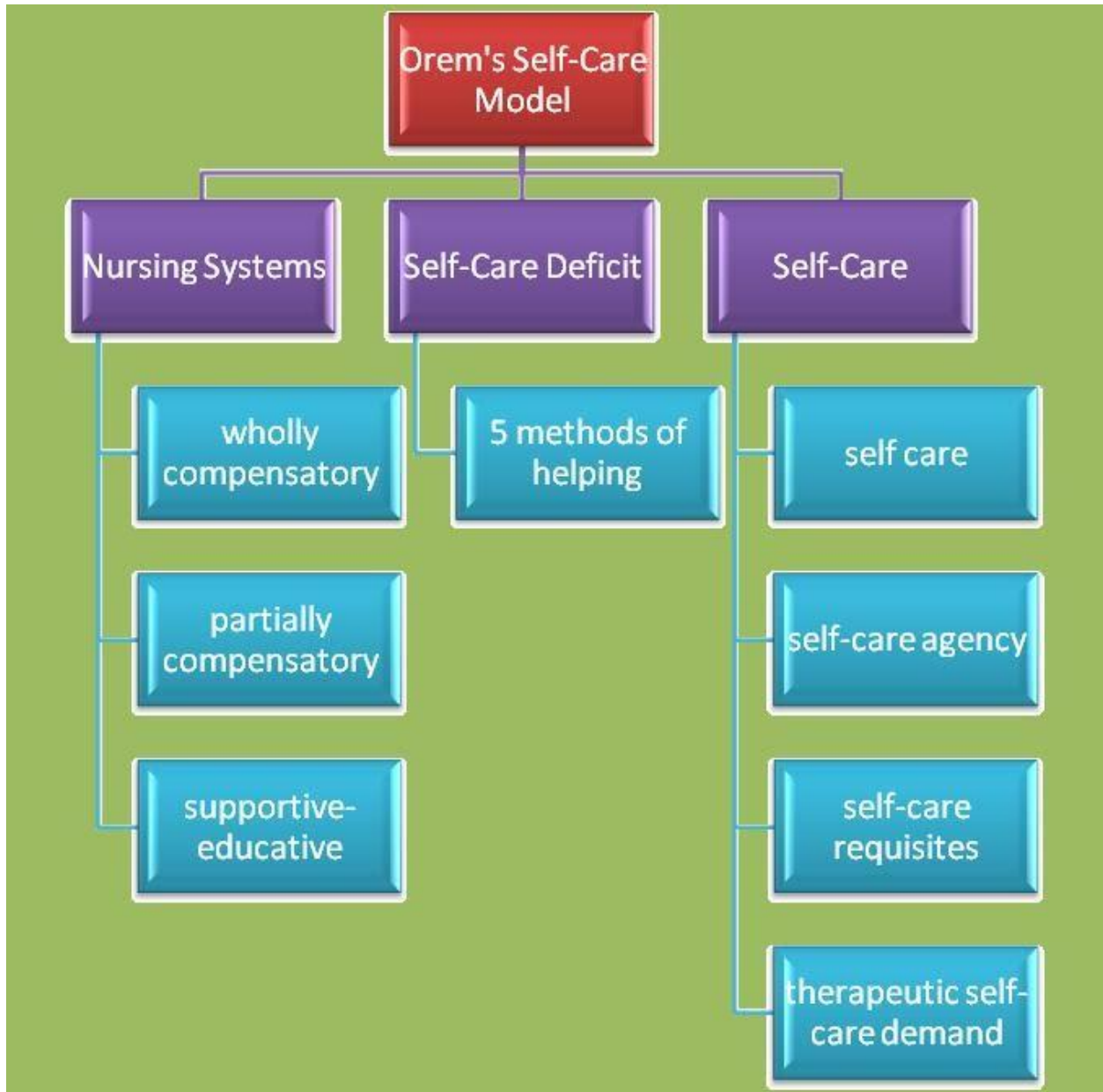


Figure 1.1: Orem's Self-Care Model

Health Deviation Self-Care encompasses the variations in self-care which may occur as a result of disability, illness, or injury. In other words the person with a variation is unable to meet his/her self-care needs to maintain health and wellness in an individualised manner. The Theory of Self-Care Deficits maintains that every mature person has the ability to meet his/her self-care needs, but when a person is unable to do so due to limitations, a self-care deficit exists. A person benefits from nursing interventions when a

health situation inhibits his/her ability to perform self-care activities or when a situation exists where a person's abilities are insufficient to maintain his/her own health/wellness. Nursing actions focus on identifying limitations/deficits and implementing appropriate interventions to meet the person's specific needs.

The Theory of Nursing Systems looks at the ability of the nurse to aid the person in meeting current and potential self-care demands. The theory focuses on three support modalities, namely: wholly compensatory, partially compensatory and educative-supportive compensatory systems. The client's ability for self-care involvement will determine his/her support modality (Brindis, 2013). In the current study, educative-supportive modality was applied.

Educative-supportive modality elicits the help of the nurse solely as a consultant, teacher or resource person implying that clients/patients remain responsible for their own self-care activities. A person can fluctuate between modalities at any given time throughout his/her life. In this study learners were experiencing different physical and psychological developmental stages and they needed to be guided and supported throughout these phases of their lives.

A nurse's role in helping a client to achieve or maintain a level of optimal health and wellness implies acting as an advocate, redirector, support person and teacher and to provide an environment conducive to therapeutic development. In this study the researcher sought to develop a programme that would help learners achieve or maintain a level of optimal SRH and wellness.

1.7.4 Propositions of Orem's Self-Care Model

Age, experiences, developmental state, and sociocultural background influence a person's self-care abilities

- Capabilities to provide own self-care and care for others are learned and recalled

- Self-care capabilities and self-care demands should be balanced by self-care deficits
- Life experiences, health, socio-cultural orientation, resources, developmental stage, and age mediate self-care or dependent care
- Nurses, patients/clients and others are involved in therapeutic self-care by meeting self-care needs and regulating self-care capabilities
- Nurses assess patients'/clients' abilities and potential to meet and perform their self-care needs
- Nurses select reliable and valid processes, actions, and/or technologies to meet persons' self-care needs (Masters, 2013).

Self-care deficit is the key to Orem's Self-Care Model because it identifies when and how much a nurse is needed in the care of a patient/client. Nursing care is needed if there is a problem that prevents a person from reaching his/her optimal health (Moore, 2013). In the current study, lack of comprehensive SRH services and knowledge constitute a self-care deficit to secondary school children because they unknowingly indulge in risky sexual practices. A comprehensive SRH programme could assist learners to be knowledgeable about of risky sexual behaviours and to develop relevant self-care attitudes and access available SRH services.

Orem's self-care theory was applied to develop the programme, using Dickoff's survey list as depicted in figure 1.2

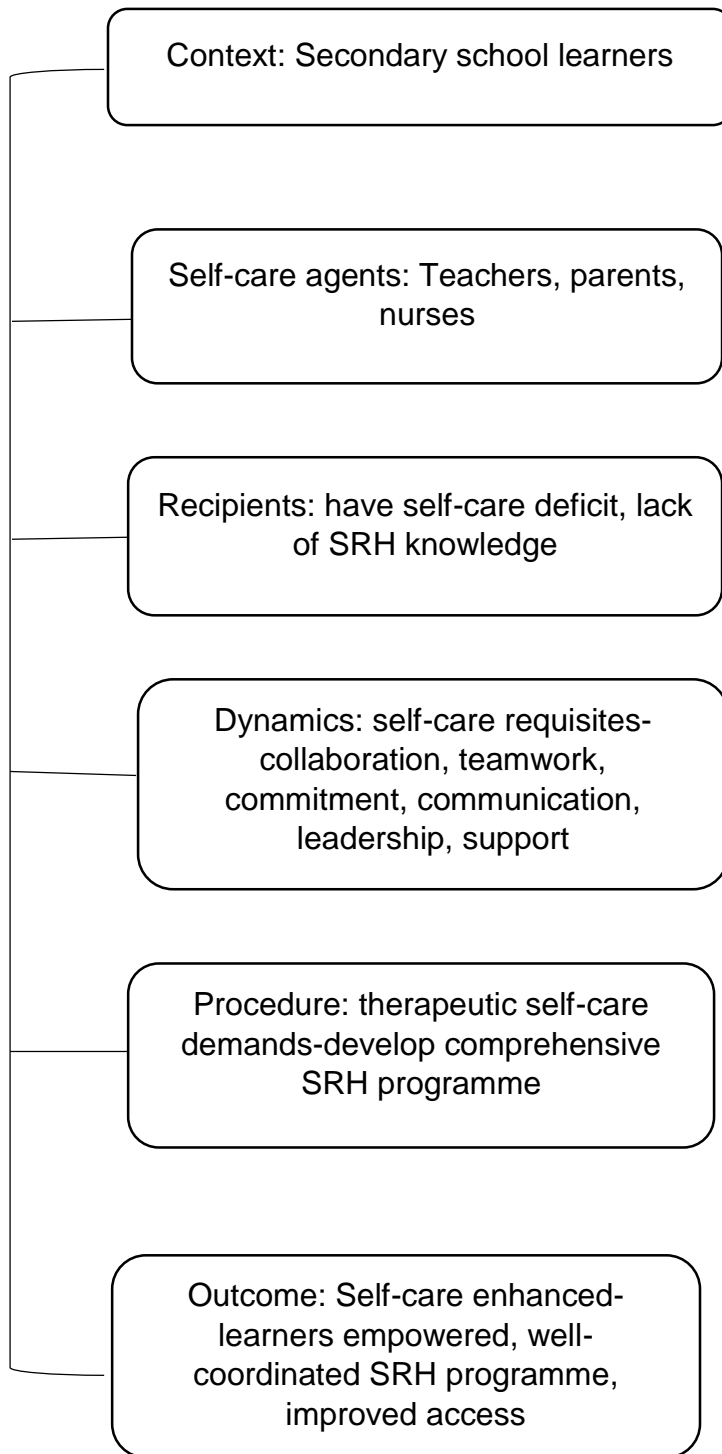


Figure 1.2 Integration of Orem's self-care theory and Dickoff's survey list

1.7.4 Application of Orem's Self-Care Model and the nursing process to comprehensive SRH

Orem's model influenced the development of a comprehensive SRH programme for secondary school learners. A detailed discussion will be found in chapter 6 of this study.

Orem's model and the nursing process

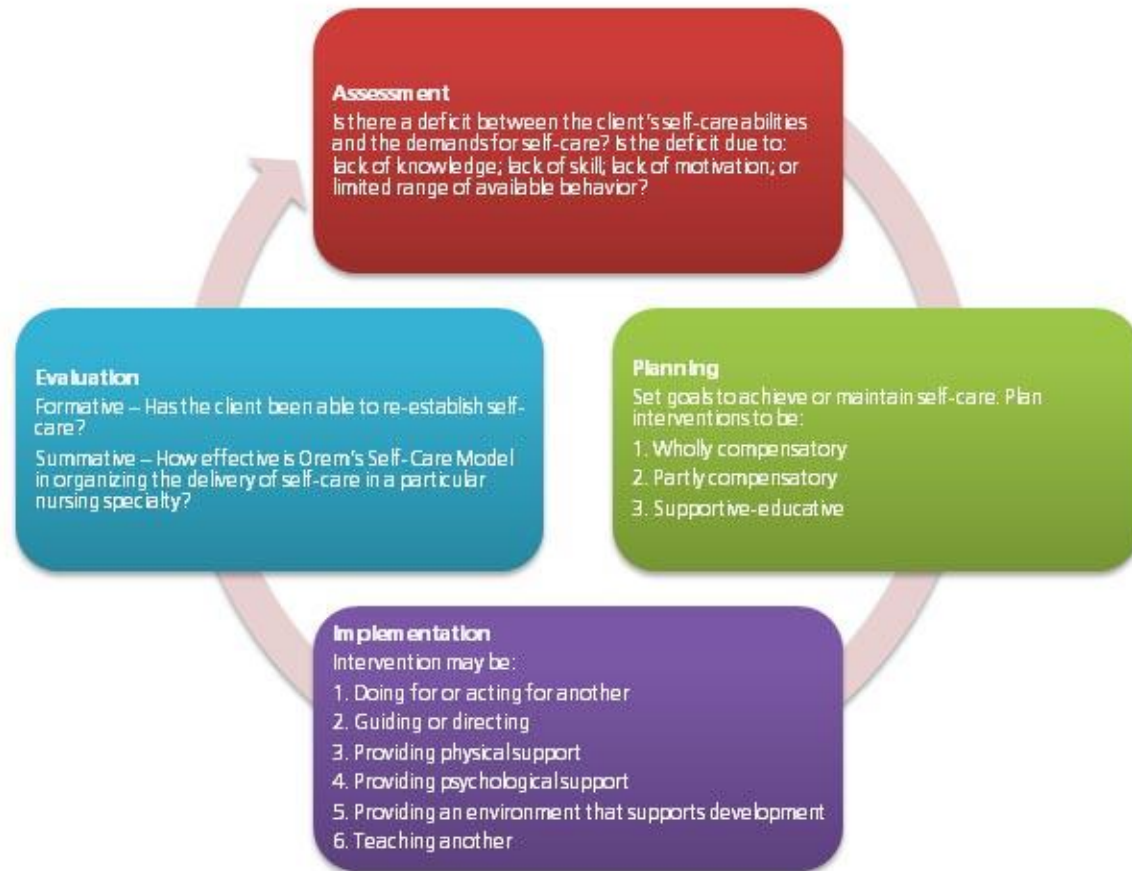


Figure 1.3: Orem's Model and the nursing process

Assessment

Both quantitative and qualitative data collection was done to assess the learners' knowledge about SRH. Findings indicated that learners, teachers and parents have knowledge deficit. Services were not easily accessible which impacted negatively on learners' self-care abilities.

Planning

Based on the findings, the following were the requirements for programme:

- Laws and policies
- Appropriate education and training of teachers
- Society and culture
- Finance
- Health care systems

Implementation

The comprehensive sexual and reproductive programme was developed using Dickoff's survey list.

Evaluation

Evaluation was done to determine whether the programme was feasible. This evaluation was done according to Chinn and Kramer's guidelines (2014), comprising five questions.

- How clear is the programme?
- How simple is the programme?
- How general is the programme?
- How accessible is the programme?
- How important is the programme?

1.8 DEFINITIONS OF KEY CONCEPTS

Comprehensive

Comprehensive means including all or nearly all the elements or aspects of a phenomenon (Fowler & Fowler, 2015). In this study comprehensive means a SRH services that include all elements of sexual and reproductive health. It also include teachers, nurses, parents and learners as role players.

Programme

A programme comprises a plan which has been developed for a particular purpose (Collins English Dictionary, 2014). In this study a programme refers to a well-coordinated SRH programme for secondary school learners that enhance access to SRH services.

Sexual health

Lebese (2013) defined SRH as the ability to express one's sexuality free from the risk of STIs, unwanted pregnancy, coercion, violence and discrimination. For the purpose of this study SRH is the ability of secondary school learners in the Limpopo Province to be equipped with knowledge and information which enable them to avoid risky sexual behaviours and to make independent informed decisions.

Reproductive health

Reproductive health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity, in all matters relating to the reproductive system including its functions and processes at all stages of life (Foy, Mosotho, Catherine, & Tettey, 2014). For the purpose of this study reproductive health implies that secondary school learners in the Limpopo Province maintain responsible satisfying and safe sex lives and that they have the capability to reproduce, and the freedom to decide when and how to do so. Teenagers have the right to access contraceptives, and to access health care services so that they can have safe pregnancy and childbirth experiences with healthy infants.

Secondary schools

Secondary schools refer to education institutions for children in grades 7 to 12 (Oxford South African Pocket Dictionary, 2015). In this study secondary schools refer to education institutions for children in grades 7 to 12 found in the Capricorn and Mopani Districts of the Limpopo Province.

Learner

Learner refers to a person who is learning something (Oxford Dictionary of English, 2017). For the purpose of this study learners refer to children enrolled at selected secondary

schools in the Capricorn and Mopani Districts in the Limpopo Province for the academic year 2016.

1.9 RESEARCH METHODS

The study employed a sequential mixed method research methodology comprising qualitative and quantitative research approaches. Non-experimental descriptive survey was used to address objective 1 which assessed knowledge of secondary school learners about SRH issues and objective 2 which assessed teachers' views about the impact of the existing SRH programmes provided in the participating secondary schools.

Qualitative approach addressed objective 3, which explored parents' perceptions about SRH services provided in schools. Exploratory descriptive design was used.

The population for objective 1 comprised secondary school learners who were enrolled in the Mopani and Capricorn Districts' secondary schools during 2016. The target group for this study were learners enrolled at the selected secondary schools that reported high teenage pregnancy rates.

The population for objective 2 comprised secondary school teachers who were employed at the selected school teaching Life Orientation. Parents of learners, enrolled at the participating schools during 2016 constituted the population for objective 3.

Purposive sampling was used to sample two schools in Capricorn District and three schools in Mopani District. Schools with high teenage pregnancy rate were purposefully included in the study.

The Slovan's formula was used to select a total sample of 240 learners. Each participating school's census of learners was used as a sampling frame. Purposive sampling was used to select 34 teachers of Life Orientation programmes using the fishbowl sampling technique. In schools where only two teachers taught Life Orientation, both were included in the study. Non-probability snowball sampling was used to select parents who had teenage children at the selected schools.

For objectives 1 and 2, self-administered questionnaires were used to collect data from learners and teachers respectively (refer Annexures G & H). In-depth individual interviews were conducted to collect qualitative data from learners' parents (refer Annexures J & K).

Descriptive statistics were used to analyse quantitative data with the assistance of a statistician (refer Annexure I). Graphics, tables and charts were used to display the results. Tesch's method was used to analyse the qualitative data with the assistance of an independent coder (refer Annexure L). Validity, reliability and trustworthiness were ensured throughout the study.

Research methodology is discussed in details in Chapter 3.

1.10 CONCEPT ANALYSIS

Concept analysis was conducted according to the following eight steps, mentioned in Walker and Avant (2016):

- Identification of concepts of interest
- Determining the purpose of the analysis
- Identifying all uses of the concept(s)
- Determining the defining attributes or characteristics of the concept(s)
- Identifying or constructing a model case
- Identifying additional cases: related cases
- Analysis of data regarding the above characteristics of the concept
- Identifying antecedents and consequences
- Defining the empirical referents

More details will be found in Chapter 5 of this study.

1.11 PROGRAMME DEVELOPMENT

A comprehensive SRH programme was developed using the elements of the survey list as outlined in the practice model developed by Dickoff, James and Wiedenbach (1968). The survey list included the context, agent, recipient, dynamics, procedure/process, and terminus/outcome. More details are discussed in Chapter 6 of the current study.

1.12 OPERATIONALISATION OF THE PROGRAMME

Guidelines for implementing the programme were clearly outlined in chapter 7 of this study.

1.13 VALIDATION OF THE PROGRAMME

Programme validation was done by requesting end-users, which consisted of learners, teachers and parents, to evaluate its relevance and feasibility before its adoption or implementation. Data was collected from five respondents per category using a questionnaire. Suggestions and recommendations were attended to.

1.14 ETHICAL CONSIDERATIONS

The study was approved by SENEX, the University of Venda's Ethical Committee (see Annexures B). Permission to conduct the research at secondary schools was granted by the Limpopo Department of Education (see Annexures D). The researcher complied with all ethical principles as detailed in chapter 3.

1.15 STRUCTURE OF THE THESIS

Chapter 1- Orientation to the study

Chapter 2- Literature relevant to the study.

Chapter 3-Research methodology

Chapter 4-Data analysis, interpretation and presentation of results.

Chapter 5- Concept analysis

Chapter 6- Programme development

Chapter 7- Operationalisation and validation

Chapter 8- Summary, conclusions, recommendations and limitations of the study.

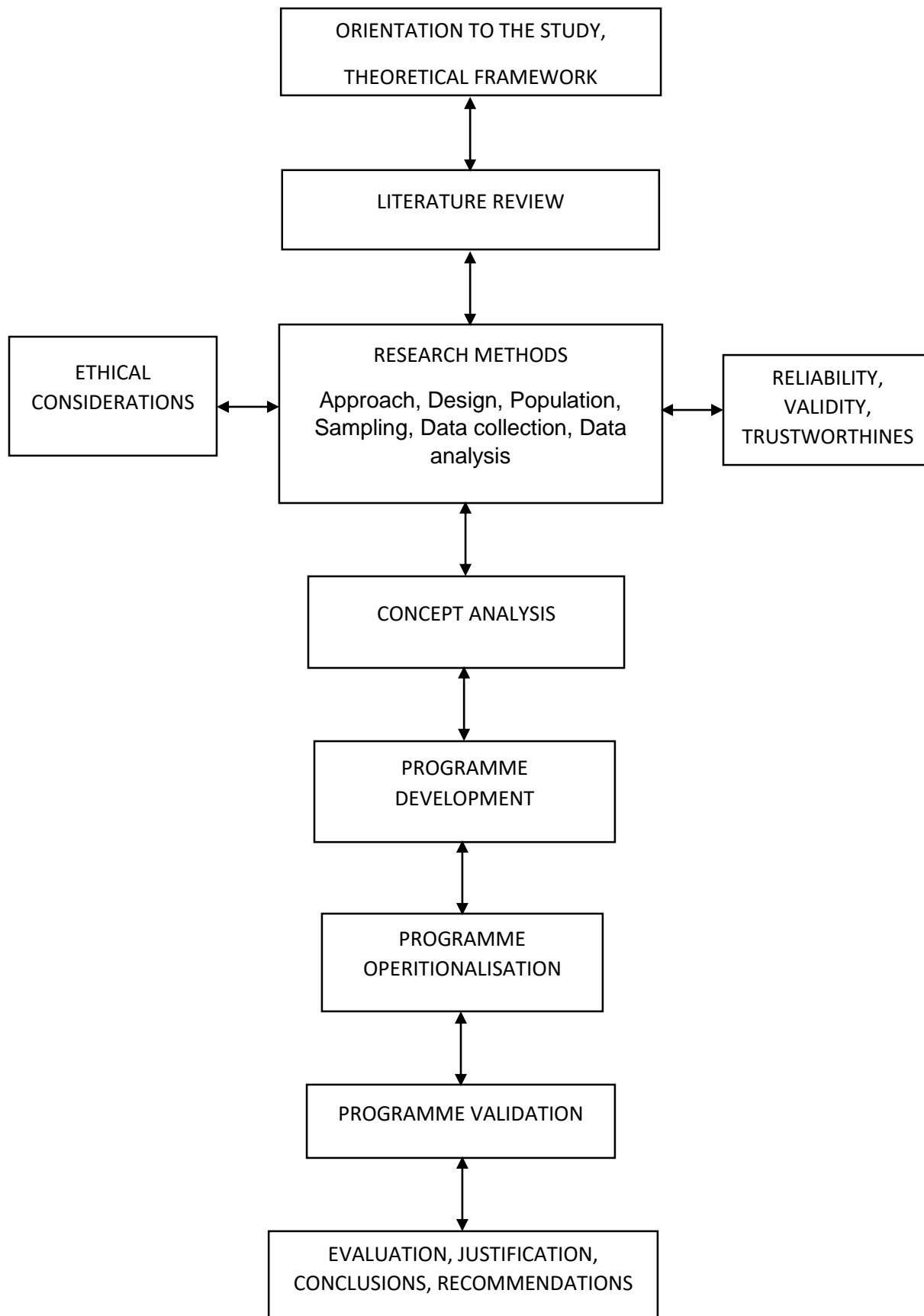


Figure: 1.4 Structure of the thesis

1.16 SUMMARY

In this chapter, an overview of the study was provided. The problem statement, purpose of the study, research objectives and questions, significance of the study and the rationale of the study were stated, and the study's operational concepts and theoretical framework were defined. An overview of the research methodology was given. The literature review is presented in the next chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 1 provided an orientation to the study. This chapter presents the review of literature accessed from many sources. A literature review involves the systematic identification, location, scrutiny and summary of written material that contains information relevant to a specific research problem. The overall purpose of a literature review was to assemble knowledge on a topic regarding what is known or what has been studied about the area and to identify existing knowledge gaps (Polit & Beck, 2017). For the purpose of this study, the literature review focused on the research objectives.

2.1.1 Literature review approach

Search engines used included books, journals, articles, thesis and dissertations, government reports, google and google scholar, online journals, library, computer databases such as Sabinet and Science Direct, radio and television news, and internet public library. These search engines were used on the basis that they provide superior support for the research process, conceptual framework and global view about the topic (Brink, 2014). The researcher reviewed the literature based on the following concepts: Comprehensive, sexual, reproductive, health, programme and learner.

2.1.2 Target population

The reviewed literature comprised research conducted globally, in Africa, sub-Saharan Africa and in South Africa starting from 2013. The researcher used literature published five years ago and less. Where sufficient information was not available, more than five years literature was included, for example Dickoff, James and Wiedenbach (1968).

2.1.3 Inclusion criteria

In this literature review, the following inclusion were used: The articles were:

- To be published in English

- To be published from 2013 – 2018
- To provide information about sexual and reproductive health programmes for adolescents globally, in Africa, sub-Saharan Africa as well as in South Africa.
- To provide information about knowledge of learners about SRH issues.
- To provide information about the impact of existing SRH programmes in schools
- To provide information about the perceptions of parents towards the provision of SRH services
- To have information about concept analysis as well as programme development.

2.2 ASSESSING LEARNERS' KNOWLEDGE ABOUT SEXUAL AND REPRODUCTIVE HEALTH

For learners to experience sexual and reproductive health, access to accurate SRH information is of the utmost importance. SRH-related information is not uniformly available to all adolescents worldwide, resulting in risky sexual behaviours (Manlove, 2015). Risky sexual behaviour implies behaviour that increases the probability of negative consequences associated with sexual contact, including HIV/AIDS or other STIs, abortions and unplanned pregnancies (Kassa, Tesfaye & Alamrew, 2013). It also includes behaviours like, having multiple partners, having risky casual or unknown sexual partners, early sexual initiation, failure to discuss risky topics prior to sexual intercourse and failure to take protective actions, such as failure to use condoms and contraceptives (Kassa et al., 2013).

According to the UNAIDS (2017), adolescents face threats to their health such as unwanted pregnancies, STIs and HIV/AIDS for various reasons, including a lack of information. Excluded groups of adolescents in developing regions include unmarried/never married women and women younger than 15 years of age.

- *Unmarried/never-married women.* In many countries in Asia and Northern Africa, and in some Francophone SSA countries, unmarried women are excluded from fertility and health surveys, or they are included but not asked questions related to sexual activity, contraceptive use and/or desired fertility. Yet, studies show that some young unmarried women are sexually active and in need of SRH services (Kassa et al., 2013).

- *Adolescents younger than 15.* Limited information is available about younger adolescents, even though in some countries more than 10% of surveyed women reported commencing with sexual intercourse before the age of 15 and some adolescents had unintended pregnancies and became mothers before their 15th birthdays (Kassa et al., 2013).
- *Youth in China.* An estimated 15% of adolescent women aged 15-19 in developing regions live in China. However, very little age-specific information is available from that country about contraceptive use, sexual and reproductive behaviours, and childbearing desires (Kassa et al., 2013).

Adolescents must be knowledgeable about key SRH topics and issues if they are to make informed decisions to protect their health and wellbeing. Many adolescents get their SRH information from poorly informed sources such as peers. Inaccurate beliefs, concerning the levels of risk associated with particular behaviours, and the effectiveness and side-effects of the different types of contraceptives, could prevent adolescents from accurately perceiving the potential consequences of their behaviours (Ngoma & Himoonga, 2016).

A study conducted by Kluge (2016) in Australia about teenagers' sexual knowledge, indicated that they were knowledgeable about HIV/AIDS but knew less about chlamydia and other STIs, which posed risks for this age group. They obtained most of their knowledge from school programmes and discussions with their mothers. The information sources young people used and trusted to find out about sexual issues, included school programmes, teachers, mothers, other female students and doctors. School programmes were the most frequently used sources. Mothers were also popular, while doctors were trusted used infrequently. Young people did not trust the media as an information source concerning sexual issues. While there was no direct relationship between knowledge and behaviour, evaluations of school programmes indicated that young people who had received sex education were more likely to delay their sexual debuts and to commence sexual relationships safely at the right time (Kluge, 2016).

Findings from reviewed literature indicate that young people receive insufficient SRH information. It is not evident on how school programmes were implemented.

2.2.1 Knowledge about condom use

Most Australian teenagers did not practice safe sex. Reasons for not using condoms included knowing the partner's sexual history (35.2%), trusting the partner (33.3%) and having unplanned sex (33.1%). More than 18% of these young people did not use condoms because they disliked condoms (30.5% males, 16.5% females) or their partners disliked condoms (24.7% males, 15.3% females). However, about 75% of these young people believed that most or all of young people in their age groups, who were sexually active, used condoms (Kluge, 2016).

2.2.2 Knowledge about HIV/AIDS

Findings by Kluge (2016) indicated that Australian teenagers were generally well-informed about HIV transmission. More than 97% of young people knew that intravenous drug use could transmit HIV, that the HIV virus could not be transmitted by hugging or through coughs and sneezes.

More than 95% of these young Australians knew that women could be infected during heterosexual intercourse and that men could be infected during homosexual intercourse, that condoms offer protection against HIV transmission while oral contraceptive pills offer no such protection. However, about 25% of these young people did not know that a pregnant HIV-positive woman could pass the infection on to her unborn baby (Bihui & Hongwei, 2016).

2.2.3 Knowledge about sexually transmissible infections

Results of a pre- and post-test study to assess knowledge about sexual health among male students at junior colleges in Pune urban area in India by Kalkute, Chithis, Mamulwar, Bhawalkar, Dhone & Pandage, (2015), showed that science students had "adequate" knowledge about sexual health when compared to arts and commerce students. Students whose parents worked in unskilled and semi-skilled occupations had "inadequate" knowledge about sexual health when compared to students whose parents who worked in skilled occupations. Parents' education levels had a positive association with students' knowledge about sexual health. In the posttest, knowledge about sexual

health of students had increased significantly when compared to the pretest. The mean posttest score was 12.61 (standard deviation [SD] 3.12), which was significantly higher than the mean pretest score of 6.34 (SD 3.23) ($p < 0.001$). Students from nuclear families had "adequate" knowledge about sexual health when compared to students from extended families. The study also showed that almost half of students (48.60%; $n=119$) had received knowledge from friends, followed by teachers (39.20%; $n=96$). Only 37.10% ($n=91$) had acquired knowledge from the Internet, while 101 students acquired knowledge about sexual health from more than one source. This study showed that imparting knowledge about sexual health during adolescence was beneficial to the students for avoiding risky sexual behaviour. Such educational programmes must be given due importance to achieve desirable behaviour change outcomes (Kalkute, et al., 2015).

A Malaysian study by Rahman, Rahman, Ibrahim, Salleh, Ismail, Ali, Muda, Ishak and Ahmad (2015) assessed SRH knowledge of adolescents attending school and compared the levels of knowledge between males and females and between older and younger groups of adolescents. This study's findings revealed that the mean knowledge score was significantly higher among females on items assessing the following: whether the genitalia could be touched freely by family members, females having attained menarche could become pregnant if they engage in sexual intercourse, whether pregnancy could occur if the penis penetrated into the vagina, whether premarital sexual intercourse caused pregnancy and whether there was a relationship between abandoned babies and premarital pregnancies (Rahman et al., 2015). The mean knowledge score, assessing whether pregnancy could be prevented by using condoms, was higher among males than females. The mean knowledge scores were significantly higher among form four and form five students than among students in forms one, two and three. The items with the fewest correct responses included: whether one can get pregnant after a single act of sexual intercourse (30.4%), whether sexual intercourse could cause STIs (12.4%) and whether washing the vagina after sexual intercourse prevented pregnancy (17.0%). Their main source of sexual information was friends (64.4%) (Rahman et al., 2015). Lack of knowledge, regarding important aspects of SRH, warranted the need to strengthen SRH education.

A cross-sectional questionnaire survey was conducted by Matesha, Ntembela, Mayaud, Said, Todd, Mujaya & Tendo (2014) in the Mwanza Region of Tanzania among randomly selected pupils, aged 12 and older, attending primary schools and secondary schools. The goals were to assess adolescents' level of knowledge about SRH, to assess the magnitude of SRH problems and to help design appropriate interventions. As many as 80% of the primary school boys and 68% of the primary school girls were sexually active; the corresponding figures were 89% for secondary school boys and 48% for secondary school girls. Vaginal sex was the most common first sexual act reported by secondary school pupils, but 40% of primary school pupils reported orogenital sex and 9% of primary school pupils reported anal sex as their first sexual acts. Almost half of primary school girls had had sexual intercourse with adults, including teachers and relatives. 'Forced sex' was reported by nearly half of primary school and secondary school girls. Of the primary school girls, 14% had been pregnant, and more than half of these pregnancies ended in illegally induced abortions. Despite a high (30%) lifetime rate of condom use, 33% and 25% of primary school boys and girls respectively, reported suffering from STIs. The STI rates were lower among secondary school pupils who had a better knowledge of STIs/HIV and fertility issues and who reported higher rates of condom use (Matesha et al., 2014). This survey demonstrated the vulnerability of school-going adolescents of the Mwanza Region of Tanzania to consequences of sexual intercourse. Comprehensive adolescent SRH programmes could help to address these issues and reduce the incidence of negative consequences.

2.2.4 Sexual/sexuality and reproductive health education in schools

Gaps in the provision of SRH education in schools were identified in the reviewed literature. Limited information was provided by teachers who might have been inadequately trained. Comprehensive sexuality education programmes in schools and communities were reported to improve learners' academic performance, postpone learners' sexual debuts, reduce the frequency of sexual intercourse, decrease the number of sexual partners, increase the use of condoms and other contraceptives, and reduce negative health consequences such as unintended pregnancies and STIs (Burke, Coles & Meglio, 2014).

SRH education is considered a lifelong process of acquiring information and forming attitudes, beliefs and values about identity, relationships and intimacy. Components of sexuality education, as viewed by the South African government, include sexuality development, reproductive health, interpersonal relationships, affection, intimacy, body image and gender roles. It addresses the biological, socio-cultural, psychological and spiritual dimensions of sexuality from the cognitive, affective and behavioural domain, including the skills to communicate effectively and make responsible decisions. The main aim of sexuality education is to provide accurate information about sexuality health and to assist youth in acquiring skills to make informed decisions and to assist them to develop interpersonal skills and to be able to exercise responsibility regarding sexual relationships (DOH, 2017).

Teenagers in Zambia criticised sex education at schools because it was presented by embarrassed and ill-prepared teachers. They also complained that they received information too late after they had engaged in sexual activity and when some learners had already given birth. Other teenagers complained that they learned about sex and relationships from friends or gathered the wrong information on their own (Ngoma & Himoonga, 2016).

Teenagers' menarche ranges from 11 to 17 years but for most it starts between the ages of 13 and 15 years. Some girls start menstruating before they turn 11 years. This might predispose them to teenage pregnancies if SRH education is not formerly provided in schools. It is also important to know the age of sexual initiation so as to determine when to introduce SRH education to school children. Young girls become sexually active at early ages. Research findings by Mulelu (2015) indicate that 33% of girls between the ages of 12 and 17 years were sexually active and girls as young as eight were sexually active, whereas girls aged 12-17 were pregnant. Most women who began their sexual activity before the age of 17 are more prone to herpes simplex infections which cause cellular reaction and might predispose them to cervical cancer. A younger female's reproductive tract is not well-developed and the skin is more likely to tear during sexual intercourse, which increases the risk of HIV infection ((Mulelu, 2015; Van Den Berg, 2014). Reportedly most teenage students' debuts in Zambia occurred at ages 15-17 (Ngoma & Himoonga, 2016). Teenagers engage in early sexual activities due to pressure

exerted by their peers and to gain acceptance among their peers. Early sexual debuts might indicate that teenagers could lack knowledge about SRH issues.

Mothiba and Maputle (2015) supported the previous researchers' findings by indicating that 62% of teenagers in Vhembe District of Limpopo engaged in sexual activities as early as 13 to 15 years of age. Of the teenagers who commenced sexual relations, 54% did so at the ages of 16 to 19 and 4% had started at the ages of 10 to 12. Early sexual debuts might violate the girls' rights and impede their education permanently (McNeely et al., 2014). Sex education should commence in primary school as teenagers aged 10-12 years are still at primary school. Sexual health of teenagers should also be taken into consideration. Teenagers might engaged in sexual activities with partners who are older than them as 48% of teenagers reportedly had sex with partners who were 21 years old and older, 43% reported their sex partners to be 19-20 years old, while 4% said their sex partners were 16-18 years old (McNeely et al., 2014).

A survey conducted among Cape Town's secondary school students in grades 8 and 11 revealed that 29.9% participated in sexual intercourse whereas 23.4% males and 5.5% females had already had sexual intercourse by the age of 14 years. The average age of South Africa women at their sexual debuts was 16.8 years as compared to 19.3 years 40 years ago (Green, 2014).

In South Africa, the teaching of life skills in formal classroom settings is reportedly absent, especially in townships where HIV infections are rife (Jansen, 2015). Makgoro (2015) revealed that teachers experienced discomfort during sex education lessons because sex education was viewed as encouraging sexual behaviour and experimentation.

In the Limpopo Province, the initiation of sexual intercourse by all population groups occurs at the mean age of 16.3 and at the median age of 16.0 years. The Mopani and Vhembe districts of the Limpopo Province reported teenagers' average of sexual debuts to be 16.2 years, which differed from that reported in other districts, namely: Sekhukhune 16.1 years, Capricorn 16.7 years and Waterberg 14.9 years. About 28% of women in Limpopo Province indicated that their first sexual experiences were unwanted (DOH, 2017).

Kluge (2016) advised that when educating youth about sexual matters one should use effective communication in a non-critical manner with open-ended questions and should use age-appropriate language. Active listening skills should be employed. Youth should be encouraged to delay the initiation of sexual intercourse and abstain from sex, and they should be encouraged to use condoms irrespective of use of other contraceptives. The youth should be taught about reproductive physiology, provided with contraceptive choices and advised to make safer choices and avoid unsafe sexual practices (Kluge, 2016).

Healthy People 2020 was introduced by the United States Department of Health and Human Services, and proposed to meet all its priorities by 2020 in all countries. One of the indicators identified was that people should be responsible for their sexual behaviours and they should have access to health care. The objectives of Healthy People 2020 were to introduce health education goals or objectives in schools addressing the knowledge and skills articulated in the national health education standards. These standards focus mainly on senior high school learners to demonstrate the ability of the student to practice health advancing behaviour and avoid or reduce risks. Schools recognise that health matters should be included in the education curriculum as part of education mission. (Inman, Van Bakergem, La Rosa, David & Garr, 2017).

A health promoting school is defined as one that organises policies, procedures, infrastructure and activities which protect and promote the health and wellbeing of students, teachers and administrators. The WHO and Healthy People 2020 identified strategies and programmes that could be introduced in schools and communities to advance health for people by the year 2020 such as sexual health, the prevention of STIs and pregnancies. It also stated sexual health as a state of physical, emotional and social wellbeing in relation to sexuality. Sexual health requires a positive and respectful approach to sexuality and sexuality relationships as well as the possibility of having pleasurable and safe sexual experiences free of coercion, discrimination and violence (Inman et al., 2017).

The South African Children's Act (South Africa, 2005) stipulates that every child has the right to access education on promotion and prevention as well as treatment of SRH-related issues. Sex education in adolescents provides opportunities for preventing HIV, pregnancies and STIs which could contribute to many reproductive complications. Adolescents should be knowledgeable about SRH as they are vulnerable to high risk sexual behaviours. Adolescents' sexual behaviours form part of normal development as human beings (Kalembo, Zgambo, & Yukai, 2014).

Most adolescents were said to be using condoms as contraceptives as a result of sex education awareness practices (Kalembo et al., 2014). Young adolescents engaging in unprotected sex are vulnerable to infections. The younger ones experience more barriers to access health care than older adolescents and adults. Therefore sex education should be provided to primary school children before they enter secondary schools (Kalembo et al., 2014).

In South Africa, sex education is offered in schools incorporated in the school-based programmes. The school is expected to cooperate as a unit to provide sexuality and contraceptive education to learners within its boundaries, especially in the rural areas of the Limpopo Province. In the Limpopo Province all clinics are integrated using a supermarket approach. This approach affects adolescents as they are impatient to wait for a long time, due to staff shortages (Kirby, Waszak, & Ziegler, 2015).

2.2.5 Teenagers' beliefs about sex and sexuality

Teenagers' opinions about sex and sexuality indicate their level of knowledge about SRH. Interviews were conducted by a member of the Perinatal HIV Research Unit at Goba Clinic in KwaZulu-Natal, South Africa (reported on the eTV channel of South Africa's national television) with school children. Makongoza (2014) reported that most interviewed school children, especially boys, wanted to experience sexual intercourse and they felt pressurised by their peers to do so. Some school children said that they competed with their peers as to with how many girls they had sexual intercourse. Those boys who had no sexual experience were considered to be "moegoos" (dumb persons). Some learners said they enjoyed group sex when they engaged in sexual relations as a

group, sometimes with one girl, sharing ideas about the same popular girl, rotating the same girl who did not refuse to have sex with different boys. If girls saw their friends having sex they also did so. Some school children said it was difficult to discuss sexual issues with their mothers because their mothers were strict. Some parents were too shy to talk to their children about sex. Children said their parents did not talk about sex except when referring to abortion or to someone's pregnancy (Ngoma & Himoonga, 2016). Teenagers' inappropriate sexual perceptions and behaviours indicate an urgent need for the development of a comprehensive SRH school programme.

2.3 THE IMPACT OF EXISTING ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH PROGRAMMES

In the USA, adolescent comprehensive sex-education programmes focus on improving reproductive health outcomes such as preventing unplanned pregnancies, increasing STI/HIV knowledge and promoting both abstinence and contraceptive/condom use (Manlove, Fish & Moore, 2015). Evaluation of the USA's programmes indicated positive outcomes as teenagers' birth rates had declined by 15%. However, the USA reported an increase in STIs, which indicate the need for rigorous SRH school programmes.

2.3.1 Teenage pregnancies

Teenage pregnancy is an indicator for the impact of existing SRH services provided to school children. Globally one million teenagers become pregnant each month and 33% of these teenagers terminate their pregnancies. Teenage maternal death rates were as high as 48%. Factors contributing to these deaths included poverty at home limiting financial resources to seek health care and lack of social support (WHO, 2017).

Although the rate of teenage pregnancy in the USA is at its lowest level in nearly 40 years, it remains the highest among the most developed countries globally. Kost & Henshaw, (2015) report that 67.8 out of every 1000 women, aged 15-19, become pregnant each year in the USA and 82% of these pregnancies are unintended.

About 50% of teenage pregnancies in South Africa are unplanned. Adolescents, aged 15-21, battle with motherhood and the demands of schooling. Many teenage school dropouts are related to pregnancy and the demanding roles of being a parent and a learner

simultaneously (Bezuidenhout, 2016). Low levels of education make it impossible to find well-paying jobs causing both the teenage mothers and their babies to be their parents' burdens. If girls could terminate their pregnancies before it is visible, they could avoid dropping out of school but many adolescents were unaware of termination of pregnancy (TOP) services (Bezuidenhout, 2016). Lack of information ruin young people's futures.

The Northwest Province's Department of Education raised a concern about the escalating number of teenage pregnancies in one of their schools. Seventeen learners from grades 10, 11 and 12 (aged 14-18) were in advanced stage of pregnancy, with imminent child birth. This prompted the school governing body to request a guardian of each girl to be nearby while the learner was writing examinations (Tshehle, 2014).

A study, conducted in the Limpopo Province, focused on factors associated with teenage pregnancies. The incidence of unplanned pregnancies was 33% in the Vhembe and 34% in Waterberg Districts. Tradition played a role by encouraging teenagers to give birth by praising them for proving that their womanhood (DOH, 2017). This behaviour demonstrates ignorance, which could be the result of lack of knowledge.

Poor teenagers believed multiple sex partners could help them financially, especially older persons, although such behaviour exposes them to unplanned pregnancies, STIs and HIV. The child support grant also influenced some teenagers to become pregnant for financial reasons. Large households, with limited supervision and orphans who live without adult supervision, might afford more 'unsupervised' opportunities for adolescents to engage in sexual activities than households with adequate adult supervision (Van den Berg, 2014). Poverty seem to influence teenagers' sexual behaviours, a comprehensive SRH programme will empower the teenage to be independent and make informed decisions.

Mkamba and Moolla (2016) reported that the MEC for Education in the KwaZulu Natal Province was shocked when reading that about 13000 learners in that province were affected by pregnancies. The MEC demonstrated the extent of crisis in the KwaZulu-Natal

Province by indicating that, during 2013 and 2014, 1263 school girls were pregnant in the Pinetown District, 1193 school girls in the Umlazi District, 1725 in Vryheid and 1383 in Empangeni.

South Africa's Minister of Health reported that during 2015, 1121 South African school children were pregnant aged 10-14, and 301 experienced maternal complications (Mkamba & Moolla, 2016). The Minister consequently allowed health care providers to supply condoms to all sexually active teenagers (Mkamba & Moolla, 2016). Teenage pregnancy kept on escalating, because supplying condoms would be ineffective without a comprehensive SRH programme.

Learner pregnancy rates are higher in schools located in poor areas and in poorly resourced schools. The consequences of teenage pregnancy and childbearing include maternal illnesses, miscarriages, stillbirths, neonatal morbidity and mortality, low birth weight babies. Children of teenage mothers often experience health and developmental problems. Teenage pregnancies pose a substantial financial burden to the South African tax payers to fund child health support allowances (Hoffman & Maynard, 2017).

A survey conducted in 2007 in four of South Africa's nine provinces showed that 19.2% of females, aged 12-19 years, had been pregnant at least once and most of these pregnancies were unwanted. However, 5.8% of the males in the same age group had impregnated girls. In addition, reported condom use by youth, aged 15-24, during their most recent sexual encounters dropped from 85.2% to 67.5% for males and from 66.5% to 49.8% for females, according to two nationally representative surveys conducted respectively during 2008 and 2012 (Beksinska et al., 2014).

In 2008, the Youth Risk Behaviour Survey reported that 30% of female learners were sexually active and 24% had been pregnant. Of the sexually active female learners, 15% did not usually use contraception, and 67% did not use condoms. In addition, 71% of the sexually active male learners did not use condoms, and of the 4.4% of sexually active learners who had had a STIs, only half had received treatment (Beksinska et al., 2014).

Government and non-government organizations (NGOs) initiatives have been implemented since South Africa's transition to democracy, such as national media

campaigns promoting awareness of HIV/AIDS among youth (such as Soul City, Soul Buddyz and Love Life programmes); peer education programmes (such as Old Mutual, Have Hope AIDS Peer Group Project, the Society for Family Health's Abasha Phezulu Peer Helper project); youth SRH service provision programmes (the National Adolescent Friendly Clinic Initiative [NAFCI] launched in 2001 and Love Life programmes); HIV prevention awareness programmes, including the Stepping Stones HIV prevention programme (Beksinska et al., 2014).

South Africa's current guiding policy for youth SRH initiatives is the 2012 Integrated School Health Policy 3 (ISHP), which outlines SRH care for youth. This policy states that all learners in secondary schools should receive SRH counselling, particularly about high risk behaviours (Beksinska et al., 2014). Dual-method contraception (the simultaneous use of condoms and one other contraceptive), HIV counselling and testing (HCT) and STI screening services should be provided for sexually active learners by an on-site nurse or via referral to a healthcare facility, offering these services. However, provision of SRH preventive services, including contraception and condom provision in schools, and the 2005 Children's Act, enabling youth aged 12 and older to access SRH care services without parental consent, met resistance in spite of the most recent youth HIV, STI and pregnancy statistics (Johnson, 2016). All these challenges indicate the existing SRH programmes are not effective.

2.3.2 South African government school health programmes

In 1999, South Africa's Department of Education initiated the school health programme by establishing the National Policy on HIV and AIDS for Learners and Educators in Public Schools and Students and Educators in Further Education and Training Institutions (Beksinska et al., 2014). As a result, the HIV and AIDS Life Skills Education Programme was implemented during 2000, with the aim of reducing the vulnerability of young people to HIV and AIDS and enhancing their knowledge and skills for making responsible sexual behaviour decisions. The programme was implemented through Life Orientation (LO) subjects across all grades. However, evaluation studies identified challenges to this

programme, such as insufficient teachers and a lack of integration of Life Orientation into the schools' systems and policies (Beksinska et al., 2014).

The 2003 National School Health Policy (NSHP) was then implemented as a health promotion and preventive school-based initiative for youth, integrating school and other district health services. Some of the problems identified, with the implementation of the NSHP, included poor service provision, suboptimal and inequitable nurse-to-school ratios, and the absence of referral services to respond to problems identified via screening assessments (Beksinska et al., 2014).

Questions about the implementation and efficacy of the discussed policies have far-reaching implications with regard to the state of youth SRH. Reports have evaluated the effectiveness of different youth SRH interventions. Three years after the Love Life programme had been initiated, a baseline study in all South African Provinces revealed no significant differences in HIV and STI prevalence between youth living in communities with Love Life youth centres and NAFCI interventions compared with those in communities with no such interventions. It appeared that awareness or knowledge about these youth interventions did not necessarily translate into behaviour change. However, a qualitative study on NAFCI in the Greater Tzaneen sub-district in the Limpopo Province showed that adolescents used the NAFCI services at the clinic, especially contraceptive, STI and pregnancy services. Despite this, pregnancy and STI rates in the area did not decrease and HCT services remained under-utilized (Henrich, Bookmeyer, Shrier & Shahar, 2015).

A cross-sectional nationally representative household survey showed that men and women who participated in at least one Love Life programme were significantly less likely to be infected with HIV than those who did not do so. Another cross-sectional population-based household survey on 3 123 youth, aged 18-24, in four South African provinces reported that multimedia exposure, and not face-to-face programme exposure, was found to be protective against HIV infection (Beksinska et al., 2014).

An evaluation of 12 youth centres under the Love Life programme, DOH centres and Youth and Adolescent Reproductive Health centres was conducted nationally among youth aged 12-24 and their parents. The survey showed that while there was a fair degree of awareness of these centres, only 29% of youth had visited these sites. Centres offering recreational activities were busier than those providing SRH services only. Although several youth programmes have been implemented to address SRH, youth still face barriers to access SRH care. Healthcare workers reportedly lacked adolescent-friendly training or restricted services to adolescents younger than 16 (Beksinska et al., 2014). Therefore, it is imperative to develop a comprehensive SRH programme as part of the school curriculum to ensure access to youth-friendly services.

Knowledge about sexual and reproductive issues was low in the Limpopo Province. Friends were the common source of SRH information for teenagers. Television was a source of information in most districts of the Limpopo Province, except in the Mopani District. Perceived lack of confidentiality in schools caused teenagers to be hesitant to communicate with teachers about SRH aspects for fear that their personal issues would be shared with other people (DOH, 2017).

Adolescents from disadvantaged families might start childbearing at or before 17 years of age, while adolescents from advantaged families might start childbearing in their late 20s or early 30s. Those adolescents who start planning for pregnancies late emphasised their career plans, university education, money issues and personal development as reasons for doing so. Despite freely available family planning services and termination of pregnancy services (Act no 92 of 1996), the pregnancy rate among teenagers continues to increase in the Limpopo Province (Mulelu, Khoza & Nemathaga, 2015).

2.3.3 Use of contraceptives by the youth

The use of contraception by teenagers could reduce the number of unwanted pregnancies if accessible and used properly. The effectiveness could be enhanced if contraception would be provided at schools. Some teenagers lack knowledge about contraception and about the physiology of pregnancy. Teenagers in the USA were

reportedly knowledgeable because of pregnancy prevention programmes in the school curriculum. However, there were speculations that the inclusion of sexuality programmes in the curriculum raised teenagers' levels of sexual activity and encouraged adolescents to start engaging in sexual intercourse. The rate of teenage pregnancy in the USA has declined by 86% as a result of increased use of contraceptives, availability at school health centres in the USA (Mulelu et al., 2015; Kost & Henshaw, 2015).

The teenage pregnancy rate in the United Kingdom increased between 2006 and 2007 prompting the PHC department to encourage school health nurses to issue the morning after pill to all adolescents when they needed these pills. The United Kingdom instituted a text service as an innovative approach helping young people to access emergency contraceptives and also sexual health advice from trained health professionals (Martinez, 2017).

It has been estimated that about 60% of South African youth are sexually active, with the risk of unwanted pregnancies. It has been noticed that more boys (48%) use condoms than girls (7%). Reportedly girls used injectable contraceptives and few youth used unreliable methods such as withdrawal or the rhythm method. Most boys in Cape Town used condoms as a result of frequently conducted sex awareness campaigns. Few youth had never used the condoms (DOH, 2017). Using contraceptives effectively could enable adolescents to develop into mature adults, complete their education, start their lifelong careers, become economically independent and prepare for marriage and childbearing when personal and social circumstances are favourable to do so (Dhlamini, 2016).

As many as 88% of teenagers knew about the use of contraceptives whereas 12% did not possess this knowledge. There is a need for a comprehensive school-based SRH service maintaining teenagers' privacy and confidentiality. The availability of youth centres and effective sexual and reproductive education were recommended by Mothiba & Maputle (2015).

Research among students in a western cultural background found that both male (80%) and female (90%) students considered contraception to be the responsibility of females (Martinez, 2017). According to Seloilwe, Jack, Letshabo, Bainame, Veslove, Mokote,

Kobue and Muzila (2014) females believed that they were expected to demonstrate their fertility by having children before they got married. Most females had negative perceptions about engaging in sexual activities before marriage without their parents' consent. Skidmore and Heyter (2014) reported that female students were more concerned about unplanned pregnancies than HIV and condoms were often regarded negatively. Pregnancy was these teenagers' main concern, not HIV infection. Some teenagers feared contraceptives' side-effects such as weight gain, headaches and irregular per vaginal bleeding (Skidmore & Heyter, 2014).

Female students feared rejection by boys when refusing to indulge in unprotected sex exposing them to risks of HIV, other STIs and pregnancy. Boys indulging in sexual intercourse without condoms coerce female students to consent to unprotected sex. Both males and females felt uncomfortable discussing condom use (Thompson-Robinson, Richter, Shegog, Weaver, Trahan, Sellers & Brown, 2015).

Shier, Butler and Lewis (2015) described the challenges of contraceptives as being messy; to be fitted by the doctor or trained health care professional, increasing women's risk of cardiovascular diseases and causing weight gain and breast tenderness, menstrual changes, severe menstrual cramps and increased risk of infection. These perceived challenges contributed to teenagers' low usage rate of contraceptives.

A study at the University of the Free State, involving students from African and Western cultures, found that students had 2-5 sex partners since their registration at tertiary education institutions. Of the students who engaged in sexual activities, 20% were not using any contraceptives. This finding indicates a need to empower school learners about sexual and reproductive matters (Shier et al, 2015).

Of the participating teenage mothers in the Limpopo Province, 79.1% knew that using condoms at every sexual encounter could prevent pregnancy. However, only 34.1% of these teenage mothers knew that contraceptives did not affect fertility negatively. Some of the girls were not comfortable using contraceptives because they expected

contraceptives to make them obese, to have pimples and to cause fertility complications should they desire to become pregnant. Of the teenagers who had babies, 56.6% knew that emergency contraceptives could prevent pregnancies (DOH, 2017). It remained unknown as to why these teenage mothers failed to use emergency contraceptives despite being knowledgeable about emergency contraceptives.

2.3.4 HIV/AIDS and sexually transmitted infections among teenagers

Sexually transmitted infection rates among teenagers could indicate the impact of SRH services in schools. Factors that increase teenagers' chances of being infected with STIs and HIV/AIDS include commencing sexual activities at a young age, having many sex partners and engaging in unprotected sex (Christofides, Muise & Desmarais, 2015).

The WHO estimated that approximately 20% of adolescents contract curable STIs annually, and almost half of all new cases of HIV occur among adolescents. Reasons suggested for the low adolescent condom use include poor SRH knowledge, inadequate access to contraceptive products and services, dislike for condoms, and low self-efficacy for condom use (Aransiola, Asa, Obinjuwa, Olarewaju, Ojo & Fatusi, 2013).

Tu et al. (2016), of the Indiana University of Medicine in the USA, told Reuters Health that half of the teenage girls contract STIs within two years of first having sex. Teenage girls have the risk of contracting at least one of three common STIs, namely chlamydia, trachomonitis, and Neisseria gonorrhoea. Most girls became infected by the age of 15. Repeated infections were common and 25% of these women became re-infected with the same organism. Young teenagers were vulnerable to contract STIs and were not screened on time because of health care providers' perceptions that young teenagers are unlikely to suffer from STIs. Late screening, diagnoses and treatment of STIs could result in severe reproductive health complications. The high incidence of STIs emphasised the need for a comprehensive SRH programme for school children (Tu et al., 2016).

Findings by Upreti, Regmi, Pant and Simkhada (2018) indicated that the overall knowledge regarding STIs and HIV/AIDS among young people was high although the level of knowledge differed according to education, gender, and area of residence. Knowledge about condoms was also very high but correct and consistent correct condom

use with premarital, extramarital, and casual sex partners seems to be low. The overall sexual behaviours of young people were unsafe. Thus young peoples' SRH issues need to be further addressed and explored in order to promote safer and more responsible sexual behaviour.

The incidence of new HIV transmissions in Uganda decreased dramatically when Bill Clinton supported a comprehensive sex education approach, including information about contraception and abortion. On the contrary, George Bush declined to support SRH programmes that included abortion. This decline was associated with high maternal mortality rates, complications of unsafe abortions and increased numbers of HIV/AIDS infections. Ugandan AIDS activists, perceived the Global Gag Rule, brought about by the Bush administration, to be undermining community efforts to reduce HIV prevalence and HIV transmission rates (Wikipedia, 2014).

On the 7th December 2013 ministers of education and health from 20 countries made a commitment on providing comprehensive sexuality education and reproductive health services for adolescents and young people in Eastern and Southern Africa. These ministers realised that HIV remains an urgent problem, with 430 000 new infections per year among young people aged 15-24 and with an increase of 50% in deaths among adolescents living with HIV globally. The ministers believed that quality education and health outcomes could be achieved through comprehensive sexuality education provided by well-trained teachers, adequately resourced and supported to deliver programmes in (within the formal curriculum) and out of school (Wikipedia, 2014).

Factors that contribute to teenagers' susceptibility to HIV and other STIs, by engaging in unprotected sexual intercourse, include peer pressure, engaging in risk taking behaviours and using drugs. Females might be vulnerable to infections if they engage in sexual intercourse with older men who might have had many sex partners. Forced sex might cause genito-urinary trauma with lacerations risking infections. Girls involved in commercial sex work face increased risks of contracting HIV and STIs (Van den Berg, 2014).

Van den Berg (2014) also revealed that female students, notwithstanding their cultural background, preferred having sexual relationships with older men who have a high risk of being HIV infected because older men usually have larger numbers of sex partners than younger men. Female students have a high risk of HIV infection if they cannot negotiate for safer sex. The young ones also have sex with strangers, family members, boyfriends or sugar daddies (“blessers”) and might not negotiate for condom use (UNAIDS, 2017).

Women who commenced their sexual activities before the age of 17 were more prone to herpes simplex infections, causing cellular changes, predisposing these women to an increased risk of cervical cancer. Young people should be encouraged to abstain from sexual activities because of potential detrimental effects later in their lives. Sexually active young people should be taught about the effects of early sexual debuts, including teenage pregnancies and STIs (Van den Berg, 2014).

Results of a study conducted by Netshikweta, Tshililo, Maputle, Tshitangano and Mapaya (2013) indicated that 50.3% of youth lacked comprehensive knowledge about HIV/AIDS and preventive practices (50.2%).

South Africa, like most SSA countries, has a high HIV infection rate of 30.1% among youth. The HIV/AIDS prevalence indicate in the Limpopo Province was estimated to be 21, 9%. The HIV/AIDS prevalence rates for specific age groups in the Limpopo Province were: 14% for those aged 15 to 19, 26.7% for those aged 20 to 24, and 37.3% for those aged 25 to 29 years (Shilumani, 2014).

2.3.5 Accessibility of sexual and reproductive services

Even though the Ghanaian government has tried to comply with the 1994 ICPD agreement, the following gaps were identified:

- Programmes focus on information rather than on practice
- Services are more concentrated in urban than in rural areas
- The use of contraceptive services remain limited (Republic of Ghana, 2015).

Ghana has to revisit its policies and programmes to pay attention on the identified gaps.

Young adolescents might experience greater challenges to access contraceptives than older adolescents and adults. A study by Ramathuba (2013) revealed that adolescents did not access contraceptive services easily because the nurses lacked interpersonal skills, nurses' inadequate comprehensive knowledge about contraception and adolescents' use of alternative contraceptive methods such as herbs.

Nearly half the world's population is under the age of 25. Yet around the world, these young people are unable to access the information and services required to protect their SRH, and plan their lives. In the world's poorest countries, contraceptive use is low, and one in three women has a child before reaching the age of 18 while issues of reproductive health and family planning for adolescents might remain a taboo (Sheffield & Shawa, 2013).

Mda, Mahoney, Yogeswaran and Wright (2013) also reported that adolescents were scared to go for family planning at the clinic because of the thought that health care workers at the clinic know them and they are friends to their parents. In addition adults who are attending the clinic will comment that they are still young, why do they want to prevent pregnancy.

2.4 PARENTS' PERCEPTIONS ABOUT SEXUAL AND REPRODUCTIVE HEALTH SERVICES AT SCHOOLS

2.4.1 Support for the programme

Most parents supported SRH education in schools because it enhanced parent-child communication. According DiCenso et al. (2013) the Sexuality Information and Education Council of the USA, reported that 93% of the adults participating in their survey, supported sexuality education in high school and 84% support it in junior high school. In fact, 88% of parents of junior high school students and 80% of parents of high school students believed that sex education in school facilitated parents' and adolescents' communication about sex. Also, 92% of adolescents wanted both to talk to their parents about sex and to have comprehensive in-school sex education.

A study in Nigeria by Akande and Akande (2017), showed that 63.8% of teachers and 53.0% of parents strongly agreed that sex education should be a compulsory school subject. The secondary level of education was viewed by most participants (students 66.8%, teachers 59.0%, and parents 69.0%) as the ideal stage where sex education should be introduced. At the secondary level, adolescents have acquired sufficient mental maturity to assimilate what is been taught in class and to make informed decisions about sex.

Teachers felt that sex education should start at the age of ten years while parents felt that fourteen years of age would be more appropriate. Adolescents at these ages were probably at their pubertal stage where rapid development of their sex characteristics takes place (Akande & Akande, 2017).

Aransiola et al. (2013) revealed that teachers were supportive of including SRH in the syllabus, and to teach this subject. However, many teachers were uncomfortable with the inclusion of contraceptive issues but accepted biology-focused pubertal-related information.

Dhlamini, (2016) cited that parents of children at Mtubatuba School in KwaZulu-Natal showed concern about the high pregnancy rate where five girls gave birth every month. There are no SRH services at these schools.

Ibis (2014) reported that parents were concerned that the lack of information and guidance about SRH in schools contributed to high rates of pregnancy and HIV among young people in Nw'amita community in the Tzaneen are, in the Limpopo Province. Some parents felt that laws protecting young women's rights, such as access to SRH services without parental permission after the age 12, limits parental control and interferes with parents' childrearing practices (Ibis, 2014). Parents were also concerned about the accessibility of SRH services to school children as clinics closed early and health care professionals at clinics were not friendly and did not treat clients' information in a confidential manner.

Similarly, findings by Akim and Monique (2016) in Durban South Africa, supported the introduction of sex education in the national school curriculum. However, some parents were negative about the provision of SRH services to learners. This is supported by

Ntukula, Liljestrom and Umleavyo (2014) who found that most male parents perceived talking about sexual health with children as shameful, immoral and encouraging the children to engage in sexual intercourse.

2.4.2 Influence of religion

Religious believers might not support the introduction of SRH services in schools arguing that it could promote immorality. Catholic schools in Texas in the USA, follow the Catholic Church's teachings opposing sex education maintaining that SRH programmes might do more harm than good. They contend that children are not mentally and emotionally ready for this type of instruction, and believe that exposing the young to sexual and reproductive programmes might encourage students' preoccupation with sex. The Catholic Church believes that parents should be the primary sex educators (DiCenso et al., 2013).

Islam prohibits teaching SRH to adolescents. Wray, Ussher and Perz (2014) found that regular religious practices were associated with later sexual debuts, but that sexually experienced adolescents, regularly practicing their religion, were less likely to use contraception. Social control, exercised by family members and social networks, were particularly important for young women. These controls could pose barriers for adopting preventive behaviors, resulting in sexual risk-taking among younger generations of devoted Muslims. Lebesse et al. (2015) cited that parents encouraged their adolescent children to attend church because religion emphasises sexual abstinence. That study reported that church doctrines and different religious beliefs provided group counselling sessions for adolescents who were members of a particular church.

2.4.3 Influence of culture

Sexual and reproductive issues are sensitive issues in most cultures. Study findings showed different responses from participants where some said it is important to include it in the school curriculum while others said it should not be included. Some teachers experienced discomfort teaching such a sensitive subject stating that learners considered them as their parents making it awkward to discuss SRH issues with children. Some parents and school administrators might not want to include sexual health topics such as

condoms, abortion and homosexuality in the school curriculum. However, effective sex education can prevent unplanned pregnancies and STIs, including HIV/AIDS (Lebese, 2013).

According to Phiri, Lebese and Maputle (2013), parents might be uncomfortable to communicate with their children about sex and sexuality, shifting the responsibility to teachers. However, some teachers also experience discomfort discussing sex and reproductive matters in the classroom, fearing that such discussions might encourage permissive sexual behaviours and experimentation among adolescents. Parents could not always assist their teenage children to learn about SRH issues. Similarly, Phiri et al. (2013) indicated that some African cultural beliefs and norms forbid talking about sex with young adults or adolescents. This might contribute to adolescents' engagement in unprotected sexual intercourse which they could have avoided if their parents had talked to them timeously. Mulaudzi (2007), cited in Phiri et al. (2013), reflects that Vhavenda initiates were warned against engaging in sexual activities at an early age. The same study also reported that young girls were taught how to engage in sexual intercourse, which caused confusion to the teenagers (Phiri et al, 2013). Teenagers need access to adequate information to enhance informed decisions making.

2.5 SUMMARY

In this chapter different study findings and documents, related to adolescent SRH, were reviewed. Study findings related to adolescent SRH at global, regional and country levels were presented. The reviewed literature indicated that secondary school learners in developing countries had more knowledge about and better access to SRH services than those in underdeveloped countries. The next chapter will discuss the research methodology adopted for the current study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The previous chapter discussed literature related to the study. Chapter 3 presents the research methods and procedures adopted by the study. The philosophical world view, research settings, populations, sampling, data collection procedures, and data analyses will be addressed. Measures to ensure reliability and validity/trustworthiness as well as ethical considerations will also be discussed. This chapter forms step one of Orem's nursing process which is assessment. Data collection, analysis and interpretation were used to develop the comprehensive SRH programme.

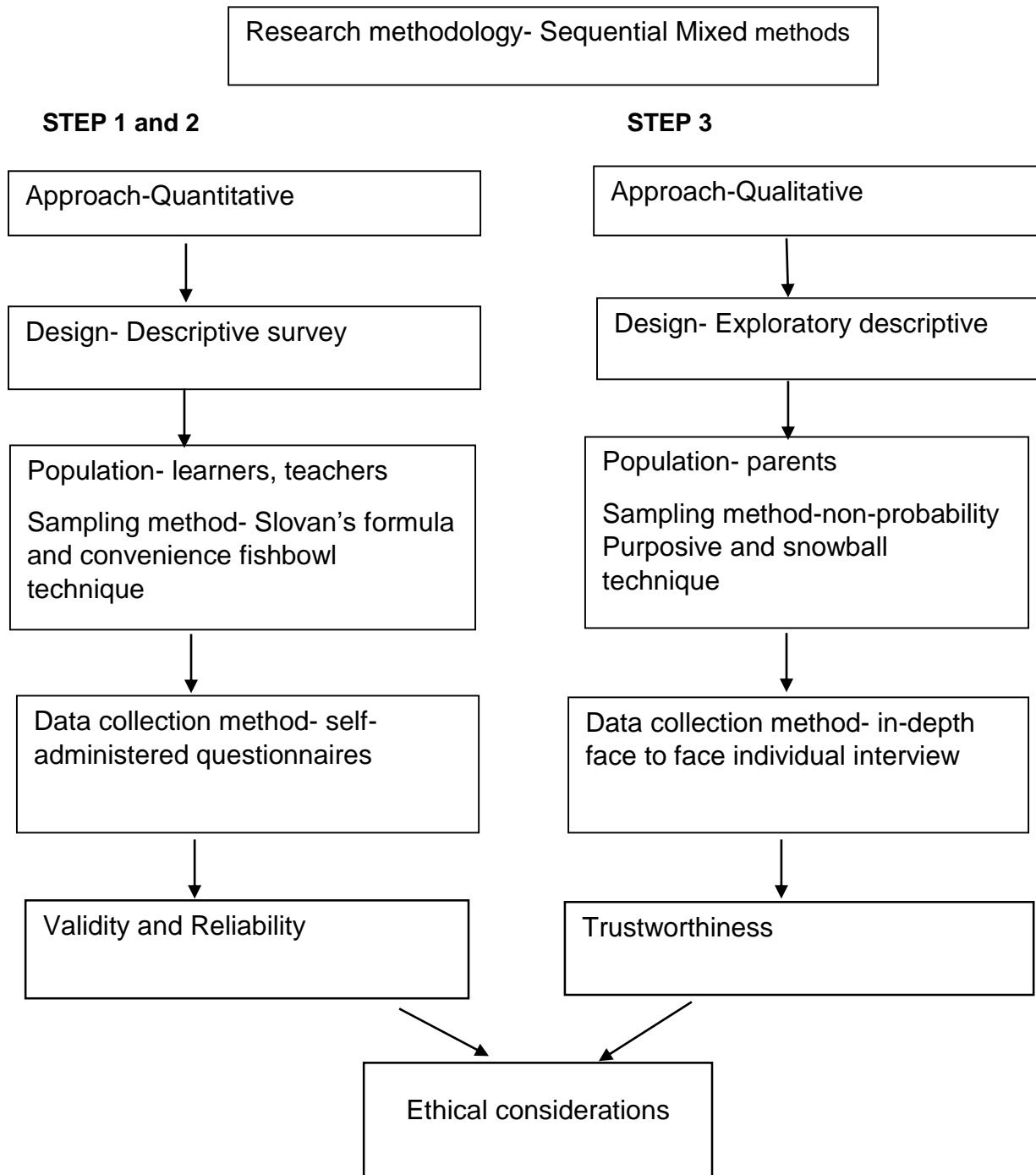


Figure 3.1: Summary of research methodology

3.2 PHILOSOPHICAL WORLD VIEW

A philosophical world view refers to basic sets of beliefs that guide the researcher's actions. It is the philosophical orientation about the world and about the nature of research that the researcher brings to the study. Pragmatism, as a worldview, guided the researcher's action of choosing to use mixed methods because the researcher did not believe that the research problem could be solved by adopting only one research approach. Pragmatism is not committed to any one system of philosophy and/or reality. This applies to mixed methods research in that inquirers draw liberally from both quantitative and qualitative assumptions when they engage in their research. Hence, the researcher believed in pragmatism, since it allows for the mixed methods approach, which opens the door to adopting multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis (Creswell, 2014).

3.3 RESEARCH APPROACH

A research approach comprises the plan and procedures for the research process, encompassing all steps from broad assumptions to detailed methods of data collection, analysis, and interpretation (De Vos, 2017).

This study used explanatory sequential mixed methods, which is an approach to inquiry involving the collection of both quantitative and qualitative data, integrating the data from the two approaches and using distinct designs that involve philosophical assumptions and theoretical frameworks. It is considered to be sequential because the initial quantitative phase was followed by the qualitative phase. The advantage of this form of inquiry was that the combination of both quantitative and qualitative approaches provided a more complete understanding of the research problem than one approach could achieve (Creswell, 2014).

The use of mixed methods provided strengths that offset the weaknesses of both quantitative and qualitative research. Objectives that could not be addressed by the quantitative method were answered by using the qualitative method. Bias and weaknesses of using a quantitative method (questionnaire) were overcome by a follow-

up inquiry through the use of the qualitative method (namely in-depth face to face individual interviews), while statistical data from the questionnaire enabled the generalization of certain themes or constructs produced in the qualitative analysis (Creswell, 2014).

The researcher decided to use mixed methods approach because each method has both strengths and limitations, and considered how both strengths can be combined to develop stronger understanding on how to develop a comprehensive SRH programme for secondary school learners. Quantitative approach was first used to assess knowledge of learners about SRH issues and to assess teacher's views about the impact of the existing SRH programmes. Qualitative approach was used to explore the perception of parents towards the provision of SRH services in schools. Quantitative findings were integrated with qualitative findings, which assisted the researcher to develop the SRH programme.

3.4 RESEARCH DESIGN

Research design is a blueprint or detailed plan of how a research study is to be conducted, operationalising variables so they can be measured, selecting a sample of interest; collecting data to be used as a basis for testing a hypothesis, and analysing the results (Creswell, 2014; De Vos, 2017).

Non-experimental descriptive survey was used for quantitative approach. Survey studies are concerned with gathering information from a sample of the population to describe a phenomenon (Brink, 2014). The design was relevant to the study as it concerned gathering information about the knowledge of learners regarding SRH issues.

A phenomenological qualitative design was used. Phenomenology is a process of learning and constructing meaning of human experience through intensive dialogue with persons who are leaving the experience. The researcher conducted in-depth face to face individual interviews with participants to explore parents' perceptions regarding the provision of SRH services in schools. This design was relevant for the researcher to understand the phenomenon from the participants' perspective and how the participants give meaning to SRH services (Creswell, 2014).

3.5 RESEARCH SETTING

The Limpopo Province comprises five districts: Sekhukhune, Waterberg, Capricorn, Mopani and Vhembe. The study was conducted in secondary schools in two districts, namely Capricorn and Mopani. Two schools were selected from Capricorn District, and three schools in Mopani District. The reason for choosing Capricorn and Mopani districts was the high pregnancy rate 29% and 33% respectively among school girls (Matlala, 2015). There are 360 secondary schools in the Capricorn District distributed in 29 circuits. Mopani District has 24 circuits with 253 secondary schools. Average enrolment of learners in each school was 700 and the average number of teachers per school was 32. Most schools are in rural areas. There are better facilities such as libraries and recreational facilities in urban schools than in rural schools.

3.6 THE RESEARCH PROCESS

The study is organised into three steps.

Step one is a quantitative approach which addressed objective 1

Step two is also a quantitative approach which addressed objective 2

Step three is a qualitative approach which addressed objective 3

Table 3.1: Presentation of the research process

Step	Objective	Research approach and design	Population	Sampling method	Data collection	Data analysis
1.	To assess knowledge of secondary school learners about SRH issues. Assessing	Quantitative non-experimental descriptive survey	Secondary school learners in Capricorn and Mopani Districts	Learners Non-probability Purposive sampling Slovan's formula Schools	Questionnaire	Statistical package of social sciences (SPSS) version 23

	Orem's self-care deficit.			Purposive Sampling		
2.	To assess the views of teachers about the impact of the existing SRH programmes for teenagers.	Quantitative non-experimental descriptive survey	Secondary school teachers in Capricorn and Mopani Districts	Non-probability Convenience sampling Fishbowl technique	Questionnaire	Statistical package of social sciences (SPSS) version 23
3.	To explore parents' perceptions regarding the provision of SRH programmes in schools.	Qualitative, Exploratory descriptive	Parents of learners at selected schools	Non-probability snowball	In-depth face to face individual interview	The Tesch's principle

3.6.1 Step1: Quantitative approach

A quantitative research approach was adopted to address objectives 1 which was assessing the knowledge of secondary school learners about SRH issues.

A non-experimental descriptive survey was used. Brink, Van der Walt and Van Rensburg (2014) define non-experimental as a study which is carried out in natural settings, where there is no manipulation of subjects and phenomena are observed as they occur. This method was relevant to the current study because the study was conducted at secondary schools without manipulating or controlling the independent variables. The major purpose of a non-experimental descriptive survey is to describe phenomena and explain the relationship between variables. The design could be useful for generating knowledge in a variety of situations, where it is difficult, unethical or impossible to employ an experimental approach (Brink et al, 2014; Woods & Catanzaro, 2017).

3.6.1.1 Population

The population for objective 1 comprised of secondary school learners who were enrolled for the academic year 2016. The average number of learners in each class was 30. The total population from five schools was 598 learners.

Accessible population comprised of learners enrolled at the selected secondary schools for the 2016 academic year who were present during data collection.

The target population consisted of learners from selected secondary schools because these schools reported large numbers of teenage pregnancies.

3.6.1.2 Sampling Technique and Sample Size

Purposive sampling was used to select two schools in Capricorn District and three schools in Mopani District. Schools with high pregnancy rates were purposefully selected.

A minimum sample size of 240 learners was required for the study. The sample size was calculated using Slovan's formula below:

$$n = \frac{N}{1 + N(e)^2}$$

Where

n = sample size of the adjusted population.

N= population size of learners in grade 8 to 12

e = accepted level of error set at 5% (Polit & Beck, 2017).

The sample was distributed proportionally to the size of the learners (Table 3.2). In each school all grade 12 classes were selected, while for grade 8 and 11, only two classes in each grade were randomly selected for the study. Learners in the selected classes were voluntarily asked to participate in this study.

This method was chosen because it reduced bias, was objective, permitted the researcher to estimate sampling errors and selection was random (De Vos, 2017; Polit & Beck, 2017; Brink, 2014; Burns & Groove, 2014).

Table 3.2: Sample frame for learners

School	No of learners	Sample Size Proportion to Size
A	135	54
B	124	50
C	120	48
D	101	40
E	118	47
Total	598	240

3.6.2 DATA COLLECTION

Self-administered questionnaires were used to collect data. Data from learners were collected after obtaining informed consent from parents as most learners were younger than 18 years of age and could not legally sign their own consent forms. Those learners who were 18 or older signed the consent forms after the purpose and the significance of the study had been explained. Measures to ensure confidentiality and anonymity were also explained. Permission was obtained from the Department of Education (see Annexure D). Data were collected after school to avoid disrupting the school programmes.

The researcher collected data with the assistance of two hired data collectors who distributed and collected the questionnaires. A briefing session with hired data collectors was conducted before data collection commenced. Clarifications were provided where necessary. Data were collected over a period of five days as one school was visited each day. All questionnaires were returned as the researcher and the assistants distributed them to respondents who completed the questionnaires immediately. Questionnaires were collected on the same day as soon as they had been completed by the learners. Respondents were not left to complete the questionnaires on their own as some clarifications were required. The use of questionnaires was relevant as data were collected from a large group of learners (Polit & Beck, 2017; Brink, 2014).

The strength of a structured questionnaire was the ability to collect unambiguous and easy to analyse answers, leading to quantitative analysis. This ensured anonymity, thus

honest answers could be provided without fear of identification and all participants responded to the same questions in the same sequence (Bowling, 2013).

Although 240 learners completed questionnaires, 127 questionnaires were spoilt as respondents made crosses in both yes and no responses, and some questions were not answered, thus remaining with 113 questionnaires. Most learners took 45 minutes to complete the questionnaires but some required more than an hour to do so.

Development of the questionnaire – Refer to Annexure G

The researcher derived questions for developing the questionnaire from the literature review (see chapter 2), from the researcher's personal observations and from consultations with educators and curricula specialists.

The questionnaire was discussed with a statistician, a language editor and the researcher's supervisors from the University of Venda. Polit and Beck (2014) emphasise that experts in the content should be called upon to analyse the adequacy of item representing the topic under study to ensure content validity. The questionnaire was only available in English. The researcher and the assistants clarified issues when requested to do so.

Structure of the questionnaire for learners

The questionnaire consisted of seven sections.

SECTION A: Demographic data.

SECTION B: Sexual debuts.

SECTION C: Knowledge about contraception

SECTION D: Knowledge about STIs, HIV/AIDS and pregnancy

SECTION E: Knowledge about the risk for unplanned pregnancy, STIs and HIV

SECTION F: Source of information about SRH

SECTION G: Accessibility of SRH services by secondary school children

3.6.3 DATA ANALYSIS

Descriptive statistics were used to analyse the data. Descriptive statistics describe and summarise data by converting and condensing the data collected into an organised, visual presentation or picture in a variety of ways to display the meaning of the data. A statistician analysed the data using the Statistical Package for Social Sciences version 23. Graphics, tables and charts were used to display the results visually, chi-square was also used to compare differences in comparable variables (Burns & Grove, 2014).

3.6.4 MEASURES TO ENSURE VALIDITY AND RELIABILITY

Content validity was ensured through intense literature review during questionnaire development. The questionnaire was then given to experts in SRH field, colleagues and supervisors to analyse the items to check whether they adequately represented the content universe in the correct proportion. Reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring (Polit & Beck, 2017). The questionnaire was pre-tested by requesting 10 learners to complete the questionnaire. These learners were similar to the study's population but these 10 who completed the questionnaires did not form part of the actual study. The purpose of the pre-test was to determine how long the learners might take to complete the questionnaires and to identify any potential and/or incomprehensible items in the questionnaire before conducting the actual data collection. Questions which were not clear were rephrased to provide clear meaning. Participants answered the same questions in the same sequence. Only learners with validly signed consent forms received questionnaires.

3.7 STEP 2: QUANTITATIVE APPROACH

In this step, objective 2 will be discussed. A non-experimental quantitative research design was used to assess the impact of the existing SRH programmes provided in schools.

3.7.1 Population

The population for objective 2 comprised secondary school teachers who were employed at the selected school.

The accessible population were teachers who were present at the selected school during data collection.

Target group for this study comprised teachers teaching Life Orientation at the selected secondary school.

3.7.2 Sampling procedure

Table 3.3: Sampling frame for teachers

School	No of teachers	TOTAL SAMPLE	SAMPLE %
A	36	7	20
B	28	5	20
C	34	6	20
D	36	7	20
E	36	7	20
Total	170	34	100

Purposive sampling was used to select two schools in Capricorn District and three school in Mopani District municipality to make a sample of five schools. Schools with high pregnancy rates were purposefully selected.

Purposive sampling was used to obtain a sample of 20% of teachers per school to make a sample of 34 teachers for both Districts. Teachers teaching Life Orientation were automatically included in the sample. Teachers who were not teaching Life Orientation and were interested in participating in the study, were selected using fishbowl sampling technique.

3.7.3 Inclusion and exclusion criteria

Only teachers teaching at secondary schools in the Capricorn and Mopani Districts of the Limpopo Province were included, both males and females.

Primary school teachers, and teachers in other Districts were excluded.

3.7.4 DATA COLLECTION

Self-administered questionnaires were used for data collection. The researcher collected data with the assistance of two hired data collectors who distributed and collected the questionnaires. Briefing sessions were conducted with the hired data collectors before data collection commenced. Participants' information letters were provided to teachers before issuing the questionnaires of which they read and signed to indicate acceptance to participate (see annexures E & F).

The questionnaire consisted of open-ended and closed-ended questions. Questionnaires were distributed to respondents who completed them in their own time, allowing a maximum of five days for completion. The researcher provided respondents with contact details in case clarity was needed (Polit & Beck, 2014; Brink, 2014).

Development of the questionnaire – Refer to Annexure H

The researcher derived questions from the literature review (see chapter 2), from the researcher's personal observations and from consultations with two educators, two health professionals and two curricula specialists. The consultants agreed that the components of the questionnaire accurately reflected the essence of the concepts being studied and that the questions were appropriate before final copies were produced and distributed. The questionnaires were written in English only as all teachers were fluent in English. Pilot study was conducted with five teachers who were not included in the study. Results indicated that teachers well understood the questionnaire which was written in English, therefore the questionnaire was implemented as such.

Structure of questionnaire for school teachers

The questionnaire consisted of two sections

Section A: Demographic data of the respondents

Section B: Availability of sexual and reproductive health services at schools

Section C: How sexual and reproductive health information is provided in schools

Section D: Impact of the SRH services

3.7.5 DATA ANALYSIS

Descriptive statistics were used to analyse data. Descriptive statistics describe and summarise data by converting and condensing collected data into an organised, visual representation or picture to portray the meaning visually. A statistician analysed the data using the Statistical Package for Social Sciences version 23. Graphics, tables and charts were used to display the results.

3.7.6 MEASURES TO ENSURE VALIDITY AND RELIABILITY

Validity was ensured by requesting experts, colleagues and supervisors to evaluate the face and content validity of the questionnaire. Literature review guided the construction of the questionnaire. The questionnaire was piloted for feasibility before the actual data collection commenced. Five teachers participated in the pilot study. Shortfalls were identified and corrected before the actual implementation. The fact that data were collected from known groups who elicited characteristics required for the study, ensured reliability. The researcher did not influence the completion of the questionnaires as teachers completed the questionnaires on their own and were answering the same questions in the same sequence.

3.8 Step 3: QUALITATIVE APPROACH

An explorative qualitative approach was used to address objective 3, which aimed to explore parents' perception regarding SRH services provided to secondary school learners in the Limpopo Province. A qualitative research approach was chosen because the study was conducted in a natural setting where human behaviour and events occur, namely secondary schools in the Limpopo Province.

3.8.1 POPULATION AND SAMPLING

The population for objective 3 were parents of learners at selected schools. The population consisted of both males and females with the average age of forty nine years old. Non-probability sampling method was used to select parents who had teenage children at the selected schools. The snowball technique was used to select parents whose children attended one of the selected schools. In non-probability samples, elements were selected by non-random method and there was no way to estimate the probability that each element had of being included in the sample. Parents who were available and willing to be interviewed, participated in the study (Brink, 2014; Polit & Beck, 2014; De Vos, 2017). The sample consisted of eighteen parents.

3.8.2 DATA COLLECTION

In-depth face to face individual interviews were conducted to explore parents' perception regarding SRH services provided in schools. The researcher started each interview by introducing herself and the topic. The purpose and significance of the study were outlined, parents were assured about confidentiality and anonymity issues and requesting them to sign consent forms after the participants had indicated that they understood everything. Participants were assured that there will be no link between their names and interview transcripts, and that numbers will be used to ensure anonymity.

- One central question was asked.
- An audiotape recorder was used to record responses to help the researcher to remember the answers.
- Field notes were taken by the researcher

Interviews were conducted at participants' homes after securing appointments with them. The interviews were conducted either in xiTsonga or Sepedi depending on each participant's preferred language. One central question was asked ***“Tell me, how you feel about introducing SRH services to schools learners?”*** The question was translated into xiTsonga and Sepedi for the participants to enhance maximum participation. The average time spent with each participant was 45 minutes. Data were collected over a period of two weeks including weekends and holidays.

Participants were encouraged to talk as freely as possible and to be honest about their opinions. Probing was applied as a means of encouraging participants to provide more information and clarification. Non-verbal cues were observed and noted in the field notes. Communication techniques such as clarification, reflection, paraphrasing, questioning, maintaining eye contact and nodding were used. Data saturation was reached after interviewing 18 participants. At the end of each interview, the researcher provided the participants with the summary of the interview with the purpose of giving them an opportunity to clarify, refine or correct the interviewer’s summary in order to achieve positive closure (Brink et al., 2014).

3.8.3 DATA ANALYSIS

Tesch’s principles of data analysis were used. In qualitative research data analysis is generally not a distinct step, it is done concurrently with data collection. The information from the voice recorder was first transcribed verbatim before data analysis commenced. Data were coded based on the themes and subthemes derived from the responses to the questions with the assistance of an independent coder. The recorded and the documented data were compared. Data belonging to one group were assembled in one place to assist further analysis. Themes and sub-themes were formulated (Creswell, 2014). The researcher and the independent coder analysed the data without consultation and then had a discussion to reach consensus about specific themes and sub-theme.

Table 3.4: Tesch’s eight steps of inductive, descriptive open coding technique

Step	Technique
1. Reading through the data	The researcher got a sense of the whole by reading all the verbatim transcriptions carefully. This produced ideas about the data segments and how they looked and what they meant. The meaning emerged during reading while writing down all ideas as they came to mind. The researcher carefully and repeatedly read the transcripts of all the participants and became thoroughly familiar with the content.

	An uninterrupted period of time to digest and think about the data in totality was created. The researcher engaged in data analysis and wrote notes and impressions as they came to mind.
2. Reduction of the collected data	The researcher scaled down the collected data to codes based on the existence or frequency of concepts used in the verbatim transcriptions. The researcher then listed all topics that emerged during the scaling down. The researcher grouped similar topics together, and those that did not have associations were clustered separately. Notes were written in margins and the researcher started recording thoughts about the data in the margins of the papers with the verbatim transcripts.
3. Asking questions about the meaning of the collected data	The researcher read through the transcriptions again and analysed them. This time the researcher asked herself questions about the transcriptions of the interview, based on the codes (creating mental picture codes while reading) based on the frequency of the occurrence of specific concepts. The questions were “Which words describe it?” “What is this about?” and “What is the underlying meaning?”
4. Abbreviations of topics of codes	The researcher started to abbreviate the topics that had emerged as codes. These codes needed to be written next to the appropriate segments of the transcription. Differentiation of the codes was achieved by including all meaningful instances of a specific code’s occurrence. All these codes were written in the margins of the paper opposite the relevant data in a different colour as to the one in Step 3.
5. Development of themes and sub-themes	The researcher developed themes and sub-themes from coded data and the associated texts and reduced the total list by

	grouping topics that relate to one another to create meaning of the themes and sub-themes.
6. Compare the codes, topics and themes for duplication	The researcher in this step reworked the data from the beginning to check the work for duplication and to refine codes, topics and themes where necessary. Using the list of all codes she checked for duplication. The researcher grouped similar codes and recoded others where necessary so that they fit in the description.
7. Initial grouping of all themes and sub-themes	Data belonging to each theme were assembled in one column and preliminary analysis was performed.
8. Summary of themes and sub-themes	The final step was the meeting between the researcher and co-coder to reach consensus on themes and sub-themes that each one has come up with independently. (Cresswell:2014)

3.8.4 MEASURES TO ENSURE TRUSTWORTHINESS

Lincoln and Guba (1995) describe trustworthiness as the value, applicability, neutrality and consistency of an inquiry. It is essential for the study to have trustworthiness established so as to be considered methodologically appropriate and worthy to attention. Trustworthiness was achieved through strategies that demonstrate credibility, transferability, dependability and confirmability (Lincoln & Guba 1995).

- **Credibility (Truth value)**

Credibility was ensured by prolonged engagement of the researcher with participants, whereby sufficient time was invested with the participants during interview to test for misinformation and distortions, and to build trust. Credibility was also ensured through member checks, whereby each participant could review a summary of his/her interview

to verify the researcher's interpretations and conclusions (Polit & Hungler, 2015; Brink, 2014; Lincoln & Guba, 1995).

- **Transferability (Applicability)**

Thick descriptions and verbatim quotations were presented so that the researcher could judge the appropriateness of transferring the study to another setting. A dense description of the research method was given to enhance transferability. Purposive snowball sampling of participants was done to ensure thick descriptive data (Lincoln & Guba, 1995).

- **Dependability (Consistency)**

The research method was adequately described in order to ensure consistency. Dependability was ensured by playing back what has been taped. Coding and re-coding of the study findings was done. Findings were recorded by an independent coder (Lincoln & Guba, 1995).

- **Confirmability (Neutrality)**

Findings that appear to be more bizarre or unusual were re-checked. Conformability was ensured by playing the tape back, comparing with field notes to verify if what the participants said was what has been reported. The researcher also achieved conformability through prolonged engagement with participants during in-depth interviews as well as reflection and verification (Lincoln & Guba, 1995; Polit & Hungler, 2015).

3.9 ETHICAL CONSIDERATIONS

When humans are used as subjects in scientific investigation, a researcher is responsible for ensuring that the research is conducted in an ethical manner. Failure to meet this responsibility undermines the whole scientific process research. To conduct research in an ethical manner means that the researcher must carry out the research competently, respect and protect the rights of humans used as subjects, manage resources honestly and communicate results accurately. In this study care was exercised to consider the

ethical responsibility to protect and respect the rights of the learners, teachers, parents who participated in the study (Polit & Hungler, 2015).

Permission to conduct the study

Permissions to conduct the study was obtained from the following structures:

- University of Venda Ethics Committee (see Annexure B)
- Department of Education, Limpopo Province (see Annexure D)
- The participants (signing informed consent forms) (see Annexure F1)
- Parents consented for minor participants (see Annexure F2)

Fundamental ethical principles were adhered to:

- **Principle of respect for persons**

This involves the right to self-determination. Self-determination implies that an individual has the right to decide whether or not to participate in a study. One has the right to withdraw from the study anytime and has the right to refuse to give information and has the right to ask clarification about the purpose of the study. Individuals with diminished autonomy require protection. Included in this category are children, mentally impaired, unconscious patients and institutionalized patients. This right was explained to all participants and informed consent was obtained prior the study (Brink, 2014; Polit & Hungler, 2015).

- **Right to full disclosure**

According to Polit and Beck (2017) participants have the right to make informed, voluntary decisions about their participation in a study after a full disclosure of the nature of the study, researcher responsibility, participants' rights to refuse participation and the likeliness of the risk and benefits that might be incurred should be clarified beforehand. The researcher explained to the participants the aim of the study. Its objectives were outlined. Participants were told that refusing to participate in the study will not expose them to any risks (see Annexure E).

- **Informed consent (see Annexure F)**

Informed consent means that participants have adequate information regarding the research; are capable of comprehending the information; and have the power of free choice, enabling them to consent voluntarily to participate in the research or decline participation. The researcher is obliged to provide the participants with relevant and adequate information when obtaining consent. The information given included clarifying the purpose of the research study, the method or procedure to be followed in obtaining information, the expected duration of the interview, the nature of the participation expected and how results would be used and published. The identity and qualifications of the researcher was disclosed to the participants. The participants were made aware of their right to participate or not to do so, and to withdraw at any time without any risk to them. The participants were offered an opportunity to ask questions to which the researcher gave honest answers. A clearly delineated area for signatures of both the researcher and participants was left open to enable them to sign (Polit & Beck, 2017; Brink, 2014).

- **Scientific Honesty**

The researcher demonstrated respect for scientific honesty by protecting the integrity of scientific knowledge. The researcher exercised honesty in whatever was done during the study by avoiding the following: fabrication/falsification, forging, claiming non-existent information or reporting on something that was actually not done (Brink, 2014). The researcher recorded all that was done throughout the study, including statements or responses of participants in order to demonstrate scientific honesty.

- **Principle of beneficence**

According to Polit and Beck (2017), the principle of beneficence refers to doing no harm to other people. It implies that a researcher should never expose participants to any harm, but should minimise harm and maximise benefits. It addresses the following:

- **Freedom from harm**

Exposing participants to experiences that result in serious or permanent harm is unacceptable. Such practices include testing the effectiveness of a new drug on a participant. The researcher avoided inflicting any psychological harm by carefully considering the phrasing of questions, allowing participants to ask questions, responding appropriately to their questions as well as providing debriefing sessions.

- **Freedom from exploitation**

The researcher did not coerce participants to take part in the study if they were unwilling to do so. Participants were assured that their refusal to participate will not be used against them.

- **Risk Benefit Ratio**

The researcher examined the balance of benefits and risks for participating in this study before embarking on the research. Benefits can be seen as positive values provided by the researcher while risks can be seen as negative values or the possibility that harm may occur to subjects, resulting from participation in the research (Polit & Beck, 2017). Approval to undertake the research was granted by the University of Venda Health and Safety Research Ethics Committee and the Limpopo Province Department of Education. (Refer Annexure B and D)

- **Principle of justice**

This principle includes the subjects' rights to fair selection and treatment and their rights to privacy (Brink, 2014).

- **Right to Privacy**

Privacy refers to the collection of data with the participant's knowledge and consent. It addresses the following: Confidentiality, which involves the researcher' responsibility to protect all data collected within the scope of the project from being made public and

should never be shared with outsiders unless specific permission is granted. Anonymity is the act of keeping all individuals nameless in relation to their participation. The researcher cannot link a participant with any data provided. Confidentiality and anonymity was maintained. Anonymity was achieved by using numbers for each subject. Information provided by subjects was not be divulged or made available to any other person or shared with any outsiders, except the researcher's supervisor, independent co-coder and the statistician (Burns & Grove, 2014).

3.10 SUMMARY

In this chapter, the research approaches and designs were explained. These included the study population, the research setting, and the data collection and data analysis procedures. The instruments used to collect data also discussed including validity and reliability. Furthermore, ethical issues which were considered during the study were outlined. In the next chapter, the analysis and discussion of the current study's findings will be presented.

CHAPTER 4

RESEARCH FINDINGS AND DISCUSSION

4.1 INTRODUCTION

The research methodology and design, including measures to ensure validity and reliability, trustworthiness and ethical considerations were discussed in the previous chapter. The objective of this chapter is to analyse raw data and interpret the findings related to the development of a comprehensive SRH programme for secondary school learners in the Capricorn and Mopani Districts of the Limpopo Province. An explanatory sequential research design was used. Quantitative data were analysed first, followed by qualitative data analysis and interpretation. Both quantitative and qualitative results were integrated in the discussion of the findings which were compared and contrasted with, or contextualised within, relevant literature. Orem's Self-Care theory was also applied, specifically to identify self-care deficits with regard to SRH. The SPSS computer program (version 23) was used to analyse quantitative data. Data were summarised and presented using descriptive statistics. Tables, charts, graphs, Chi-squares and percentages were also used to present the findings. Tesch's principles of data analysis were used to analyse the qualitative data. Themes and sub-themes were formulated according to the participants' responses.

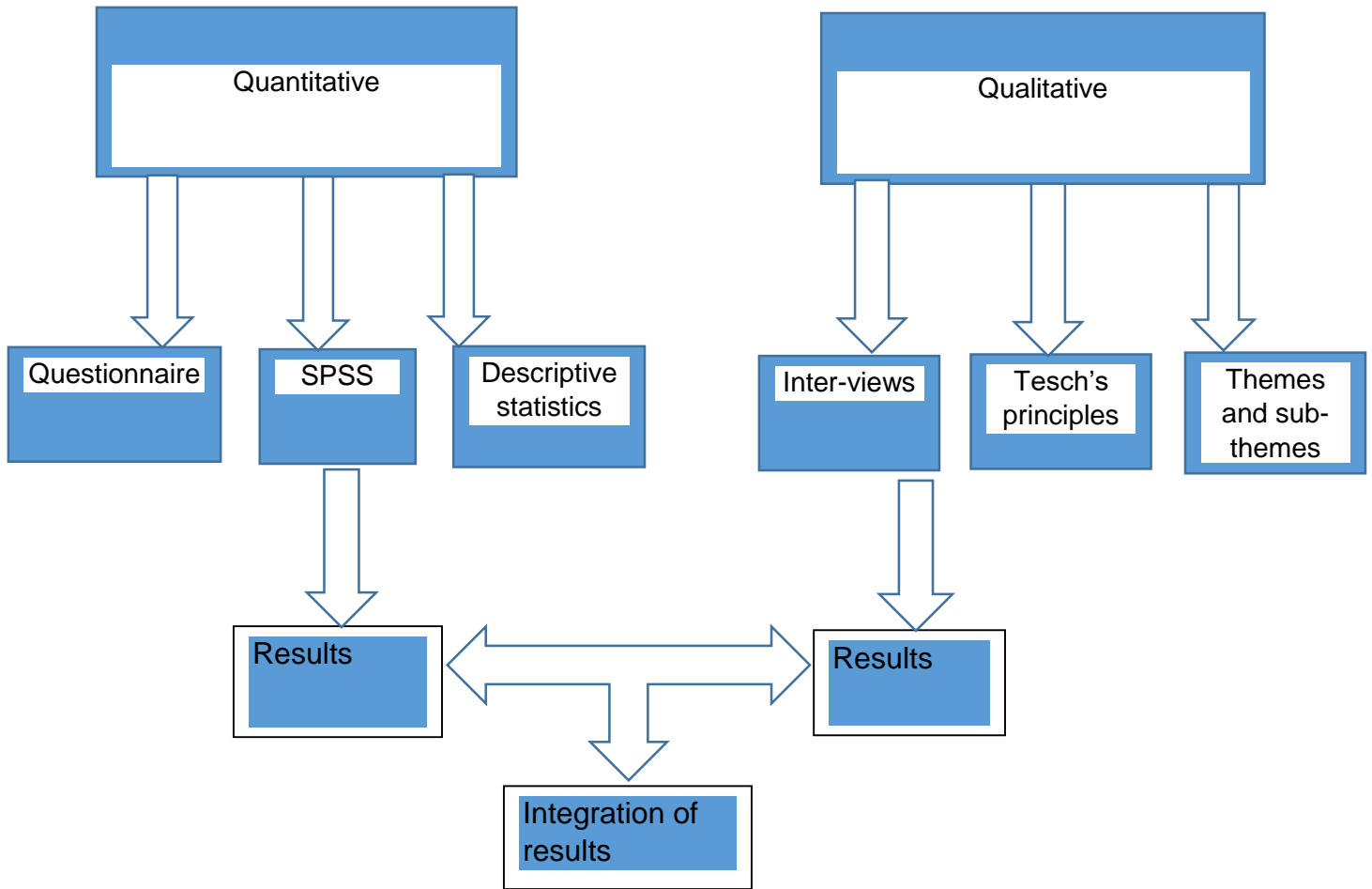


Figure 4.1: Data analysis process

The following objectives were achieved:

1. Knowledge of secondary school learners about SRH health issues were assessed.
2. Teachers' views about the impact of the existing SRH programmes provided in schools were obtained.
3. Perceptions of parents towards the provision of SRH services in schools were explored.

Step1 Quantitative analysis

OBJECTIVE 1: Assessing knowledge of secondary school learners in the Capricorn and Mopani Districts Limpopo Province about SRH issues.

In reporting information obtained from the 113 learners who completed questionnaires, the total number was indicated by N=113 and any other number of responses was indicated by n.

This chapter is divided into demographics; prevalence and factors associated with sexual activity; knowledge of contraception; knowledge about STI's including HIV/AIDS; knowledge about pregnancy; source of information about SRH services and accessibility of SRH services at school.

4.2 Demographic characteristics of the learners

Table 4.1 shows that (73%; n=82) of respondents were females and only (27%; n=31) were males. This was because male learners were reluctant to participate in the study. Both females and males learners need SRH services about prevention and treatment of STIs, including HIV and AIDS, sexual health information, education and counselling as appropriate to human sexuality, reproductive health and responsible parenthood (Floyd & Latimer, 2013).

The majority (45%; n=51) of the respondents were in the age group 17-18 years followed by those in the age group 15-16 years (27%; n=31). The mean age of the respondents was 16.8 ± 1.8 years range from 13 to 22 years. Kluge (2016) advised that when educating young persons about sexual matters one should use age-appropriate language. Age was an important variable to enable the researcher to develop an age-appropriate SRH programme.

Most (91%; n=103) were from public schools and only (9%; n= 10) in private schools. The Mopani and Capricorn Districts of the Limpopo Province are mostly rural areas with a few private schools. Seventy percent (70%; n=79) were from rural areas as compared to (30%; n=34) from urban areas.

A greater proportion (41%; n=46) was in grade 12 followed by (21%; n=24) in grade 11. Few respondents (8%; n=9) were in grade 8. Parents of grade 8 learners were probably not comfortable for their children to be exposed to the questionnaire about SRH issues therefore refused to give the required consent. This refusal of grade 8 learners' parents to give consent support DiCenso et al. (2013) findings that some parents considered their children not to be mentally and emotionally ready for SRH information, believing that exposure to SRH programmes might foster learners' preoccupation with sex.

Sixty eight per cent (68%; n=77) of the learners were from rural areas and (32%; n= 36) were from urban areas. The Limpopo Province has more rural than urban areas. It was important to include this variable to determine the extent of the need of SRH services in the different locations. This item assisted the researcher to consider the rural-urban distribution of SRH services when developing the SRH programme for secondary schools.

Fifty one percent (51%, n=58) of the respondents were from Capricorn District and (49%; n=55) were from Mopani District.

Table 4.1: Demographic profile of the respondents N=113

	No	%
Gender		
Male	31	27
Female	82	73
Age		
13-14	12	11
15-16	31	27
17-18	51	45
19+	19	17
School type		
Public	103	91
Private	10	9
Grade		
8	9	8
9	19	17
10	15	13
11	24	21
12	46	41
Location		

Urban	36	32
Rural	79	68
District		
Mopani	55	49
Capricorn	58	51

4.3 Prevalence and factors associated with sexual activity

Sixty one per cent (61%; n= 69) (95% CI: 51% to 70%) of the respondents reported sexual intercourse. The mean age to start sexual intercourse was 15.6±1.4 years range from 12 to 20 years. Findings are supported by Ngoma and Himoonga (2016) who reported that most teenage sexual debuts in Zambia occurred from 15 to 17 years of age. Mulelu et al. (2015) and Van Den Berg (2014) also found that in South Africa, 33% of girls between the ages of 12 and 17 years of age were sexually active. Mothiba and Maputle (2015) found that in Limpopo, 54% of teenagers had engaged in sexual intercourse for the first time between the ages of 16 to 19 years and 4% started when they were 10-12 years old. Kluge's (2016) research indicated that the average age of first sexual intercourse in South African women was 16.8 years.

Peer pressure (35%; n=23) followed by (23%; n=15) pressure from boyfriend and (10%; n= 7) friends were the most common reasons to start sexual activity.

Findings are supported by Kluge (2016) who indicated that about 28% of women in South Africa said their first sexual experiences were unwanted, while others were pressurised by older boyfriends. Kluge's (2016) findings appear to be in consistent with those of Lebese (2013) indicating that early sexual debuts among teenagers in the Limpopo Province were influenced by peer pressure. Similarly, Lebese et al. (2015) found that most girls in the Limpopo Province were lured by boys to have unprotected sex.

Slightly more than half (56%; n=38) said they have one sexual partner and (44%; n=29) had 2 or more partners. The current study's findings do not support those of Christofides et al. (2015) indicating that large numbers of sex partners increased teenagers' chances of becoming infected with STIs and HIV. A study conducted at the University of the Free State, in South Africa, found that students reported having had sex with two to five sexual

partners since their registration at the university (Bezuidenhout, 2016).

4.4 Association between selected demographics and sexual activity

Table 4.2 presents the relationship between sexual activity and selected demographic information of the respondents. The prevalence of sexual experience was higher among males than females (63% versus 60%), however, the result was not statistically significant ($p>0.05$). Learners who were sexually active were significantly older than those not involve in sexual activity (17.3 ± 1.6 versus 16.2 ± 1.9 , $p<0.05$).

Table 4.2: Association between selected demographics and sexual activity N=113

	Sexually Active		p-value
	Yes (%)	No (%)	
Gender			
Male	19(63)	11(37)	0.766
Female	50(60)	33(40)	
Age (mean±sd)	17.3±1.6	16.2±1.9	0.001
School type			
Public	63(62)	38(38)	0.168
Private	4(40)	6(60)	
Grade			
8	4(44)	5(56)	0.001
9	4(21)	15(79)	
10	13(87)	2(13)	
11	18(75)	6(25)	
12	30(65)	16(35)	
Location			
Rural	43(57)	33(43)	0.193
Urban	25(69)	11(31)	
District			
Mopani	55(78)	7(22)	0.015
Capricorn	42(53)	37(46)	

Sexual activity significantly increase with grade ($p<0.05$) and learners in Mopani were more likely involved in sexual activity than those in Capricorn (78% versus 53%, $p<0.05$). There was no statistical relationship between school type and location ($p>0.05$).

4.5 Knowledge of Contraception

All learners who were not sexually active indicated that they abstain from sexual intercourse. Of the female learners who were sexually active (20%; n=10) said they used protection and contraception, (95%; n=18) male learners said they use protection. This finding of the current study is supported by Mothiba and Maputle (2015) who reported that 88% of teenagers, participating in their study, knew about the use of contraceptives whereas 12% did not know how to use contraceptives. Of these, most (80%; n=19) use condoms and (17%; n= 5) injections. Mda et al. (2013) also found that many teenagers used male condoms because they were accessible in public places and could be bought at shops and pharmacies. Mda et al. (2013) further concur with the findings for this study when they found that few teenagers used injections because they were scared to visit the local clinics as the clinics' nurses knew the teenagers and asked annoying questions like *“do you have boyfriend if you want family planning services?”*

However, findings are in contrary with Ramathuba (2013) which indicate that inadequate knowledge about effective regular contraceptive use, accounted for one out of five unplanned pregnancies. Similarly, Mlambo (2015) found that the incorrect usage of contraceptives, and misconceptions about contraceptives, existed among teenagers.

Table 4.3: Association between selected demographics and use of protection N=113

	Use protection and/or contraception		p-value
	Yes (%)	No (%)	
Gender			
Female	10(20)	40(80)	0.135
Male	18(95)	1(5)	
Age(mean±sd)	17.5±1.6	16.1±1.3	0.001
Grade			
8	1(25)	3(75)	0.005
9	3(75)	1(25)	
10	10(76)	3(24)	
11	15(83)	3(17)	
12	29(97)	1(3)	
Location			
Urban	21(84)	4(16)	0.976
Rural	36(84)	7(16)	

District			
Mopani	20(80)	5(20)	0.541
Capricorn	36(86)	6(14)	

Table 4.3 illustrates the association between use of protection and/or contraception and selected demographics. Boys were more likely to use protection than girls (95% versus 20%), ($p=0.135$). The study findings are not supported by Beksinska et al. (2014) who found that 71% of sexually active male learners did not use condoms because they considered it to be the responsibility of females to use contraceptives. Use of protection and/or contraception significantly increased with grade ($p<0.05$). In addition, older learners were more likely to use protection and/or contraception than their counterpart (17.5 ± 1.6 versus 16.1 ± 1.3 , $p<0.05$). Findings of the current study concur with that of Kassa et al. (2013) who cite that in China, limited SRH information is available for younger adolescents, even though in some countries more than 10% of surveyed women reported commencing with sexual intercourse before the age of 15 and some adolescents had unintended pregnancies and became mothers before their 15th birthdays.

There was no significant difference between use of protection and location and district ($p>0.05$).

4.6 Reasons for not using protection/contraception

More than twenty percent (24%; $n=17$) said they do not have knowledge about contraceptives. This is different from the findings by Mothiba and Maputle (2015) which found that eighty eight (88%) of teenagers knew the use of contraceptives whereas 12 % do not know how to use contraceptives. Lack of knowledge about different methods of contraception results in teenagers stopping the use after trying only one method which make them experience uncomfortable side effects. Lack of knowledge may also result in using the contraceptives incorrectly.

Eighteen percent (18%; $n=12$) showed ignorance. This is supported by the findings by Seloilwe et al (2014) which indicates that females believed that they are expected to demonstrate their fertility by having children before they can get married as they believed that contraceptives will result in inability to bear children later in life. Ignorance goes hand in hand with lack of knowledge. Female learners need to be empowered that they do not

have to proof their fertility, they have to plan for their children to be born at the right time when they are ready to be parents. This can only be possible if SRH services are available in schools.

Eleven percent (12%; n=9) said they did not have time to go to the clinic because is too far. Easy access to contraception helps to reduce the incidence and cost of teen pregnancy (PPFA, 2013). Accessibility of SRH services remains a problem in South African schools including Limpopo Province, hence the alarming rate of teenage pregnancy. Findings by Ramathuba, Lebese, Maputle and Khosa (2013) revealed that adolescents were not accessing contraceptives services freely due to interpersonal skills of nurses, inadequate comprehensive knowledge about contraception and use of alternative methods such as herbs. Inaccessibility to family planning was found to be a hindering factor as teenagers had to travel almost 10km to the clinic. School linked clinic will help in breaking this barrier.

Less than eight percent (7%; n=4) said boyfriends did not want the use of protection/contraception. Fear by female students of rejection by boys when refusing to indulge in unprotected sex exposes them to the risk of HIV infection (Thompson-Robinson et al, 2015). Female learners become vulnerable to boys because of lack SRH information, thus exposing them to unfavorable consequences. They do not have the courage to say no to unprotected sex because they are not empowered with skills to do so.

Few respondents (16%; n=11) said contraceptives make them gain weight. This is supported by Shier et al (2015) who described the complications of contraception as being messy; others need to be fitted by the doctor, raises risk of cardiovascular diseases in some women and also cause weight gain and breast tenderness, menstrual changes, severe menstrual cramps and increased risk of infection, hence low usage rate.

Table 4.4 Reason for not using protection/contraception

Reason	Frequency	Percent
Lack of knowledge	17	24%
Weight gain	11	16%
Boyfriend did not want	4	7%
Ignorance	12	18%
No time to go clinic (too far) ± 7 KM	9	12%

4.7 Knowledge about STI's including HIV/AIDS

The following questions were used to assess knowledge of STI: Have you ever heard about STIs, do you know how STI are transmitted, do you know ways to avoid STI and do you know symptoms of STI. Level of knowledge was determined by answering yes to all the questions. Few respondents (38%; n=32) had knowledge about STI. A significant higher proportion of learners in urban areas were more knowledgeable than those living in rural areas (72% versus 33% $p < 0.05$, Table 4.5). This finding of the current study is supported by those of Kluge (2016) indicating that young people in urban areas had good knowledge about STIs and HIV/AIDS. Netshikweta et al. (2013) also found that HIV/AIDS awareness among teenagers in urban areas was moderately higher than those in rural areas. This indicates that SRH services are more needed in rural communities.

Table 4.5: Association between selected demographics and knowledge about STI's

	Have knowledge about STI's		p-value
	Yes (%)	No (%)	
Gender			
Female	32 (38)	51(62)	0.647
Male	17(57)	13(43)	
Age(mean±sd)	16.8±1.8	17.0±1.9	0.587
Grade			
8	3(33)	6(67)	0.177
9	12(63)	7(37)	
10	12(80)	3(20)	
11	16(67)	8(33)	
12	25(54)	21(46)	
Location			
Urban	55(72)	21(28)	<0.001
Rural	12(33)	24(67)	
District			
Mopani	21(65)	11(35)	0.548
Capricorn	47(60)	32(40)	

There was no significant relationship between gender, age, grade, district and learners knowledge about STI's ($p>0.05$). However, being female, young, in grade 10, living in Mopani was more likely to be knowledgeable about STI's.

4.8 Knowledge about pregnancy

Knowledge about pregnancy was assessed using the following questions: do you know how pregnancy comes about, do you know how to avoid pregnancy and have you ever been pregnant. If the answers to the first two questions are yes – then a learner was considered knowledgeable. About (90%, $n=102$) of the learners were knowledgeable about pregnancy. Results of this study reflected that (33%; $n=37$) of learners have been pregnant. Majority of respondents (64%; $n=24$) fell pregnant at the age of 17 years, (15%, $n=6$) at 16 years. Findings differ from Finer & Zolna (2015) report which states that one million teenagers become pregnant each month worldwide due to inadequate knowledge. Similarly, Matlala (2015) reports that pregnancy rates among school girls remain 29.5% in the Capricorn and 31.2% at Mopani Districts of the Limpopo Province, hence the current study focused on these two Districts. Adolescents aged 15 to 21 years are greatly affected by teenage pregnancy (Bezuidenhout, 2016).

Table 4.6: Association between demographics and knowledge about pregnancy

	Have knowledge about pregnancy		p-value
	Yes (%)	No (%)	
Gender			
Female	74(89)	9(11)	0.508
Male	28(93)	2(7)	
Age(mean±sd)	16.9 1.8	16.51.9	0.4113
Grade			
8	6(67)	3(33)	0.133
9	18(95)	1(5)	
10	14(93)	1(7)	
11	21(87)	3(13)	
12	43(94)	3(6)	
Location			
Urban	33(92)	3(8)	0.715
Rural	68(89)	8(11)	
District			
Mopani	28(88)	4(12)	0.561
Capricorn	72(91)	7(9)	

The association between demographics and knowledge about pregnancy is presented in Table 4.5. There was no significant association between gender, age, grade, location, district and knowledge about pregnancy ($p > 0.05$).

4.9 Source of information about SRH services

Table 4.7 present the learners' source of information about SRH by selected demographics. The majority (81%; $n=91$) of the learners said that someone has talked to them about SRH services. The most common person to provide information were teachers (61%; $n=69$) followed by parents (20%; $n=23$) and media (10%; $n=11$). There were few learners who said they got the information from nurses (7%; $n=8$).

According to Kluge's (2016) findings, students obtained most of their SRH-related knowledge from school programmes and discussions with their mothers. The information sources young people used and trusted included school programmes, teachers, mothers, other female students and doctors. School programmes were the most often used sources. Mothers were popular, while doctors were trusted but were seldom used. Young people did not trust the media as an information source on sexual issues (Kluge, 2016).

Ngoma and Himoonga (2016) cite that many adolescents obtained their SRH information from poorly informed sources such as peers.

Ngoma and Himoonga (2016) further reported that youth complained that they were given very little SRH information, were taught too late when they had already started engaging in sexual activities and had babies. Other teenagers complained that they learned about sex education and relationships from friends or obtained the wrong information on their own. A comprehensive SRH programme for learners could enhance communication between teenagers, parents, teachers and health care professionals about SRH-related issues (Ngoma and Himoonga, 2016).

Table 4.7: SRH information given by selected demographics N=113

	Someone talked to you about SRH services		p-value
	Yes (%)	No (%)	
School type			
Public	83(82)	18(18)	0.348
Private	7(70)	3(30)	
Location			
Urban	28(78)	8(22)	0.636
Rural	62(82)	14(18)	
District			
Mopani	26(81)	6(19)	0.977
Capricorn	64(81)	15(19)	

4.10 Accessibility of SRH services at school

Access to health care, especially for adolescents is a high priority. SRH services need to be accessible and access barriers need to be overcome. A greater proportion (86%, n=97) of the learners indicated that SRH services are not provided at their schools and (16%; n=12) reported that the service is available. As indicated in Table 4.8, there was no statistical significant relationship between district, location, school type and availability of SRH services ($p > 0.05$). However SRH services were more likely not to be provided at private schools, in urban areas and in Mopani district. Many studies cited having to walk long distances to the nearby clinics, coupled with clinics' operation hours clashing with school hours, as barriers to accessing SRH services by teenagers, contributing to teenage pregnancies.

Ramathuba (2013) also found that in Limpopo Province, most adolescents could not access clinics due to long distances. Findings are consistent with those of Tu et al. (2016) which cite that young teenagers were vulnerable to contract STIs and were not screened on time because of health care providers' perceptions that young teenagers are unlikely to suffer from STIs. Late screening, diagnoses and treatment of STIs could result in severe reproductive health complications (Tu et al, 2016).

The researcher sought to develop a comprehensive SRH programme specifically for secondary school learners to enhance access to and availability of services based on the learners' ability to make informed decisions.

Table 4.8: Availability of SRH services by selected demographics

	SRH provided at school		p-value
	No (%)	Yes (%)	
School type			
Public	85(84)	16(16)	0.174
Private	10(100)	-	
Location			
Urban	32(89)	4(11)	0.509
Rural	64(84)	12(16)	
District			
Mopani	28(88)	4(12)	0.715
Capricorn	67(85)	12(15)	

Of the learners who said the SRH services are not available at their schools (n=97), (73%), reported that there is a clinic nearby. Of the respondents who said there is a clinic nearby, (62%; n=70), fifty nine (71%; n=59) had visited the clinic. Mda et al. (2013) reported that adolescents were scared to go to for family planning to clinics because health care professionals might know them and might even be friends with their parents. Adults attending the clinic might enquire why young people would want to prevent pregnancies. The services provided for respondents in the clinic visited are shown in Table 4.9.

Table 4.9: SRH services received at the clinic

	No	%
Contraception	48	27
Condoms	39	22
Pre-ANC	14	8
Post-ANC	7	4
STI's treatment	4	2
HIV testing	87	49
Cancer screening	11	6
Pregnancy test	4	2

Most (90%) of the learners who visited the clinics indicated that the services they went for were available and 43% reported that nurses were unfriendly. Unfriendly nurses might prevent teenagers from visiting a clinic. Learners who perceive clinic nurses to be friendly, might encourage more teenagers to visit the clinics. The current study's findings apparently is supported by Beksinska (2014) statements that youths face barriers when accessing health care services, healthcare workers lacked adolescent-friendly training

and restrict services to adolescents younger than 16 years of age. Similarly, Knott and Lotter (1999), cited in Mlambo (2015), reported that teenagers were afraid to use family planning services, were dissatisfied with the quality of communication at clinics, and perceived the staff to be unapproachable. They wanted health care providers to be approachable, friendly and caring.

One of the roles of a nurse is to provide counseling, provide accurate information and education to the health care recipients (Wright & Richardson, 2014).

Forty five per cent (45%) of the learners who visited the clinics were counselled for SRH services. These findings of the current study support those of Mlambo's (2015) report that teenagers were dissatisfied with counselling services when being provided with contraceptives as evidenced by the following statement: *“Often contraceptives are provided, while sex education is neglected, because of the heavy workload of the staff. There is nothing explained to us, it’s just go through, what method do you want and if it’s an injection they will inject you. The nurses always look busy and we are afraid to ask questions”*.

With developed comprehensive SRH programme, there will be nurses who could focus solely on learners, would have more time to provide counselling and adequate information.

4.11 SUMMARY

In this step, knowledge of learners about SRH was assessed which focused on prevalence and factors associated with sexual activity; knowledge of contraception; knowledge about STI's including HIV/AIDS; knowledge about pregnancy; source of information about SRH services and accessibility of SRH services at school.

The next step will present and interpret the findings from teacher's views about the impact of the existing SRH programmes for adolescents in the Capricorn and Mopani Districts in the Limpopo Province.

STEP 2: QUANTITATIVE ANALYSIS

4.2 PRESENTATION AND INTERPRETATION OF THE TEACHERS' FINDINGS

Objective 2 – Assessing the impact of the existing SRH programmes provided in schools

4.2.1 INTRODUCTION

In the previous step, the results for learners were presented and interpreted. This step presents and interprets the findings from teacher's views about the impact of the existing SRH programmes for adolescents in the Capricorn and Mopani Districts in the Limpopo Province. The target group for this step of the study comprised of Life Orientation teachers at selected secondary schools. A questionnaire was used to collect data. Descriptive statistics were used to analyse the data. Descriptive statistics describe and summarise data by converting and condensing collected data into an organised, visual presentation or picture in various ways to portray the meaning of the data. A statistician analysed the data using the SPSS version 23. Graphs, tables and charts were generated to display the results (Burns & Grove, 2014).

The chapter is divided into: demographic profile and views of the teachers with regard to the impact of the existing sexual and reproductive health programmes at schools.

4.2.2 Demographic characteristics of the teachers

Thirty four teachers participated in this study. Most (88%; n=30) of the respondents were in the age group 40-59 years (Table 4.9). The mean age of the participants was 48.7 ± 6.9 range 26 to 60 years. A greater proportion (29%; n=10) had honours degree and 59% had 20 or more years working experience.

Table 4.10: Teachers demographics N=34

	No	%
Age (years)		
<40	3	9
40-49	15	44
50-59	15	44
60+	1	3
Level of education		
Diploma	6	18
Degree	8	24
Post-basic diploma	2	6
Post-basic degree	6	18
Honours/Master	12	35
Years of experience		
<10	5	15
10-19	9	27
20+	20	59

4.2.3 Availability of SRH services at school

- **SRH Policy**

Four of the teachers (12%; n=4) said that SRH policy is available at their schools and 44%; n=15 said the SRH programme is also available (Table 4.10). Jansen (2015) cite that a new policy draft which sets out how schools should support pregnant pupils and protect them from discrimination is expected to be published for public comment before the end of 2018 in South Africa. The policy is expected to prevent schools from expelling or excluding pregnant learners from schools, and will emphasise that pupils have the right to remain at school during and after their pregnancies (Jansen, 2015). However, this expected South African policy seems to emphasise pregnant learners' right to education, without addressing SRH services' accessibility to learners, implying that the government addresses the outcome of the lack of SRH services in schools. The factors contributing to such outcomes should be addressed to reduce the incidence of teenage pregnancies. Political commitment is required to reduce the teenage pregnancy rate among South African learners. Recommendations, based on the current study's findings, will be

incorporated into a SRH programme for secondary schools and it will be submitted to policy makers for consideration for inclusion in a SRH policy for schools in South Africa.

According to Basch (2015) sexual health policies state how sexual health education should be provided such as being comprehensive and age-appropriate, specifying people who should provide it (trained qualified professionals), and emphasising the role of parents and course content.

The constitution of South Africa, 1996 (Act No. 108 of 1996) stipulates that no child should be denied access to education because of pregnancy (SA, 1996). Learners should be supported during and after pregnancy. Some schools have developed their own policies which contradicts the SA constitution when they prevent pregnant learners from attending school.

- **SRH Programme**

Forty four percent (44%, n=15) of the participating teachers said there were SRH programmes at their schools. Thirty three percent (33%; n=5) of teachers reported that the programme is offered once a week as part of Life Orientation. Jansen (2015) advocated for a comprehensive approach to SRH programmes involving adolescents, families, schools, community agencies, media, health care providers and government at all levels in order to ensure the provision of quality and sustainable SRH programmes. Seventy two per cent (72%, n=24) of the participants said that SRH policy and programme were not effective.

These findings of the current study, based on the teachers' views, indicate that existing SRH programmes were ineffective as evidenced by the persistently high teenage pregnancies in schools. Similar findings were reported by Tshehle (2014) that in Northwest Province about 17 grades 10, 11 and 12 were pregnant during one year. Their ages ranged from 14 to 18 years. Angie Motshekga's report on learners' pregnancies in South Africa (27 March 2017) reflects a total of 8732 pregnant learners in South Africa for the year 2016 only (Phakgadi, 2017).

Kalembo et al (2013) indicate that effective adolescent SRH education programmes could produce positive changes in adolescent SRH outcomes, increase delayed initiation of

sexual intercourse, increase abstinence, reduce learners' number of sexual partners and increase use of condoms

Table 4.11: SRH services available in schools

	No	%
SRH policy available at school	4	12
SRH programme available at school	15	44
Operation of programme		
Full-time	4	27
Once a week	5	33
Quarterly	2	13
One-stop combined service	4	27
SRH policy/programme effective		
Yes	8	28
No	21	72
SRH information included in curriculum		
Yes	22	67
No	11	33

4.2.4 Provision of SRH information at schools

Table 4.11 presents the provision of SRH information at school. More than half (55%; n=11) of the teachers seldom have adequate training and have necessary manuals. Forty per cent (40%; n=8) indicated that teachers seldom have external support and another (55%; n=11) said often learners show enthusiasm for lessons. Persons providing SRH services need to be adequately trained to be able to provide the correct information to the learners. In the current study, some teachers appeared to be inadequately trained to provide effective SRH education. This might imply that learners received superficial information which might be of doubtful value to help them to deal with SRH challenges. Teenagers in Zambia criticised sex education at schools because it was presented by embarrassing and ill-prepared teachers (Ngoma & Himoonga, 2016).

Findings of the current study appear to be supported by the WHO's (2015) report which stated that obstacles to the implementation of SRH programmes included the lack of skilled personnel and training materials. Similarly, Thang (2015) reported that teachers

were not capable of providing SRH training as they had not been specifically trained in SRH and they had no access to appropriate SRH education materials.

To be able to provide SRH information to learners, teachers need external support from both the DOE and the DOH in the form of workshops and short courses as well as teaching and learning materials. This is supported by Brindis (2013) who identified obstacles to the implementation of SRH programmes as being a lack of active support, commitment and coordination from ministries of health, as well as from education and school officials. Mechanisms to supervise, monitor and evaluate programmes were also lacking and posed obstacles to the implementation of a sustained effective SRH programme (Brindis, 2013).

Table 4.12: Provision of SRH information at school

	Always		Often		Seldom		Never	
	No	%	No	%	No	%	No	%
Teachers have adequate training	5	25	4	20	11	55	-	-
Teacher have necessary manuals	4	20	3	15	11	55	2	10
Teacher have external support	3	15	2	10	8	40	7	35
Learners show enthusiasm for lessons	5	25	11	55	4	20	-	-

Most (67%; n=23) of the teachers indicated that SRH information is included in school curriculum, of which (90%; n=31) teachers are the main person teaching. Findings for this current study are in contrary with Taras and Potts-Datema (2015) who maintained that SRH services should be provided by school nurses as well as other school personnel. School nurses could provide medically accurate information to students and staff, provide referrals and counselling, and dispense condoms and contraceptives.

Findings by Lebese (2013) indicate that some parents and school administrators do not want to include sexual health in the school curriculum. The curriculum is commonly taught from grade 7 to 12; however, one teacher indicated that the curriculum is also taught from grade 4 to 7. Ramathuba (2013) recommended that SRH should be

extended to all schools through school health services to ensure learners' access to SRH programmes and services.

4.2.5 Teachers' views about the impact of existing SRH programmes

Figure 4.2 depicts that a greater proportion of teachers (68%; n=23) strongly agree/agree with the statement that SRH services decrease teenage maternal deaths and improved learner's knowledge (58%; n=.20). However, (67%; n=23) strongly disagree/disagree with the statement that the SRH programmes have reduced absenteeism related pregnancy, teenage birth rate (68; n=23), STI's and HIV (56%; n=19) and pregnancy rates (67%; n=23). Teenage mothers' babies are more prone to complications or abnormalities than adult mothers' babies, contributing to teenage mothers' absenteeism from school (Martinez, 2017). Pregnant teenagers commence attending ANC clinics late because they try to hide the pregnancy as long as possible. Such late ANC clinic attendance might make it impossible to render adequate ANC, resulting in maternal complications and maternal mortality (Martinez, 2017). Moreover, teenagers are physically immature to cope with the physiological demands of pregnancy, making it more likely for teenagers to experience obstetric complications than adult women (Martinez, 2017).

A qualitative study at the NAFCI center, in the Greater Tzaneen area of the Limpopo Province, reported that adolescents used the NAFCI services at the clinic, especially contraception, STI and pregnancy services. Despite this, pregnancy and STI rates in the area did not decrease and HCT services remained under-utilised (Beksinska et al., 2014).

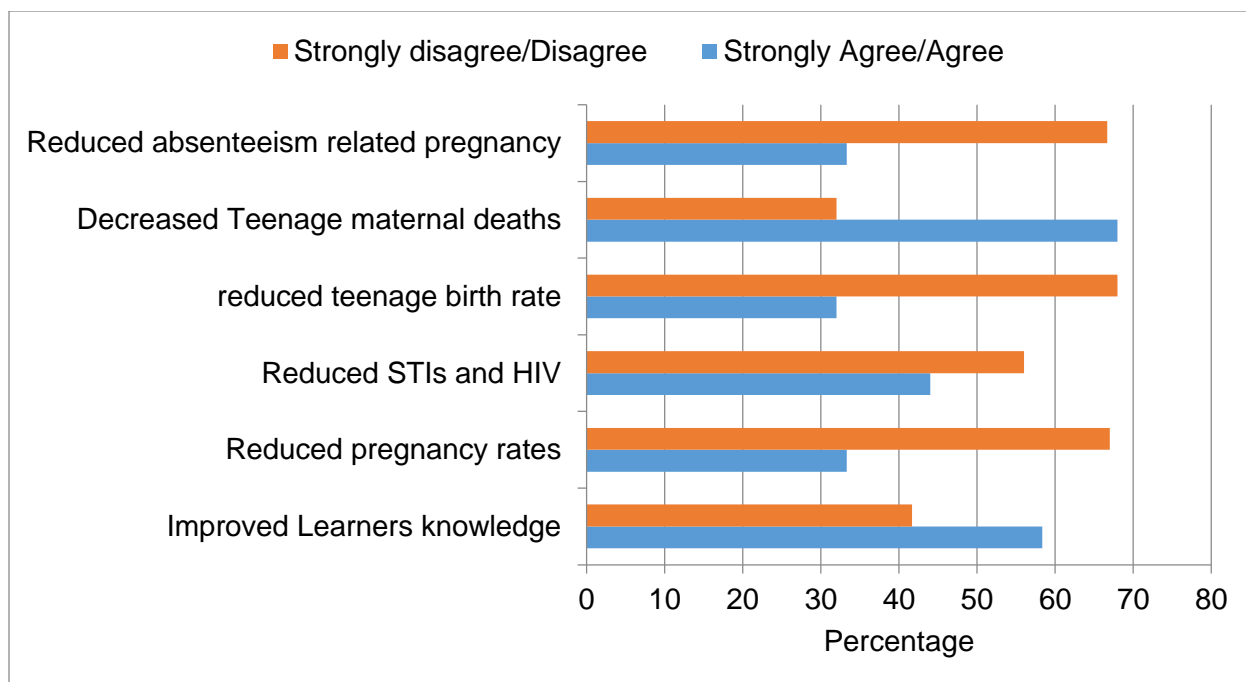


Figure 4.2: Teachers views in relation to SRH services

4.2.5 SUMMARY

In the subsection the impact of the existing SRH programme and services provided to learners, were analysed. The next subsection will analyse the perception of parents towards sexual and reproductive health provided in schools.

4.3 STEP 3: QUALITATIVE DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.3.1 Introduction

Step 1 and 2 analysed and discussed quantitative data. Step 3 analysed qualitative data. In qualitative research, data analysis is generally not a distinct step, it is done concurrently with data collection. The objective of this step is to analyse the raw qualitative data and reduce it into themes and sub-themes to reflect the participants' **perception towards sexual and reproductive health provided in schools.**

Data was collected through in-depth face to face individual interview, saturation was reached after interviewing 18 participants. Tesch's principle of data analysis was used. Relevant literature was used related to the findings whilst incorporating Orem's Self Care Theory.

4.3.2 Biographic data of participants

Table 4.21 below depicts participants' demographic data. Data was collected from parents of learners attending school at the selected schools in Capricorn and Mopani Districts of Limpopo Province who had teenage children. The age of parents ranged between 35 and 62. Participants had between 1 and 3 teenage children. Participants were 15 females and 3 males. The reason that most participants were females was that most males were migrant workers and come home once a month. Secondly, most female participants were single parents. Participants' home language was Sepedi and xiTsonga. Interviews were conducted in the participants' own languages and translated into English.

Table 4.13 Participants' demographic data

No	Gender	Age	Number of teenage children	Home language
1	Female	54	1	Tsonga
2	Female	61	1	Sepedi
3	Female	37	1	Sepedi
4	Female	52	1	Sepedi
5	Female	46	2	Tsonga
6	Female	49	1	Sepedi
7	Female	41	1	Sepedi
8	Female	35	1	Tsonga
9	Female	42	1	Tsonga
10	Female	48	3	Tsonga
11	Female	53	2	Sepedi
12	Female	55	2	Tsonga
13	Female	47	1	Sepedi
14	Female	54	1	Sepedi
15	Female	60	1	Sepedi
16	Male	52	3	Tsonga
17	Female	55	3	Sepedi
18	Male	50	2	Sepedi

4.3.3 Discussion of findings

Data analysis yielded 4 themes and 15 sub-themes as illustrated in table 4.13. In qualitative data analysis, themes are theoretical relationships that emerge after the researchers have spent extensive time examining data, categorizing and sorting of elements into groups to look for patterns (Burns & Groove, 2014). Themes and sub-themes were substantiated by direct quotations from participants, integrated with relevant national and international literature.

Table 4.14 Themes and sub-themes related to parents' perception towards SRH services provided in schools.

Main theme	Sub-theme
Theme 1: Views of parents related to discussion of SRH issues with teenagers.	1.1 Narratives that SRH topics should not be discussed with teenagers.
	1.2 Parents difficulties to discuss SRH issues with their teenage children
	1.3 The importance of parents' discussing SRH issues with teenagers
	1.4 The importance of SRH services
Theme 2: Relationship of parents and their teenagers about SRH matters.	2.1 Positive versus negative relationship between teenagers and their parents.
	2.2 The influence of positive relationships between parents and teenagers
	2.3 The influence of positive parent-teenager relationships on the awareness of situations which teenagers face.
Theme 3: Knowledge of parents on SRH matters.	3.1. Parents' lack of SRH knowledge
	3.2 Parents' existing knowledge about SRH matters
	3.3 Parents' knowledge about physical changes that occur during puberty
Theme 4: Suggested strategies by parents on how to implement the SRH programme	4.1 Suggestion that Nurses should provide the SRH programme and services to learners
	4.2 The relevance of teachers to offer SRH programmes

	4.3 Strategy of providing SRH services to school learners.
	4.4 The need for collaboration in providing SRH services
	4.5 Grades where SRH programmes should be included

4.3.4 Theme 1: Views of parents related to discussion of SRH issues with teenagers

During interviews parents expressed different views about discussing sexual and reproductive health issues with children. Some parents displayed positive attitudes, indicating that discussing SRH issues will positively benefit learners. However some parents indicated negative effects that can be brought about by the introduction of SRH services in schools.

4.3.4.1 Sub-theme 1.1 Narratives that SRH topics should not be discussed with teenagers

Some parents, who were interviewed during the current study disagreed with the introduction of SRH services in schools indicating that it was against their religion. They felt that exposing teenagers to SRH topics was like telling them to start experimenting with sexual activities promoting promiscuity. Participants further said the church was trying to teach children good morals by emphasising that sex before marriage was sinful.

Some participating parents mentioned that in their culture, it was unacceptable to talk about SRH-related issues with one's children, being a cultural taboo. They said that they felt restricted by this cultural taboo even to start SRH-related conversations. Male participants emphasised that in their culture, they could not talk with their daughters about issues like menstruation, contraception and/or pregnancy. However, the same male participants said they also failed to talk to their sons about protection indicating that their sons would be taught about these aspects when they attend the initiation school. One

male participant only told his son how to attract women because in his culture a man is regarded as being a hero when he has relationships with many women, but he acknowledged that it was “not right” to do so. Another participant was concerned because she maintained that children currently do not have consciences like children had when she was a teenager. She said if SRH programmes and services should be provided in schools, children would become more immoral. Another participant indicated that children should be children and refrain from doing things (implying engaging in sexual intercourse) belonging to adults. She said it was “disgusting” to consider introducing SRH programmes and services at schools as it would promote immorality.

In their own words participants said:

“My religion prohibits such topics, no sex before marriage, finish and klaar (hitting the table). If they don’t listen and abide by our religious beliefs, it will be their own problem, not mine. We are trying to teach our children good morals, but you want to bring things that will promote immorality, no,no,no.”

“I am a pastor, I thought my children share the same values and beliefs as mine. Me and my wife abstained till marriage, and I preach the same thing in the church. We believe that our bodies are the temple of God and should not be defiled with sexual activities before marriage. I was shattered when my 19 year old year old son impregnated a 17 year girl. I was so depressed that I could not stand on pulpit for two Sundays. Ya.....”

“You know....in my culture it is a taboo to talk about sexual issues with children. When my 16 year old girl fell pregnant, I blamed her mother for not talking to her. The same year my 18 years old son impregnated a 15 year old girl. I was dumb founded, didn’t know whom to blame now. I thought it is her responsibility to talk to girls about issues like menstruation, contraception, pregnancy, but I failed too to talk to my son about protection.”

Another participant said *“Mam...Being a man I can’t talk to my girls about sex, menstruation and so on.”*

“Mina I will tell my son how to attract women. To us black men, you are seen as a hero when you have more women. Mara na swi vhona kore a swi longaka (But I can see that this is not right). (Looking down). I don’t have valid reasons for not doing the right thing.”

These findings of the current study are similar to those of DiCenso et al. (2013) indicating that Catholic schools in the USA followed religious teachings with regard to sexual and reproductive education emphasising abstinence. Some opponents of sex education in Catholic schools believed that SRH programmes were doing more harm than good to the young people. They contended that children might not be mentally and emotionally ready for this type of instruction, and believed that exposing the young people to sexual and reproductive programmes might the students to become preoccupied with sex. (DiCenso et al, 2013).

These findings are also supported by Zwane (2008), cited in Phiri et al (2013), who indicated that in African culture it would be considered to be a taboo to talk about sex with young adults or adolescents. As a result, some adolescents reportedly found themselves doing things they would have not done if their parents had talked to them.

Furthermore, these findings also concur with those of Ntukula, Liljestrom and Umleavyo (2014) reporting that most male parents perceived talking about sexual health with one’s children as being shameful, immoral and encouraging the child to have sex, which was culturally unacceptable. Ntukula et al (2014) also found that parent-child communication about SRH was mainly conducted by mothers and rarely by fathers.

Some religious beliefs do not support the discussion of SRH issues with children, arguing that it would promote immorality. However, some parents realised that there was a need for these services to be provided in schools considering the high teenage pregnancy rate.

Cultural beliefs and values dictated what parents should and should not say to their children. Some parents did not talk to their children about SRH topics citing that it was culturally unacceptable. Parents seemed to think that SRH-related issues concerned only sexual intercourse, indicating a self-care deficit in terms of Orem’s Self-Care Model.

4.3.4 .2 Sub-theme 1.2 Parents difficulties to discuss SRH issues with their teenage children

During the individual interviews, some parents indicated that it was difficult to discuss SRH issues with their own children or to answer their children's questions in this regard. Parents felt uncomfortable and ashamed, they did not know how and when to start such conversations. Some parents were frustrated by their inability to communicate with their children about SRH issues. One participant said he physically assaulted his daughter for sleeping out, fearing that she could fall pregnant, but could not communicate with her. Male parents indicated their discomfort in talking with their female teenagers regarding SRH matters. Some parents indicated that they used warnings and threats to communicate. Participants also said that teenagers were not free to engage in SRH topics with their parents. Some parents mentioned that they only talked to their children about SRH topics when they noticed that their children might have started engaging in intimate relationships or started menstruating so as to warn them against HIV and pregnancy. Teenagers, according to the interviewed parents, preferred discussing SRH issues with their friends or peers rather than with their parents. Another participant said that her children would just stand up and leave her if she started talking about any SRH topic, so she would never again start such a conversation. Sometimes children asked sensitive questions which parents might not be able to answer. Participants highlighted that children and parents could not discuss SRH issues because they were not peers, children should talk about such issues with their peers. Parents indicated that tension existed between parents and children regarding SRH issues.

Gender-related issues were cited by some parents as factors causing discomfort. Male parents indicated that they could not talk to their daughters about menstruation, dating or contraception. One male parent said he even physically assaulting his teenage daughter when she started dating because he could not sit down with her and advise her about the implications of irresponsible dating.

Participants indicated that children were not free to discuss SRH issues with their parents reflecting that their children obtain SRH information from friends, peers and the media. They said that even if parents wanted to initiate such conversations, their children would

either avoid it or become defensive because SRH issues were regarded as being confidential. Some parents indicated that their children spent much time on their cellular phones and watching pornographic materials on TV, and did not want their parents to see what they were watching.

These aspects are confirmed by the following statements from the interviewed parents:

“Hmm... it is sometimes difficult but sometimes we try, even though as a parent you feel ashamed to face your child and talk about SRH things.”

“Eh...eish... it is a bit difficult to talk to a teenager especially when you are her parent than when you talk to somebody else’s child or child in next door because the answers you will get won’t be correct, she just say no mama why are you telling me such things, but. This information is important to talk about, yeah... it is difficult to talk to your child, especially teenagers of today. Even when I see actions that involve sex on TV with my children around, I feel uncomfortable and change the channel (laughing) I can’t do the PG (parental guidance).”

“I am a parent and a teacher, children at school will ask questions that I am not comfortable to answer during Life Orientation class. I remember one day a learner asking me this question, laughing... how many rounds does it take to make a baby? Another learner asked “mam is it true that when you have sex while standing you won’t fall pregnant? And the other learners laughed looking at me to see how I will respond. This is really uncomfortable. Even at home, eish... it is difficult to speak about SRH to our children. You don’t know where to start. You know, our children also are not comfortable to discuss SRH issues with us. When you try to reach them, is either they laugh, become defensive or avoid you, until they fall pregnant. This are sensitive issues.”

“No, I don’t feel comfortable talking to my son about SRH issues. It is so difficult. It will be better if those services can be introduced in schools. Nurses should always visit schools as we parents are unable to talk about sex and reproductive health at home. It is not easy, you don’t know where to start”.

“I avoid to answer questions about sexual and reproductive issues from my children, I will even warn them not to ask such questions, a se nna thaka ya lena (am not your peer).

So children will learn wrong information from their peers. I think it will be much better if SRH services are available at schools, nurses are well trained to tackle such issues."

"No, I don't feel comfortable talking to my son about SRH issues. It is so difficult. It will be better if those services can be introduced in schools. Yes I took my son for circumcision but I did not explain to him that this can minimise STI's and HIV infections. Ya... this is not right."

"I physically man handled my daughter for going out with boyfriend and don't sleep at home, but I could not contain her because it was the wrong way of talking to her. I could not sit down with her to tell her this, eish! It was difficult, I was not comfortable and feeling ashamed to discuss such sensitive topic with my daughter".

"The only time I talk to my children about sex is when someone in the village died of HIV/AIDS, thereby warning them, other than that, I never talk to them."

"It is not easy to discuss sex issues with my daughter because those are confidential things....she can't tell you, she is always on the phone and does not want me to be nearby. One day I forcefully grabbed her phone and was shocked with what I saw. And again, they go to bed late watching TV. If you can sneak in without being noticed you will be shocked by the pornographic movies they are watching".

Results for this study are supported by those of Louw and Van Ede (1997), cited in Phiri, Lebesse and Maputle (2013), who revealed that parents played a relatively small role in sexual socialisation and education of adolescents which could contribute to adolescents' engagement in sexual intercourse without proper guidance. Lebesse (2013) also found that parents were uncomfortable to talk about or discuss sex and sexuality issues with their children.

Phiri et al (2013) also who found that parents were uncomfortable talking about sex and sexuality with their children, shifting the responsibility to teachers and nurses. However, teachers also experienced discomfort discussing sex and reproductive health matters in the classrooms, with the view that it might encourage teenagers' permissive sexual behaviours and experimentation (Lebesse et al., 2015). Such poor communication

between parents and teenagers could contribute to high rates of teenage pregnancies, STIs, HIV and AIDS infections. Parents might make indirect speeches when talking about sex with their children and leading to misinterpretations and distortions of the essence of their sex education messages. Wight, Williamson and Henderson (2015) also reported that most parents felt that talking about sex with one's children was unpleasant and hence they had to wait for clues or triggers that a child was sexually active before they warned and threatened about the consequences of engaging in sex. Wight et al.'s findings (2015) showed that the biggest challenge for parents was starting the discussion about sex with one's children without a definite reason.

Zwane (2008), cited in Phiri et al. (2013), supported the fact that some African cultural beliefs and norms consider it to be a taboo to talk about sex with young adults or adolescents. Consequently some adolescents engaged in unprotected sexual activities that they might have avoided if their parents had talked to them about these issues.

Kalkute (2015) reported that students, whose parents were employed in unskilled and semiskilled occupations, had inadequate knowledge about sexual health when compared to students whose parents were employed in skilled occupations. Thus parents' education levels had a positive effect on students' knowledge about SRH. The current study's findings (obtained during step 3) revealed that educated, uneducated, male and female parents of different ages were uncomfortable discussing SRH topics with their children regarding it to be a sensitive topic, using mostly warnings to initiate such communication.

Orem's Self-Care Model comprises the practice of activities that individuals initiate and perform on their own behalf to maintain life, health, and well-being (Moore, 2013). The purpose of Orem's Self Care Model is to allow individuals and their families to maintain control of their health care. Self-care Deficits comprise the key to Orem's Self-Care Model because these deficits identify when and how much a nurse is needed in the care of a patient or client. Professional health assistance is needed if there is a problem that prevents a person from reaching their optimal health without assistance (Moore, 2013).

The current study's findings, obtained during individual in-depth interviews with learners' parents, indicate that the following factors contributed towards making it difficult for parents to discuss SRH issues with their children: ignorance, culture, gender, fear, age difference, and outsourcing of responsibility (to teachers or health care professionals). Although parents could not communicate about SRH issues with their children, they showed concern about their children's safety resulting from a lack of knowledge. Some teenagers were afraid of talking to their parents about SRH issues. The parents reported that some of their teenage children obtained information from social media without parental guidance, which could have negative consequences. These findings of the current study indicate a self-care deficit because parents of learners were unable to provide their children with SRH knowledge to protect these teenagers from risky sexual practices and vulnerability to sexual abuse.

4.3.4.3 Sub-theme 1.3 The importance of parents' discussing SRH issues with teenagers

Some parents indicated during the individual in-depth interviews that it was important to discuss SRH matters with teenagers so that they could be well informed and also understand the changes in their bodies. Some mothers said that their boys preferred to discuss SRH related matters with them rather than with their fathers. Other parents said that they were the ones who initiated these conversation during family meetings or during informal dialogues.

The following were expressions from the parents:

"Yes, I am open to my children and my children are able to tell me that there is 1, 2, 3 and most of the time I am with them. I always tell them hey, you people, especially the boys, you play around too much, you must use condoms because there are many diseases. Did you see what happened to your brother? I am a person who always sits down and talk with my children, I don't hide things. But I want to emphasise that this issue that children should be taught further is important, because children.... You find that a 12 year old child or 13 years has AIDS, a 12, 13, 14 year old child has a baby. So do you see that this is a serious problem in South Africa because children cannot continue with education, they contract diseases and so on, so it ends up....not going well with children."

“Since my experience about teenage pregnancy, I vowed that I don’t want any of my children to go through what I went through. I always share with them my story and tell them what to do to avoid that, I think they listened because to date none of them is a victim of teenage pregnancy My first born is had a child at 24, second born at 26, last born is 23 and does not have a child. So talking to children is important.”

“Yes, very well, me as a parent with three children, the first one is a girl, she took some time to freely discuss with me, When she started menstruating she was afraid of me, but I sat down with her and said look, I know you are afraid of me as your mother, there is no one who can help you, you must tell me step-by-step what is happening, what do you see, I started explaining. Even the boys when they come to me, they come freely, I tell them and say look, let me tell you, when you play in blankets, a baby will come, one, two children, you will end up unable to buy something for yourself because you will be maintaining all these children. I even teach them that every action has consequences which are bad. I am very very free to talk to them, I don’t have a problem, they also come to me when they have problems, they don’t go to their father (laughing), they come to me. They will say mum because you work at the hospital what do you see there, then I explain to them and say to them, this and this is not good, things like sexual stimulants (metsosha), those things are not good, leave everything to nature as determined by God.”

The current study’s findings are similar to those of Phiri et al. (2013) who identified that some parents did educate their adolescents about sex, STIs and HIV. Parents also encouraged their adolescent children to have one sex partner and always to use protection when engaging in sexual activities. Shier et al. (2015) also found that communication about SRH was initiated by parents.

McNeely, Shew, Beuhring, Sieving, Miller and Blum (2014) found that parent-child SRH communication was mainly delivered by mothers and rarely by fathers. Wamoyi et al. (2014) also reported that most young people were more relaxed talking to their mothers than talking to their fathers, but some adolescents did not trust their parents and censored what they could tell their parents for fear of punishment.

The study's participants revealed, during individual in-depth interviews, that they realised the importance of discussing SRH issues with their teenage children. Mothers communicated most with their teenage children regarding SRH. They were concerned about their children's safety and about the consequences of unprotected sexual engagements.

4.3.4.4 Sub-theme 1.4: The importance of SRH services

The current study's participants indicated that SRH services were important and necessary to be provided at school children. They said children would be provided with correct information about STIs and the consequences thereof. They stated that such services could help to reduce the high rates teenage pregnancies and HIV/AIDS. Parents felt that a SRH programme should be formally made available and be incorporated into the school curriculum. Some parents indicated that the availability of SRH services would relieve them from the shame and discomfort of having to talk with their children. They felt that if the topic could be initiated at school, it would be easier to continue talking with their children at home and to emphasis what the teachers had started. Some views were that SRH services would assist their children to go through developmental stages with understanding and instill self-confidence and acceptable moral behaviours.

These findings are confirmed by the following quotations from participants:

“But if it has to be taught at schools Department of Education must come up with a curriculum about everything, experts must sit down and talk about the whole curriculum, where to start so that learners can get proper information.”

“My child died of AIDS at age 21 because I could not talk to him about the use of protection as a parent. Please we don't want to lose more lives (crying). Let SRH services be available at schools so that learners are taught how to play safe and have access to condoms and contraceptives.”

“I perceive this is a good and right thing that children as early as 10, 9 years must be taught about sex education, because even if we are afraid to teach them, the fact is that

they know, they see, they hear and they understand. So the earlier we teach them the better, we will be preparing a better future for them.

“Sexual and reproductive programmes will help our children to understand themselves, if [he] is a boy [he] must know what is expected of him, if [she] is a girl [she] must also know what is expected of her and that they must know their position about gender, so that they can behave in a proper manner and be proud of themselves in the society, so that they can be real men and women in future who know yes and no.”

“Yes, it is very very much important because eh... diseases will be reduced and children will not engage and sexual relations at early ages, children will live longer, because these days it is difficult, you find children are not told anything, their eyes are closed, they just start indulging in sex that is not safe.”

“Yes, according to me it is important that these services should be introduced in schools and it will help in that the problem of teenage pregnancies will decrease, will be halved, even though it is difficult because our children don not listen, but if we can teach and teach some will listen, teenage pregnancy will be reduced. If nurses can visit schools once a month, children will benefit a lot.”

“Yes (boldly) I agree with the fact that SRH programmes should be available in schools because children spend much time at schools with teachers, they are more used to their teachers than to us parents, they are more open to teachers than to us parents. Teachers also know the characters of these learners. They know that this one is naughty or not and they are able to accept the learner as she/he is. [This is better] than when you, as a parent, talk with him/her at home where he/she will not be open or hide his/her real behaviour that he/she displays while at school.”

“I see it as a good thing, as a good vision, it will help our children at schools while they are still growing so that they can know their position, especially related to sex. Our children at schools engage in sex without any information. So I think it is important that you develop that programme, is a good thing so that our children can benefit and learn and grow up having knowledge and correct information regarding sexual and reproductive health.”

“I agree that sexuality be taught at schools by teachers, not hearsays, Ya...to avoid getting inaccurate information from elsewhere.”

“There are other people if you can go to the clinic, you will see that this person lacked guidance, when hear them saying “...nobody ever told me, if I knew I wouldn’t have fallen pregnant”. You will find that she is regretting that her parents never told here. You know some parents.... But they don’t do it deliberately, they are migrant workers, children are left with extended family members, there is no time to talk about those issues. But then if this can be introduced in schools and given focus, it will be very helpful.”

Linda, Patton, Milton, Lynne, Wright, Peppard and Dodd (2015) reported findings similar to those of the current study when revealing that parents of secondary school learners in Australia indicated that sexuality was an important part of their children's lives and they want their own children to be better informed than they had been as adolescents. Linda et al. (2015) also found that parents believed that it was both unethical and futile to try to dictate sexual decisions to their children; instead they attempted to provide them with the knowledge and skills to make informed choices. Parents, interviewed during the current study, expressed appreciation of school sexuality education programmes and said these programmes would make it easier to talk about sex at home.

Results for the current study are also supported by those of Wright and Richardson (2015) whose results showed that most parents (92%) supported sexuality education at schools. Thang (2015) also showed that parents perceived a need for their children to be educated about SRH in schools.

Burke, Coles & Meglio (2014) cited that comprehensive sexuality education programmes in schools and communities had contributed to improved academic performance, delayed and reduced frequency of sexual intercourse, reduced number of sexual partners, increased use of condoms and other forms of contraception, and reduced negative health consequences such as unintended pregnancies and STIs, including HIV/AIDS. Similar advantages of SRH programmes were also identified by Kalembo, Zgambo and Yukai (2013) who found that adolescent SRH education programmes were effective in

enhancing positive, attitudes and behavioural changes towards SRH, reducing teenage pregnancies, STIs and HIV infections.

According DiCenso et al. (2013) indicated that the Sexuality Information and Education Council of the USA reported that 93% of the surveyed adults supported sexuality education in high schools and 84% supported it in junior high schools. As many as 88% of parents of junior high school students, and 80% of parents of high school students, believed that sex education in school made it easier for them to talk to their adolescents about sex. Also, 92% of adolescents reported that they wanted both to talk to their parents about sex and to acquire comprehensive SRH-related knowledge in school during sex education.

Akim and Monique (2016) also supported these findings because they found that parents and teachers supported the introduction of sex education in Lesotho's national school curriculum to provide balance between providing young people with information and developing their skills in sexual empowerment and in coping with sexual pressure.

The current study's findings, supported by numerous research reports, showed that there was a dire need for a comprehensive SRH programme and services in schools. Participants believed that if SRH services would be provided in schools, teenage pregnancies and STI/HIV infections could be reduced. Parents were worried about the safety of their children, they wished that the SRH services could be provided immediately.

4.3.5 Theme 2: Relationship of parents and their teenagers about SRH matters

Parents, interviewed during the current study, indicated that they had good relationships with their teenage children, which made it easier to engage in communication about SRH-related topics with them. However, some parents did not feel comfortable to engage in SRH-related discussions with their teenage children.

4.3.5.1 Sub-theme 2.1: Positive versus negative relationships between teenagers and their parents

Some parents indicated that it was easy for them to discuss SRH matters with their teenage children. Both male and female teenagers were more comfortable discussing SRH matters with their mothers than with their fathers.

In their own words, participants said:

“Fortunately I and my little girl are friends, she is able to share and I am also able to guide her, is just like touch ups. When talking to her I can see that she knows a little bit something.”

“Yes, me as a parent have established a good relationship with my child, we are free to talk anytime. I am able to communicate with him, guide him, give him information about life so that he can know and understand that if he can have a girlfriend at that age he will fall into trouble.”

Wamoyi et al. (2014) support the findings that parent-child communication about SRH happened in most families and the communication was mainly on same sex basis, mother-daughter and rarely father-son or father-daughter. In contrary, Linda et al. (2015) found that both Australian fathers and mothers encouraged their children to protect themselves and others when engaging in sexual activities. Miller, Benson and Galbraith (2013) indicated that mother/child closeness related to the later onset of sexual intercourse for daughters, but not for sons. These findings appear to be contrary to those of Lebesse et al. (2015) indicating that there was minimal, if any, dialogue about sexual health between teenagers and their parents.

Findings show that some parents had good relationships with their teenage children which facilitated two-way communication but mothers seemed to communicate more often with their teenage children than fathers.

4.3.5.2 Sub-theme 2.2: The influence of positive relationships between parents and teenagers

Some teenagers' parents, who participated in the current study, indicated that they had good relationships with their children which enhanced their communication about SRH

matters. Female participants reflected that their teenage sons sought advice, related to SRH issues, from them rather than from their fathers.

The following are quotes from participants support the finding:

“I am able to communicate with my son, guide him, give him information about life so that he can know and understand that if he can have a girlfriend at that age he will fall into trouble, trouble of impregnating a girl or contract diseases.”

“I tell them that if they want to start doing such things, they should use disease prevention measures, like hmm... condom. A girl must at least use a condom as well and contraceptives to prevent STIs, HIV/AIDS as well as pregnancy.”

Miller et al. (2013) reported findings similar to those of the current study by demonstrating that the most consistent finding of numerous studies was that parent/child connectedness (support, closeness, and warmth) was related to lower adolescent pregnancy risk attributed to delayed and reduced frequency of sexual intercourse.

4.3.5.3 Sub-theme 2.3: The influence of positive parent-teenager relationships on the awareness of situations which teenagers face

Teenagers' parents who participated in the current study said that having a close relationship with their teenage children made it possible for the parents to be aware of dangerous situations faced by teenagers. Participants also said in some instances teenagers could not talk about difficult situations, but having close relationships, enabled teenagers to talk eventually. Parents indicated that it was important to have good relationships with their teenage children as this enhanced teenagers' openness to reveal hidden issues about which teenagers could not talk if parents were unapproachable. The current study revealed that some parents could identify situations which affected teenagers and could give support and advice. This was found to be useful to teenagers because their challenges related to SRH were addressed.

The following relevant statements from participants support this finding:

“I teach my teenage girl that she should not allow boys to touch her and that she should run away from older men who take advantage of young girls, they want to ruin their future. Actually my girl was telling me that when they come back from school men will stop their cars and call them.”

“Because we don’t know what happens when they get out of the gates and go to school, what kind of friends do they meet, what is it that they tell them what we don’t tell them. So I just keep on telling them this sexual and reproductive health issues for them to be able to protect themselves, so that even if they to engage in sexual relationships, they must protect themselves, they must start engaging knowingly, they must not only protect themselves, but knowingly.”

The current study’s findings seem to be contrary to those reported by Wamoyi et al. (2014) who found that families rarely discussed contraception and condoms.

4.3.6 Theme 3: Knowledge of parents on SRH matters

Some learners’ parents, who were interviewed during step 3 of the current study, indicated that they were unable to communicate about SRH matters with their children because the parents lacked knowledge. Even if they wanted to be engage in such discussions, they did not know where to start. A participant said SRH should be taught by teachers at school for children to get accurate information and not speculations, while another participant said SRH education should be provided by nurses because they are well trained and more knowledgeable.

4.3.6.1 Sub-theme 3.1. Parents’ lack of SRH knowledge

Parents who were interviewed during the current reflected that they could not communicate with their children regarding SRH because they did not know where and how to start communicating about the topic because they lacked knowledge about such services. Parents indicated that they even avoid answering questions because they did not know what to say. They only communicated through warnings and threats. Parents

were scared that their children would laugh at their parents because they were old fashioned, while their children knew current information which they learned at school.

Lack of SRH knowledge was expressed as follows:

“I avoid to answer questions about sexual and reproductive issues from my children because I don’t know what to say. I will even warn them not ask such questions, I am not their peer. So they will learn wrong information from their peers. I think it will be better if SRH services are provided by nurses because they are well trained and more knowledgeable”.

“I fell pregnant at the age of 17 because my mum never talked to me about SRH issues. I think it was because she did not have knowledge. The only time she talked to me was when I started menstruating at the age of 13, where she was warning me that if I sleep with boys I will fall pregnant. Indeed I slept with a boy and fell pregnant. Had SRH services been available, I would have had the correct information”.

“The other thing we parents don’t talk about SRH is that we don’t have enough knowledge of these services and we are old fashioned. We are afraid that we can talk about old things and our children will laugh at us because they know the current information they receive from their Life Orientation teachers.”

Wight et al. (2015) asserted parent-child communication could be hampered by limited parental knowledge about HIV and other SRH matters. Young people appeared to be more knowledgeable than their parents. Wight et al. (2015) further found that although grandparents were comfortable discussing sex with their grandchildren, they had limited knowledge concerning HIV/AIDS prevention, modern contraception and condoms and thus were limited in what they could communicate.

The current study’s findings are also supported by Thang (2015) who found that parents perceived themselves to be incapable of educating their children about SRH matters and expected the school to be the primary SRH educators. Lebeso et al. (2-15) reported results related to limited information provided by parents. Khoza, Lebeso, Maputle and Shiluvane (2013) also found that parents were not teenagers’ main sources of information about safe sex teenagers as teenagers reported learning about safe sex at school. Hence

it was recommended that parents and teachers should be provided with more information so that they could be involved in teaching teenagers about safe sex, addressing teenagers' questions, and preventing teenagers from getting conflicting information from parents, teachers and peers. Roudi-Fahimi and Feki (2014) also found that young people and their parents would like to be provided with more information on SRH topics because they had limited information.

It is evident the current study's findings, and from similar findings reported by several other researchers as discussed in this section of the thesis, that parents lacked SRH knowledge which is required to equip young people with the correct SRH information. Some parents' had less knowledge about SRH matters than their children, contributing to teenagers' acquisition of SRH information from peers, which might be misleading.

4.3.6.2 Sub-theme 3. 2: Parents' existing knowledge about SRH matters

When asked to explain their understanding of SRH, some parents, interviewed during the current study provided very little information while others gave more information. Some participants explained that SRH involved child development, adolescence, reproduction and puberty. Another participant said SRH referred to changes in body shape, breasts and beards, menstruation, sperm, pregnancy, impregnating a girl. Another participant said SRH was about gender, male and female. Some parents said SRH pertained to sex, relationships, prevention of sexual diseases and pregnancy, contraceptives, condom use, attending ANC clinics when pregnant. Some participants reflected that it SRH concerned safe sex, STIs, girls becoming women, and boys becoming men.

The following quotes from participants were relevant in this regard:

“Sexual and reproductive health I understand that is about gender, male and female, and that we have children at home that we have to discuss these things with so that they can be able to understand themselves. If [it] is a boy, [he] must know what is expected of him, if [it] is a girl, [she] must also know what is expected of her and that they must know their position about gender, so that they can behave in proper manner and be proud of themselves in the society, so that they can be real men and women in future who know yes and no.”

“Eh... is about sex, relationships and prevention of sexual diseases and pregnancy among teenagers

“Eh... regarding sexual and reproductive health, I understand that children should understand issues about sex, contraceptives and that they must attend antenatal clinic if they happen to be pregnant, and how to use condoms if they want to start to have sex and to know what sex is.”

“I understand that is when our children start to grow and experience some changes in their bodies and knowing sexual intercourse and the body starting to tell them about this sexual intercourse things because they will be starting to develop some features which they did not have before as children.”

“(Laughing), sexual and reproductive health... the way I understand... I think is about issues like sex... human....what, growing of a young person. Sexuality concerns body development of a teenager, it is about what...sex, prevention (pause), health, nutrition (pause), yeah... STIs, all health related issues, thus how I understand it.”

“Eeh... sexual and reproductive health is when girls grow to womanhood and boys grow to manhood. It is when girls start to develop breasts and start to see periods. Boys start proposing to girls and start to develop some beards. At this stage girls can become pregnant and boys can make a girl pregnant, yeah... that is all I know.”

“Mhh...(thinking)...it is about sexual relationships between males and females and producing babies.”

Phiri et al. (2013) agreed that parents had knowledge on sexual and reproductive health but they shunned away from educating their teenage children about SRH. On the contrary, Wight et al. (2015), cited that parent-child communication was hampered by limited parental knowledge about HIV and other SRH-related matters. Young people appeared to be more knowledgeable than parents. Wight et al. (2015) further found that although grandparents were comfortable discussing sex with their grandchildren, grandparents had limited knowledge concerning HIV/AIDS prevention, modern contraception and condoms and were thus limited in what they could communicate. Khoza, Lebese, Maputle and Shiluvane (2013) also found that teenagers' parents were

not the main sources of information about safe sex as teenagers reported learning about safe sex at school. Parents and teachers should be provided with more information so that they could teach the teenagers about safe sex, and answer questions preventing the teenagers from getting conflicting information from parents, teachers and peers.

The current study's findings indicate that parents' existing knowledge about comprehensive SRH was very much limited, emphasising the need for the researcher to develop a comprehensive SRH programme for secondary school learners.

4.3.6.3 Sub-theme 3.3: Parents' knowledge about physical changes that occur during puberty

Teenagers' parents, were interviewed during the current study, had some knowledge about the physical changes that occur during puberty. These parents highlighted changes like the development of breasts in girls and the onset of menstruation. In boys, parents indicated that beards and sperm cells would develop. They also expressed that during puberty girls could become pregnant and boys could impregnate girls. Parents reflected that "children of today" developed faster than in the past, citing the type of foods consumed as the cause of this faster growth.

The relevant expressions from participating parents included:

"My understanding of sexual and reproductive health eh...is to grow and to change of children. Let me start with girls. When girl children reach 12 years they start to change in shape. I can say their reproduction starts on the chest, they start developing breasts. It goes... goes, they change on the waist, they start to have something called menstrual cycle, they have eggs, the eggs mature monthly and are called menstruation. If the eggs can meet with a male seed, it forms a pregnancy. Thus where sexual starts. It means that if they can have sex they will produce a human being. In boys their reproductive is change on the face. It starts with the voice, the voice changes to show that it is matured. At the age of 10, 11, 12, 13 when they enter into their teens they start to develop mustache. And they too their reproduction goes to the waist, they start to have seeds called sperms. This seeds mostly happen during the night where it just comes out. Hmm... and then there is change of diet, they eat too much, they feed themselves to show that they are growing.

They too even if they are 12, 13 because he has sperms, if he can meet with a girl who has matured eggs, they can make reproduction called pregnancy, impregnating each other (laughing).”

“Eh... I understand that it is (pause) about child development when she/he starts entering adolescent stage and is about reproduction. When a child enters adolescent stage there are many things that are happening such as breasts’ development, hips’ development and onset of menstruation in girls. At this stage they can fall pregnant.”

These findings of the current study appear to be supported by Davis, Friel and Miller (2001), cited by Svodziwa, Kurete and Ndlovu (2016), who found that Western contexts showed that families, especially parents, remained a powerful influence in fostering healthy teenage development and preventing negative social consequences of teenagers’ decisions and actions.

The WHO (2017) asserted that parents are in a unique position to influence young people’s health and personal development, and their transition to a sexually active life.

It is important that parents understand the puberty changes that occur in their children’s bodies so that parents can advise and counsel their teenage children how to cope with those changes.

4.3.7 Theme 4: Strategies suggested by parents on the implementation of the SRH programme

Parents, who participated in the current study, expressed different views on how SRH programmes should be implemented. Some parents suggested that teachers should provide the SRH services while others said that health professionals should do so. Other parents indicated that teachers and health professionals should work together in implementing the programme.

4.3.7.1 Sub-theme 4.1 Suggestion that Nurses should provide the SRH programme and services to learners

During interviews, teenagers’ parents who participated in the current study, stressed that nurses are well trained, knowledgeable and skilled and should thus provide SRH services

to teenagers. Some parents who were also teachers indicated that they did not feel comfortable to teach learners about SRH topics because learners regarded these teachers as they were the learners' parents, creating awkward situations for the teachers. One parent who taught Life Orientation said children labeled them by names like "Mr. Condom" when they taught about condom use.

Parents were aware that unless children obtained SRH information from health professionals, they might get the wrong information from their peers.

On their own participants said:

"I think that nurses will be much better, because they know a lot [more] about these things than teachers. Isn't teachers only read from the books, but nurses have been trained and are practicing them, they have attended nursing schools and I think children will be [more] free to talk to nurses than to teachers who live with them every day. With teachers they will like... they will be judged when they ask questions, wanting to know more about this SRH issues or other things, teachers may say this is what you are capable of but you know nothing about school work. Now I think that nurses are the ones who can be better than teachers."

"It should be provided by nurses, because teachers sometimes end up not explaining in details, it needs people who have more knowledge about it so that they show learners that this is a condom, it is used like this, here is injection or pills, they are used so.. so... By so doing existing diseases and pregnancies among children will be minimized."

"Eeh...actually...I think they were supposed to be taught by nurses because they understand these things female and male reproduction, sexual relationships between females and males better than teachers, they are better than teachers because teachers just read from the books, they don't know them very well, but nurses understand much better."

"Nurses should always visit schools as teachers do not have enough information about sex and reproduction. School kids take teachers as their parents, it becomes awkward to talk about those issues."

“I think that nurses should be available at schools to provide information on, for example, STIs and sexuality and the consequences thereof. Nurses know these things very well, they will teach our children correct information unlike when they see or hear from somewhere else.”

“Topics like HIV/AIDS, as teachers we feel ashamed to teach them. Let nurses do the job. Teachers are given nicknames by the kids such as Mr Condom because I taught them about condom use.”

“I am a parent and a teacher, children at school will ask questions that I am not comfortable to answer during Life Orientation class. I think it will be very much better if nurses are available full time.”

“Me, as a parent, I perceive these services at schools should be provided by nurses, senior sisters who know much about health, should talk with the Department of Education and suggest to them that we can bring programmes like these to schools, if they agree, nurses will be brought to schools”.

The current study's results are supported by Brindis (2013) who cite that school nurses were critical sources of information for learners, they provide medically accurate information and resources to students and staff, provide relevant and reliable counseling relative to SRH. Kirby, Waszak and Ziegler (2015) also found that it was crucial to include well trained staff in the provision of SRH services, capable of communicating with adolescents, providing adequate referral pathways, and providing follow-up care and collaboration between health service staff members and schools.

Kiapi-wa and Hart's (2013) findings results are similar to those of the current study reporting that health care providers were the most important category of people for providing SRH information to young people in Uganda. However, Kiapi-wa and Hart (2013) found that many health care providers were too conservative with regard to adolescent sexuality, citing lack of training and guidelines for working with adolescents as barriers.

The current study's findings revealed that parents preferred that SRH services should be provided by nurses as they have sufficient and correct information. It was found that

teachers were not relevant to provide SRH services because they were inadequately trained and lacked information. It was noted that some sources of information were incorrect and misleading, thus posing threats to learners, who might unknowingly experience unpleasant consequences of their actions based on poorly informed decisions. The shortage of nurses should not be overlooked.

4.3.7.2 Sub-theme 4.2: The relevance of teachers to offer SRH programmes

Although some parents, participating in the current study, indicated that nurses were the relevant professionals to provide SRH programmes and services to learners, other parents expressed that teachers were relevant. Some parents said that teachers should be trained and be provided with support materials on SRH matters. Parents also indicated that teachers know learners better than anybody else because they spend more time with them than anybody else.

The following are relevant expressions from participants:

“Eh... according to me I think teachers are the ones who can help us a lot before we as parents can get involved. If it can be a subject that is there at school children would understand better a lot unlike when me as a parent I can say I teach him/her at home. But if it has to be taught at schools Department of Education must come up with a curriculum about everything, experts must sit down and talk about the whole curriculum, where to start so that learners can get proper information. Teachers should use the training and syllabus provided to them by the Department of Education about that sexual and reproductive health”.

“Yeah... it is important, it is important to be taught by teachers (nodding the head). I was also a student, I remember when I was in grade... (pause, trying to remember) form two, ya grade 9 with a subject called economics, I benefited a lot when our mam taught us how to bath effectively. That teacher stood up and demonstrated in front of both boys and girls and showed us that we wash like this, like this (showing private parts), she explained that this will prevent smells and infections. I really benefited a lot. So it is important that even in this 21st century teachers help us, we at home we will just do some touch ups. We just highlight here and there because most of the time they stay with us, on weekends

when she is out with friends and we don't know where they are, but because they will be knowing that mam said if when we allow boys to touch us and do like this and that we will be in trouble. So teachers should be the ones providing this programme.”

“I think teachers are the right ones at school because they are the ones who spend much time with children at school. Teachers are academics, they can be trained, they can be capacitated by the health professionals through workshops, so they can help children in schools, to give them basic knowledge and information about sexual and reproductive health.”

“Yes (boldly) I agree with the fact that sexual and reproductive health programmes should be available in schools because children spend much time at schools with teachers, they are much [more] used to their teachers than to us parents, they are [more] open to teachers than us parents. Teachers also know the characters of these learners, they know that this one is naughty or not and are able to accept the learner as she/he [which] is [better] than when you as a parent talk with him/her at home where she will not be open or hide his/her real behaviour that she display while at school”.

The current study's findings concur with those of Kirby et al. (2015) who indicated that it is crucial to include well trained staff in the provision of SRH services, who are able to communicate with adolescents. Aransiola et al. (2013) revealed that teachers were supportive of including SRH or sexuality education in the syllabus, and appeared willing to teach about these issues. However, the results showed that a large proportion of teachers were uncomfortable addressing contraceptive issues but accepted of biology-focused pubertal-related information.

Results of the current study indicate that some parents considered school teachers to be important persons to offer SRH programmes because teachers spent much time with learners, and they knew the learners better than anybody else. For teachers to provide run SRH programmes, they need to be capacitated in the form of training, workshops should be organised and the necessary materials and support from the DOE and DOH should be provided.

4.3.7.3 Sub-theme 4.3 Strategy of providing SRH services to learners

Some parents who participated in the current study, indicated that nurses should visit schools at least once a week, some said twice a week, while others said nurses should be available Monday to Friday. Concerning gender, some parents felt that male and female learners should be taught in the same class. However, some parents indicated that males should be separated from females so as to provide gender-sensitive information freely. Some parents said teachers should assist nurses during classes, whereas some participants felt that teachers should not be present because learners might be uncomfortable asking personal and/or sensitive questions in the presence of a teacher.

The following are relevant statements from parents:

“Nurses should visit schools at least once a week to provide SRH services to learners. I think both male and female learners should be taught in the same class as part of school curriculum. Teachers can only assist the nurses as support personnel.”

“Nurses should visit schools once in two weeks. Males should be separated from females so as to provide gender-sensitive information freely. Teachers should not be present because learners will be uncomfortable.”

“It will be better if those services can be provided in schools every day, nurses should always be available Monday to Friday at the school. May be our children will be able to consult them individually”.

“Since it is difficult to discuss SRH issues with our children, it will be better if such services are provided by health professionals at schools on full time basis between 8h00 and 16h00.”

Findings from a study conducted in the USA by Singh and Darroch (2013) indicated that Mississippi, Carolina and Arizona required single sex classroom SRH instruction, the reason being that it increased teachers and students comfort. However, other states in America prohibited gender-segregated instruction, advocating for mixed gender classes (Singh & Darroch, 2013).

Bleakly (2014) indicated that in order to meet the needs of students, schools that are without SRH services should consider establishing school-linked health centers, which should be centers located off the school's property. These centers should provide services during hours before and after school and could typically provide more comprehensive SRH services than school-based health centers. Bleakley (2014) also maintained that school-based health centers (SBHC) was another model for providing SRH services in schools. SBHCs are typically located on school property or through a mobile unit typically operated by another entity like a community health center, hospital or health department.

Basch (2015) supported the use of external organizations and/or agencies in the provision of SRH services in schools. Community-based organizations and outside consultants were invited to deliver sex education in classrooms. Teachers were required to be present in the classroom while the instruction was being delivered to ensure compliance with relevant SRH policies.

The parents, interviewed during the current study, suggested different strategies for providing of SRH services in schools. Some parents wanted services to be provided once a week, some preferred fortnightly while others required full time services. Findings also reflected different opinions regarding the approach of teachers during class instruction and whether or not female and male learners should be separated during SRH education sessions.

4.3.7.4 Sub-theme 4.4 The need for collaboration in providing SRH services

Some parents, participating in the current study, indicated that nurses, teachers, parents and youth should work together to provide SRH services to learners. The most prominent fact was that nurses should capacitate teachers, parents and youth with information so that teachers and parents could guide learners.

In this regard, some participating parents said:

“Nurses should be the ones work shopping teachers so that they can assist children, if teachers are not sure about the running of the programme, they will call for assistance

from nurses so that children can clearly understand what is going on, what it is that this programme is all about is.”

“We parents at home and teachers at school and nurses must... sometimes go to schools to warn them.”

“So if children have been taught at school, when they come home, we will be able to add on top of what the teachers have done. Nurses must come and be the ones who demonstrate everything practically when teachers have taught theory such as condoms, and about everything that can help children not to fall into trouble regarding sex and reproduction”.

“And then just to add on that this sexual and reproductive health program, for it to be well received, teachers must work together with nurses, at least if they can make it a subject that is offered once a week, we know teachers are busy, but if they can request health professionals once a week to come and assist and work together with teachers, it will be helpful.”

“Teachers must at least talk with the Department of Health so that they can provide schools with nurses who will be able to teach children, so that children may know how these things work, things about sex, diseases, pregnancy among school learners”.

“Eh...I was thinking that they must be taught by nurses and teachers. Isn't at schools there are Life Orientation teachers, but they do not know much about this SRH topics such as contraceptives, condoms and others, they do not know they are used and to demonstrate. I was thinking that teachers can work in collaboration with nurses because nurses can explain clearly and demonstrate how they are used. Life Orientation teachers can assist here and there so that nurses can get learners' cooperation. ”

“I think nurses can visit schools once a month, they must discuss with teachers that on such and such a day learners must be available so that they can talk to them about this sexual and reproductive issues [as] it is important.”

“Eeh...I was thinking that teachers, nurses and we as parents should work together. Some youth can be trained to counsel because if their fellow young person addresses

them, may be they can be open and be able to ask questions, because this person is their age group, they will not feel ashamed. Everything they want to know concerning this programme, they will be able to ask him/her if they are people whom you have trained of their age.”

“I think teachers can work together with health professionals. Since well teachers are not so conversant with SRH issues, it is not their line, they can be work shopped by the health professionals to carry on with SRH education lessons while nurses come... maybe once a week or after two weeks to demonstrate the practical part, I think in that way sexual problems among teenagers can be reduced, sexual problems like pregnancies, diseases.”

4.3.7. 5 Sub-theme 4.5 Grades where SRH programmes should be included

Different views were reflected by parents, participating in the current study, about the grades in which SRH programmes should be offered. Some parents maintained that it should start during primary school while others said it should start at secondary schools. Some parents indicated that “nowadays” children grow faster and become sexually active at earlier ages than in the past, associated with the younger ages when school girls become pregnant.

The following are expressions from participating parents:

“I perceive this is a good and right thing that children as early as 10, 9 years [of age] must be taught about sex education, because even if we are afraid to teach them, the fact is that they know, they see, they hear and they understand. So the earlier we teach them the better, we will be preparing a better future for them. These days children are no longer like us when we were still growing when we were told that a baby is brought by an airplane. An eight year old child will tell you that a baby is not brought by an airplane, a baby is born. Some even start talking about sex at preschool level. This means that these children are advanced, they understand, we must communicate with them so that they can know how a baby comes about, that is when a men sleeps with woman, but we must not be reckless when we explain so that they can understand clearly. I think in that way if it could be introduced at primary school level, we can have a better nation, future leaders,

because many girls fail to be somebodies in life because of dropping out of school due to [pregnancy]”.

“Currently it is taught by teachers who teach Life Orientation, only taught in grade 7 in the school where my children are attending. I think it should be taught in all grades starting from primary school. Nowadays girls fall pregnant even in primary schools. Last year an 11-year old learner fell pregnant, it was shocking.”

Manzini (2016) agreed with these findings of the current study when she recommended that sex education should begin before puberty, at ages 9-10 and in primary school, to ensure that more girls would be in a better position to make informed choices about their sexual activities by the time they begin to engage in sex or reach menarche. Mulelu et al (2014) as well as Van Den Berg (2014) also supported these findings when they indicated 33% of girls between the ages of 12 and 17 were sexually active and girls as young as 8 were sexually active, whereas some girls aged 12 to 17 were already pregnant. It is also important to know the age of sexual initiation so as to determine when to introduce sexual and reproductive issues to learners.

Ngoma & Himoonga (2016) indicated that teenagers in Zambia complained that they were taught too late when they had already started engaging in sexual activities and when some teenagers already had babies.

Mothiba and Maputle (2015) supported the previous researchers' findings by indicating that 62% of teenagers engaged in sexual activities as early as 13 to 15 years and 4% had started at ages 10-12, indicating that most teenagers engaged in sexual intercourse at young ages. Therefore sex education should be started in primary school as learners aged 10-12 years are still at primary school (Maputle & Mothiba, 2015). However, Beksinska et al. (2014) identified that there were insufficient teachers to implement SRH programmes. The lack of integration SRH programmes into schools' educational system and policies was posed a challenge for implementing SRH programmes across all school grades (Beksinska et al., 2014).

A study by Akande and Akande (2017) showed that secondary level education was viewed by most of their study's participants (students 66.8%, teachers 59.0% and parents 69.0%)

as the ideal stage where sex education should be introduced. This is because at this stage, adolescents had gained mental maturity to assimilate what is been taught in class and could make informed decisions about their sexual lives. That study indicated that teachers felt that sex education should start from 10 years of age while parents felt that 14 years would be more appropriate. Adolescents at these ages are usually at their pubertal stage where rapid development of their sex characteristics takes place, preparing them for adulthood (Akande & Akande, 2017).

The programme was implemented as part of the Life Orientation compulsory school subjects across all grades. However, evaluation studies identified challenges to this programme, such as insufficient numbers of adequately prepared and equipped Life Orientation teachers, inadequate teaching aids and the lack of support from the DOE and the DOH.

4.4 INTEGRATION OF QUANTITATIVE AND QUALITATIVE FINDINGS

In the previous sections of chapter 4, quantitative and qualitative findings were discussed separately. This section integrated the findings of both research approaches.

Table 4.15 Integration of quantitative and qualitative findings

Quantitative	Qualitative	
Questionnaire	Themes	Sub-themes
Knowledge about SRH		
Knowledge of learners about SRH: Prevalence of sexual activity: 61% of learners were sexually active, only 25% use protection, 33%	Knowledge of parents on SRH matters	Parents' lack of SRH knowledge. Parents' existing knowledge Parents' knowledge about physical changes that

<p>knew about STI's, 84% said SRH services were not available in schools.</p> <p>55% of teachers were not adequately trained and did not have training manuals, thus had limited knowledge.</p>		<p>occur during puberty.</p>
<p>Sources of SRH information</p>		
<p>90% of teachers were the main sources of information 61% learners heard about SRH from teachers Only 20% heard from parents 58% of teachers were not comfortable in teaching SRH lessons</p>	<p>Views of parents related to discussion of SRH issues with teenagers</p>	<p>Narratives that SRH topics should not be discussed with children.</p> <p>Parents' difficulties to discuss SRH issues with their teenage children.</p> <p>The influence of culture and religion</p>
<p>The provision of SRH information in schools</p>		
<p>Is SRH policy available in school? Yes=12% SRH programmes available? Yes=44% Is programme effective? No=72%</p>	<p>Suggested strategies by parents on how to implement SRH programme</p>	<p>Suggestion that nurses should provide the SRH services to learners.</p> <p>The relevance of teachers to offer SRH programmes.</p> <p>The need for collaboration in providing SRH services.</p>

The importance of SRH programmes		
<p>67% of teachers strongly disagreed that the existing SRH programmes have reduced absenteeism related pregnancy, 68% disagreed that teenage pregnancy rate, and STI's and HIV have decreased.</p> <p>68% strongly agreed that SRH services have reduced teenage maternal deaths and improved learner's knowledge.</p>	<p>Views of parents about the provision of SRH services in schools</p>	<p>The importance of parents' discussing SRH issues with teenagers.</p> <p>SRH services are important</p>

4.5 SUMMARY

Chapter 4 analysed and discussed the findings of both the quantitative and the qualitative data. Concept analysis will be addressed in the next chapter.

CHAPTER 5

CONCEPT ANALYSIS

5.1 INTRODUCTION

In the previous chapter the data analysis and the discussion of the findings were presented. In this chapter the concept “*comprehensive*” related to SRH will be analysed. Concept analysis refers to the clarification and analysis of the lay concepts in the study and the way one’s research is integrated into the body of existing theory and research. It also refers to the underlying theoretical framework that guided the research. It is the process going on in one’s mind when one gathers impressions or perceptions, identifies similarities and combined these similarities to comprise a single thought, which expresses the similarities and then gives them meaning (Mouton, 2014). A concept can express the same idea in different sets of words (Toftagen & Fagerstrom, 2014). The aim of concept analysis is to clarify meanings of concepts that sound similar and identify multiple considerations for measuring the concept (Falan, 2015). Concept clarification is an important step in developing useful and usable knowledge in developing a comprehensive SRH programme for secondary school learners.

Walker and Avant (2016) stated that concept analysis is a process of operationalising a phenomenon so that it can be used for theory development or research measurement that evolve over time, is never fixed, but creates a useful understanding of the shared meaning of a concept within a specific context. Chinn and Kramer (2014) defined concept analysis as a complex mental formulation of experience extracted from life’s experiences, clinical practice or research, and the aim of this analysis is to clarify, refine or sharpen the concepts, statements or theories.

Concept analysis is used to examine and describe a concept and its application. The concept should be clear and distinct, unambiguously defined and well differentiated from

other concepts, and should be applicable to the world and appropriate to the context (Chabeli & Muller, 2014). A scientifically developed concept is the essential first step in any research process. Concepts are viewed as the building blocks with which theory can be constructed, and their analysis is considered essential if the concepts are to be actively and correctly operationalised (Eustace & Ilagan 2015; Mikkelsen & Frederiksen, 2015).

Concept analysis steps suggested by Walker and Avant (2016) were used to describe the meaning of comprehensive SRH when developing a comprehensive SRH programme:

- Identification of concepts of interest
- Determining the purpose of the analysis
- Identifying all uses of the concept(s)
- Determining the defining attributes or characteristics of the concept(s)
- Identifying or constructing a model case
- Identifying additional cases: related cases
- Analysis of data regarding the above characteristics of the concept
- Identifying antecedents and consequences

- Defining the empirical referents

5.1.1 Identification of concepts of interest

“Comprehensive” was identified as being a concept of interest to focus on when developing a SRH programme for secondary school learners. The concept of interest was identified from the title of the study and from analysis of data obtained from the perspectives of learners, teachers and parents. Limited knowledge from participants and assessment of existing SRH programmes for adolescents assisted in identifying gaps regarding comprehensive SRH. Participants reflected self-care deficit regarding SRH issues.

5.1.2 Determining the purpose of the analysis

The aim of a concept analysis is to clarify meanings of similarity and identify multiple considerations for measuring the concept (Falan, 2015). The objective is to understand what the concept is about (Walker & Avant, 2016).

For the purpose of the current study, concept analysis was done to:

- describe and clarify the meaning of *comprehensive* SRH
- clarify the characteristics, attributes and uses of the concept *comprehensive* SRH
- develop theoretical definitions that helped to develop a *comprehensive* SRH programme for secondary school learners

5.1.3 Identifying all the uses of the concept(s)

Identifying of the uses of the concept is the third step of Walker and Avant's (2016) concept analysis model. The researcher reviewed literature obtained through library and Internet searches to identify as many uses of the concept "*comprehensive*" as possible. The search was combined with additional search of terms used for the purpose of directing the searches towards the context of a comprehensive SRH programme for secondary schools learners. Sources like dictionaries, encyclopedias, the Internet, journal articles and books were reviewed in order to clarify the meaning of "comprehensive" as applied to SRH. Unsworth (2017) cites that dictionary definitions are authentic and therefore useful because they convey accepted ways in which words are used.

"Comprehensive" is related to terms such as complete, whole, one hundred percent, all-in-one, all-inclusive, fully, holistic and totally (Kaplan & Sadock, 2015). These concepts have different meanings when used in different contexts. The characteristics of the concept "*comprehensive*" which appeared repeatedly were complete, full, whole, all. The uses of these concepts will be discussed separately.

Complete

The researcher selected the word "*complete*" as it appeared first on list of synonyms of "*comprehensive*".

- The concept "complete" means having all the necessary or appropriate parts, often

used for emphasis to the greatest extent or degree (English Oxford Dictionary, 2017).

- Having all the necessary parts, entire, having run its course, skilled at every aspect of an activity, finish making or doing something, provide with the items necessary to make something complete, write the required information on a form (Oxford South African Pocket Dictionary, 2015).

Synonyms are:

- Unbroken
- Finished
- Everything
- Detailed
- Wholesome
- All-inclusive

The word “*complete*” from Explore Dictionary (2018) is used as follows:

- Having all parts or elements; lacking nothing; whole; entire; full.
- Finished; ended; concluded
- Having all the required or customary characteristics, skills, or the like; consummate;
- Perfect in kind or quality.
- Thorough; entire; total; undivided, uncompromised, or unmodified:
- Having all modifying or complementary elements included
- To make whole or entire:
- To make perfect:
- To bring to an end; finish:
- Football- to execute a forward pass successfully

In this study comprehensive refers to a well-coordinated SRH programme that includes all the elements without leaving anything out.

Whole

“Whole” is defined as something constituting a complex unity: a coherent system or organization of parts fitting or working together as one (Merriam-Webster Collegiate Dictionary, 2017).

Synonyms are:

- Entire
- In one piece
- Uncut
- Complete

For the purpose of the current study “whole” refers to the working together of all stakeholders in implementing the comprehensive SRH programme for learners

Full

“Full” means containing as much or as many as possible or complete especially in detail, number, or duration (Macmillan English Dictionary, 2017).

Synonyms are:

- Filled
- Occupied
- Packed
- Complete

In this study “full” refers to the agents taking full responsibility for implementing the programme.

All

“All” refers to the whole quantity or extent of a particular group or thing

Synonyms are:

- Altogether
- Everything
- Entirely
- Wholly
- Totally

(Jordan, Bayly & Sawyer, 2014).

For the purpose of this study, comprehensive SRH programme refers to a well-coordinated programme which include all the elements necessary for the successful implementation of the programme.

5.1.4 Determining the defining attributes or characteristics

Walker and Avant (2016) maintained that defining the characteristics of a concept make up the core of concept analysis. Attributes of the concept refer to the collection of attributes that are frequently associated with the analysed concept and it allows the researcher a broader insight into this concept. To define the attributes, the researcher made notes of characteristics of the concept that appeared time and again. This assisted the researcher to clarify and differentiate the concept “comprehensive” from other related concepts (Walker & Avant, 2016). The concept “*comprehensive*” is widely used every day and remains a complex concept, however its meaning varies depending on the discipline. Related words to the concept “*comprehensive*” might aid the understanding and facilitate effective implementation of the intentions or objectives of “comprehensive” SRH services.

The characteristics of the concept “*comprehensive*” which appeared repeatedly were complete, full, whole, all.

Table 5.1: Illustration of literature review related to the attributes of the concept “*comprehensive*”

Source	Year	Field	Characteristics/attributes
Oxford Dictionary	2017	General	Including or dealing with all or nearly all aspects of something.
Jordan, Bayly & Sawyer	2014	Education	A system in which children of all abilities are educated in one school. Comprehensive stakeholders include learner, teacher, parent

			<p>and society.</p> <p>Comprehensive examination is an examination of extensive coverage given to measure a student's general progress, proficiency in his or her major field of study, or the like.</p>
(Thesaurus dictionary).		General	<p>Complete, inclusive, full, all-inclusive, wide-range, broad, ample, widespread, far-reaching, across-the-board, thorough, all-embracing</p>
Oxford Dictionary	2017	Commerce	<p>Commercially, comprehensive motor-vehicle insurance means providing cover for most risks</p>
Robbins	2017	Business	<p>Comprehensive income is a statement of all income and expenses recognized during a specified period. The statement includes revenue, finance costs, tax expenses, discontinued operations, profit share and</p>

			profit/loss
Mosby's Dental Dictionary	2008	Health	<p>In the field of health, comprehensive care is an approach that cares for the whole patient and all his or her needs, not just the medical and physical ones.</p> <p>Comprehensive care also refers to using the services of many professionals working together and is the standard approach at all major medical centres</p>

5.1.5 Identification of the model case concept

“*Model case*” is defined by Walker and Avant (2014) as an example of the use of a concept that demonstrates all the defining characteristics or attributes of the concept. The researcher had to develop a model case that represents and clearly describes the true uses and attributes of the concept “*comprehensive*” SRH. The theoretical definition of the concept “*comprehensive*” were found to be complete, whole, full and all, which refer to a well-coordinated comprehensive SRH program that includes all elements as recommended by the WHO (2017).

The model case was constructed in such a way that it contained all the defining characteristics of the concept “*comprehensive*”.

Elizabeth is a sixteen year old school girl in great 10. Teacher Ronny teaches her and others in her class about contraception, prevention of STIs, HIV and pregnancy. Sister

Lolo and her mobile clinic team visit the school once a week. Elizabeth consults the clinic for contraception. Sister Lolo goes through the screening procedures with Elizabeth and found that she has an STI. Sister Lolo gave Elizabeth information about different contraceptive methods. Elizabeth decided on using an implant. Counselling was given regarding the chosen method. Sister Lolo treated Elizabeth for the STI and advised her use condoms to prevent further infections. Elizabeth also done Pap smear and was told to come back after two weeks to check for results. When asked about her experience Elizabeth verbalised that she felt empowered by the lessons from teacher Ronny. She further said Sister Lolo was friendly and showed understanding of her healthcare needs.

The above model displays ideal “comprehensive” SRH service. Elizabeth was taught about SRH in class and the actual provision of the service was done by the staff of the mobile clinic attached to the school.

5.1.6 Identification of contrary cases

Related cases refer to situations that demonstrate ideas that are very similar to the studied concept, but differ when closely scrutinised (Walker & Avant, 2011). Identifying related cases assisted the researcher to understand how the studied concept fits into the network of concepts that surround it. Related cases also assist in clarifying the defining characteristics of the studied concept and to reject what does not define the characteristics and attributes of the concept.

A 16 year old school girl visited the nearby clinic for family planning services. She had never received information about contraception from anyone before. The girl was given three packets of pills, no explanation or counselling was provided and she left the clinic. After four months the girl came to the clinic for antenatal care, had an STI and tested HIV-positive. When asked how she was using the contraceptive pills, she said she only took a pill when she was going to sleep with her boyfriend. When asked about condom use, she indicated that she thought it was not necessary to use condoms because she was using a pill to prevent pregnancy. When asked about her experience, the girl just cried indicating that her teenage pregnancy was unwanted and her attempt to access contraception was futile. She blamed the school for not including SRH information in the

curriculum.

This case indicates that clinic nurses did not provide this girl with comprehensive SRH health services. The girl was denied access to SRH information, hence she suffered the consequences of engaging risky sexual behaviours due to a lack of information. Had she been given adequate information, the girl could have made an informed healthy decision about her sexual life. SRH information was not part of the school curriculum.

5.1.7 Identification of antecedents and consequences

The next step in concept analysis was to identify antecedents and consequences. Antecedents are defined as aspects or events that precede the occurrence of the studied concept (Walker & Avant, 2016). The Explore Dictionary (2018) defines antecedent as someone or something existing or happening before, especially as the cause or origin of something existing or happening later. Chinn and Kramer (2014) stated that antecedent concepts are experiences identified before other concepts. The antecedents and consequences were identified from the literature search about the concept “*comprehensive*” SRH. The uses, defining attributes and theoretical definitions of this concept were clarified.

5.1.7.1 Antecedents of “comprehensive”

The antecedents for “comprehensive”, when developing a SRH programme for secondary school learners, referred to those aspects that preceded the process of developing the programme. Antecedents were key in helping the researcher to identify the underlying assumptions about the concept “comprehensive” SRH. Developing a comprehensive SRH programme requires a multisectoral and comprehensive approach. The following antecedents were found to be important for developing a “comprehensive” SRH programme:

- laws, policies and human rights
- education and training of teachers
- the roles of health care providers, parents,
- community and society

- health care systems-referral
- human and material resources (finance)
- coordinated health and education systems

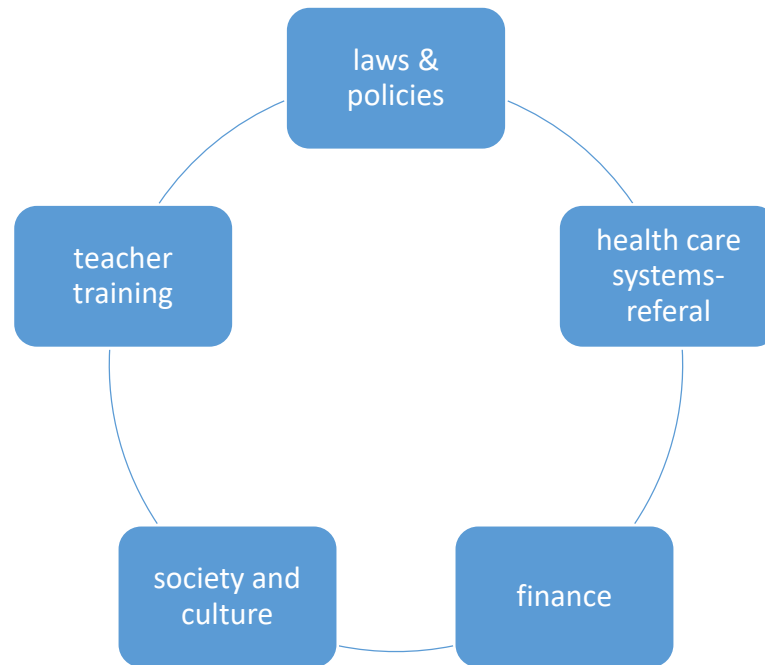


Figure 5.1: Antecedents for a comprehensive SRH

5.1.7.2 Deeper discussion of the antecedents

(I) Laws and policies

Laws refer to rules of human conduct which prescribe the imposition of a sanction or penalty for non-compliance (Wiley Online Library, 2017). Policies are sets of plans used as the basis for making decisions (Collins English Dictionary, 2014). Sorace (2013) defined policy as a law, regulation, procedure or administrative action to achieve a desired goal. Sorace (2013) further cited that in the area of SRH education, policies state the need for the particular education, how it is provided such as being medically accurate, comprehensive, and age-appropriate. In many countries there are legal barriers to the provision of SRH services to unmarried young people. Policies clearly define who is providing the SRH education, for example trained teachers or health professionals, the

role of parents and the curriculum content. Policies also provide information as to when, how, by whom and where referrals are to be made. Laws and policies are important for supporting the existing SRH interventions or for introducing new ones. South Africa needs to use laws, policies and other regulatory mechanisms to guarantee the promotion and provision of SRH information and services to secondary school learners and to uphold learners' human rights. The 1994 ICDP Cairo agreement about the elements of a comprehensive SRH programme should be considered as mandatory when developing SRH laws and policies. Laws and policies are also important to provide legal protection against any discrimination and stigma related to learners' sexual health (UNFPA, 2015).

Thoroughly considered laws and policies for school-based SRH education and access to services should be developed in collaboration with parents, learners, teachers, administrators and members of the community (Sorace, 2013).

Thus other laws and policies are necessary to address a comprehensive SRH services, as defined by the 1994 ICDP Cairo agreement, not only focusing on pregnant learners (UNFPA, 2015).

It is of great benefit to have clear and concise laws and policies pertaining to SRH to provide direction and promote consistency for implementing a comprehensive SRH programme in secondary schools in South Africa.

(II) Appropriate SRH training of teachers

The WHO's (2017) report on Reproductive Health Programs for Young Adults: School-Based Programs, states that obstacles to the implementation of SRH programmes include the lack of knowledgeable and skilled personnel and materials. Findings from data analysis indicated that parents who participated in the current study said that teachers should provide SRH information, as evidenced by the following statement: *"I think teachers are relevant because they are the ones who spend much time with children at school. Teachers are academics, they can be trained, they can be capacitated by the health professionals through workshops, so they can help children in schools, to give*

them basic knowledge and information about sexual and reproductive health.”

Teachers, who participated in the current study, on the other hand, indicated that they were not trained to provide such services, seldom had necessary manuals and did not receive support from the DOE and DOH. Thang (2015) reported that teachers stated that they were incapable of providing SRH training as they were not specifically trained in SRH and they had no access to appropriate SRH educational materials. Thus the training of teachers through formal workshops and in-service education sessions could help to equip teachers with knowledge and skills to facilitate the implementation of the SRH programme. SRH care providers should be trained to detect any problems and refer learners appropriately when necessary to do so.

(III) Society and culture

Culture consists of beliefs, behaviours and other characteristics common to the members of a particular group of people or society, while society refers to a group of people with common territory, interaction and culture (Oxford South African Pocket Dictionary, 2015).

Cultural beliefs and values are significant in determining access to SRH information and SRH services for learners. The influence of traditional values, beliefs and norms should not be underestimated when introducing a comprehensive SRH programme.

Some parents, interviewed during the current study accepted and supported the implementation of a comprehensive SRH programme at secondary schools as confirmed by the following statements:

“Yes, it is very very much important because eh... diseases will be reduced and children will not engage and sexual relations at early ages, children will live longer, because this days it is difficult, you find children are not told anything, their eyes are closed, they just start indulging in sex that is not safe.”

Another participant said: *“Sexual and reproductive programmes will help our children to understand themselves, if [it] is a boy [he] must know what is expected of him, if [it] is girl [she] must also know what is expected of her and that they must know their position about*

gender, so that they can behave in a proper manner and be proud of themselves in the society, so that they can be real men and women in future who know yes and no.”

(IV) Finance

Finance means to provide funding for a person or enterprise (Oxford Dictionary of English, 2017). By finance, the researcher refers to the funding of the comprehensive SRH programme. Study findings revealed that teachers lack resources such as facilitation materials and infrastructure. Leslie and Jameson (1990), cited in WHO (2017), concluded that cost-benefit analyses suggest that appropriate SRH interventions in schools prove to be a very high-yield health investment in reducing reproductive health problems.

Money is needed for teachers' training, teaching materials, purchasing items such as condoms, contraceptives, and all the necessary items to run the programme. Thus an adequate budget should be available to initiate and sustain the programme throughout generations. However, skilled finance officers will be needed to ensure effective and efficient utilisation of funds and resources.

(V) Health care systems

Health care systems refer to the organisation of people, institutions, and resources that deliver health care services to meet the needs of the target population (Oxford South African Pocket Dictionary, 2015). Health care systems play a significant role in responding to the consequences of sexual and reproductive ill-health (WHO, 2017).

SRH services should be made as accessible as possible to learners, and should be confidential, private, and non-discriminating. Findings for this study indicated that SRH services were not accessible to learners. The health care system of South Africa should provide at least the following SRH services:

- Sexual health education, promotive and preventive information
- Sexuality counselling for clients' sexual health needs and desired contraceptive preferences
- Identification and referral for victims of sexual violence
- Voluntary counselling, testing, treatment and follow up for STIs and HIV/AIDS

- Diagnosis, screening, treatment and follow-up for reproductive cancers
- Diagnosis and referral for sexual dysfunction
- Legal and safe abortion
- Post-abortion care which include the provision of contraceptive information, counselling and methods (WHO, 2017).

Accessible, acceptable, affordable and high-quality SRH services and referral systems are important for implementing a comprehensive SRH programme. A school should cooperate with a local clinic or partner with NGO to provide SRH services on school grounds, provide visiting speakers and counselors. Working together will improve referrals, save resources and prevent needless duplication of services

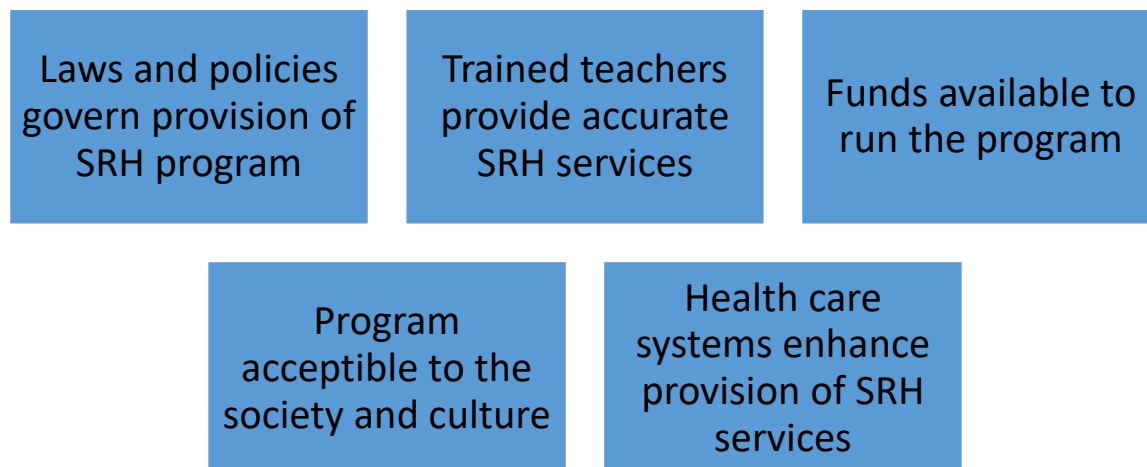


Figure 5.2 Consequences of antecedents for comprehensive SRH programme

5.1.7.3 Consequences of a comprehensive SRH programme

Consequences or outcomes are the events or incidents that occur as a result of the occurrence of the studied concept (Walker & Avant, 2014).

Consequences for this study is the existence of a well-coordinated comprehensive SRH programme for secondary school learners.

5.1.8 Defining empirical referents

Definition of empirical referents is regarded as the last step in concept analysis by Walker and Avant (2016). Empirical referents are referred to as measurable properties that further verify the concept. Furthermore, empirical referents are also defined as classes or categories of actual phenomena that, by their existence or presence, demonstrate the occurrence of the concept itself (Walker & Avant, 2016). The construction of referents was used to operationalise the concept of interest. Walker and Avant (2016) cited that referents are extremely useful in instrument development, because they are clearly linked to the theoretical base of a concept. As such they provide clear and observable phenomena of the concept. Furthermore, Burns and Grove (2014) indicated that instrument development in itself is an operational definition.

The defining empirical referents of the concepts “comprehensive” SRH were measured through the use of the elements defined by the WHO (2017).

- Comprehensive SRH programme is available
- Teachers have been trained to facilitate the programme
- Learner-friendly corner (or allocated space) has been established to consult nurses on school premises
- Nurses visit schools once a month
- Teaching and learning materials are available
- Learners have access to SRH services

5.1.9 SUMMARY

In chapter 5 the theoretical and empirical analyses of the concept “comprehensive” was discussed. The concept was analysed by using Walker and Avant (2014) steps of concept analysis. The uses, attributes and characteristics, antecedents, consequences and empirical referents were addressed. The practical perspective was based on the elements of a comprehensive SRH programme and service.

The chapter 6 will present a discussion of the development of a comprehensive SRH programme.

CHAPTER 6

PROGRAMME DEVELOPMENT

6.1 INTRODUCTION

The previous chapter discussed concept analysis. The purpose of this chapter was to develop a comprehensive SRH programme for secondary schools learners, which is the implementation phase for this study according to Orem's Self-Care Theory. The programme was developed by incorporating the findings of the study as well as using the six elements of the survey list as outlined in Practice Oriented Theory developed by Dickoff, James and Wiedenbach (1968). The list includes the context, agent, recipient, procedure/process, dynamics and terminus/outcome (Dickoff, et al 1968). The survey list of Dickoff et al (1968) was adopted as a guide to ensure logical development of a comprehensive SRH programme for secondary school learners.

Table 6.1 Summary of the structure of the programme

In what context is the activity performed?	Context: Secondary schools
Who perform the activity	Agent: Teachers, parents, nurses
Who is the recipient of the activity	Recipient: Learners
What is the energy source of the activity	Dynamics: Collaboration, team work, communication, leadership, commitment, enthusiasm
What is the guiding procedure	Procedure: identify objectives and activities to assess, plan, implement and evaluate the programme.
What is the end point of the activity	Purpose: well-coordinated comprehensive SRH programme, improved access to SRH services,

	reduced teenage pregnancies and STI's
--	---------------------------------------

6.1.1 Context

The context is viewed from the aspect of the matrix of activity. To view an activity is to see it in relation to other things, including persons and other activities, and to see the interrelation of these to other factors as contributing to an organisation, unity, and the total context of an activity (Dickoff et al, 1968). The context for this study were secondary schools in the Capricorn and Mopani Districts of the Limpopo Province. Common factors that emerged within the secondary schools' context are depicted in Figure 6.1:

- The socio-cultural environment: the values, culture, religious beliefs and social networks exert an influence on SRH matters.

The socio-cultural context of the society should be taken into consideration because SRH is a sensitive issue. The society may approve or disapprove the programme. For the programme to be successful, approval and acceptance by the society is important. Influential people such as parents, community leaders, religious leaders and traditional practitioners should be consulted to assess their perceptions about the programme. Findings for this study reflected that some parents were against the provision of SRH services to learners, citing religious and cultural beliefs.

- The legal environment: existing laws, policies and guidelines influence the provision of SRH services to adolescents. The programme must operate within the legal environment of the country. The Constitution of South Africa Act (Act no.108 of 1996) protects the rights of access to SRH services and rights to education for all citizens. Findings for the current study indicated that there were no SRH policies in schools, except the one that stipulate that pregnant learners must be accompanied by parents to school.
- The technological environment: the availability of technology such as the Internet enhance access to SRH information.
- Capacity of teachers: the availability of adequately trained teachers regarding SRH issues. Well trained teachers are necessary to facilitate and coordinate the programme. Results of this study showed that teachers were not adequately

trained.

- Health care system: the availability of school health nurses to provide SRH services to learners at the school. The system should make provision for providing schools with nurses and referral systems. Findings for this study indicated that nurses rarely visit schools. Access to clinics was also found to be a challenge.
- Infrastructure: accommodation space is required for teaching, learning and the actual provision of the services. Findings revealed that there were no private rooms at schools, where learners can consult teachers or nurses. Clinics infrastructure did not have special space for learner consultation, learners had to queue with everyone. These resulted in learners not utilising nearby clinics for fear of meeting relatives or community members who know them.

These factors need to be taken into consideration when developing a comprehensive SRH programme for secondary school learners because they can enhance or hinder the implementation of the programme.

6.1.2 Agents

An agent is a person or any other thing whose activity contributes towards the realization of the goal (Dickoff et al., 2008). Different persons can perform different activities while striving towards the same goal (Dickoff et al., 2008). Deduced from concept analysis, comprehensive health means using the services of many professionals working together. According to Orem's self-care theory, agents serve as self-care agencies who provide educative and supportive health care to promote self-care. In developing this SRH programme, as part of the current study, the agents are:

- Teachers who will be responsible for facilitating the programme. Findings indicated that teachers should facilitate the programme because they spend much time with learners and they know the learners' characters.
- Nurses are responsible for providing the actual SRH services such as screening, contraceptives, condoms, antenatal and post-natal care. Findings also reflected that nurses were the appropriate agents as they are well-trained.
- Parents provide the necessary support to teachers and learners. Findings for this study showed that parents lacked knowledge and reluctance, therefore support

and capacity building is necessary.

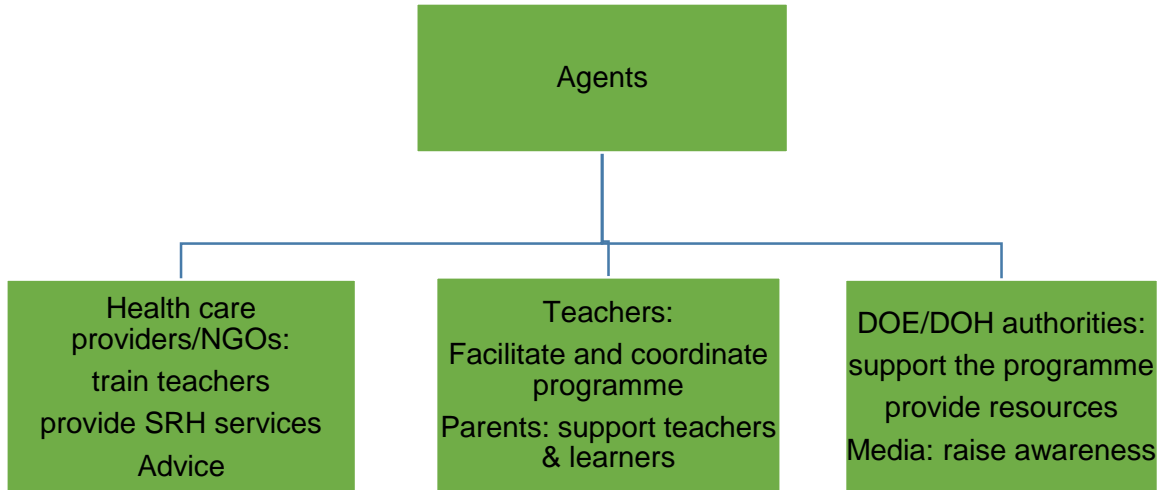


Figure 6.1: Agents required for implementing a comprehensive SRH programme

6.1.3 Recipients

Recipients are things or persons who receive action from the agent, and this activity contributes to a certain goal as described in Dickoff et al. (2008) survey list of Practice Theory. Recipients for this programme were learners. Findings indicated that according to Orem's self-care theory, learners had self-care deficit because they had limited SRH knowledge. Self-care requisites for learners include reciprocal interaction with the agents to be able to achieve therapeutic self-care demand.



Figure 6.2: Recipients of a comprehensive SRH programme

6.1.4 Dynamics

Dynamics refer to the power sources of the activity which can be chemical, physical, biological and psychological for any person or thing functioning as an agent or recipient to be part of the framework in realising the goal (Dickoff et al., 2008). The dynamics for the programme were guided by the results of this study and concept analysis. Study findings reflected the need for collaboration between the DOE and the DOH. Findings also reflected team work, commitment, enthusiasm, support and communication between the agents and the recipients.

Concept analysis clarified the concept “*comprehensive*” as having all the necessary or appropriate parts and required characteristics and skills for achieving the purpose. The agents for the programme should possess leadership skills and have good interpersonal relationship.

Findings for this study indicated that learners do not show enthusiasm in the SRH lessons that are provided during Life Orientation sessions. For the programme to be effective, the recipient need to participate actively.

Study findings revealed that teachers were lacking external support, resources and capacity to provide SRH information. For a comprehensive SRH programme to be successful, the DOE and the DOH should work together in providing necessary support to the agents, by providing resources and continuous training of facilitators.

6.2 PROCEDURE

The comprehensive SRH programme needs guiding principles, rules, processes, protocols and activities in order to achieve desired outcomes. Dickoff et al. (2008) explain the purpose of procedure as to emphasise the path, steps and pattern according to which the activity is to be performed. The procedure was guided by the outcome of the data analysis. The process of developing a comprehensive SRH programme followed the steps of the nursing process: (i) assessment (ii) planning (iii) implementation and (iv) evaluation as depicted in table 6.1.

Table 6.2: Procedure for developing a comprehensive SRH programme

Assessment	Planning	Implementation	Evaluation
Learners' status	What activities are to be carried out?	Objectives	How clear is the programme?
Existing curriculum	How and when should the activities be carried out?	Activities	How simple is the programme?
Teaching strategies	Who are the responsible persons?	Responsible persons	How general is the programme?
Resources	What are the roles of role players?	Resources	How accessible is the programme?
	Where should the programme operate?		How important is the programme?
	What resources are required?		

6.2.1: Assessment

Assessment is the first step of the nursing process (Moore, 2013). Its purpose is to diagnose or identify health needs or deficits. In this study the purpose of assessment was to determine the need for a comprehensive SRH programme.

6.2.1.1 Learners' status

It is very much important to first identify the sexual and reproductive health needs of the target group. Sexual practices, behaviours, attitudes, values and beliefs serve to inform the agents of the programme as to what should be included in the curriculum and how to execute the activities, processes and procedures. The current situation and trends in sexual and reproductive health and rights were assessed in order to define priorities. Findings of the study showed that learners

lacked knowledge about SRH issues, thus the existence of self-care deficits.

6.2.1.2 The Curriculum

The content of the existing curriculum was assessed to identify gaps regarding SRH information. Based on the study findings, the current curriculum content was found to be focusing on anatomy and physiology of reproductive organs, while decision-making, problem solving and values clarification were not given sufficient attention. Information about HIV/AIDS and STIs was found to be superficial as some learners were not aware of the risks of contracting these infections even if they did not use protection. Elements to be incorporated in the curriculum as informed by the study findings were the following:

- What kind of environment is required for effective implementation of the curriculum? (context)
- Placement of content in the school curriculum (context)
- Appropriate content to be included for the grade (recipients)
- Facilitation strategies to be used (procedure)
- Who must facilitate the programme? (agents)

6.2.1.3 Teaching strategies

It was important to assess teaching strategies that are currently employed. Findings indicated that existing teaching strategies mostly used was the traditional formal lecture method, which might restrict learners' opportunities to explore the complexities of SRH. Various teaching strategies and techniques are important to facilitate the successful implementation of the SRH programme.

6.2.1.4 Resources

Human, material as well as infrastructure are required for the implementation of the programme. Accessibility of health care systems constitute another important factor. A situation analysis was conducted to assess what is available and how the resources should be accessed. The following were found to be required for the programme:

- Adequately trained teachers
- Health care providers

- Pharmaceuticals
- Infrastructure
- Budget
- Transport
- Teaching materials such as videos, films, music and posters. These teaching materials are most effective as young people enjoy and respond positively to them (Basch, 2015). These materials are also effective in drawing learners' attention. The use of these teaching materials should be followed with relevant activities to further clarify and offer additional information.

6.2.2 Planning

Planning is the second step of the nursing process. The importance of planning is to ensure the smooth running of the programme without omitting important steps so as to achieve the desired goal. Dickoff's survey list and research findings were used to identify the context, agents, recipients, dynamics and procedures.

6.2.3 Implementation

Implementation entails putting the determined plan into action to achieve the established outcome. A curriculum was designed to achieve programme outcomes.

6.2.3.2 The curriculum content

The curriculum was designed to address the cognitive, affective and behavioural domains. It integrated physical, emotional, intellectual and social dimensions of human experience, which will be staggered throughout the secondary school grades. The curriculum I focused on the following aspects:

- Behaviours and conditions that promote SRH and prevent risks and diseases
- Skills needed to address those behaviours or conditions
- Specific knowledge, attitudes, beliefs and values related to the behaviours and conditions
- Learning experiences that will allow learners to model and practice the skills

The researcher adopted curriculum content from the UNESCO PROAP Regional Clearing

House on Population Education and Communication (Villanueva, 2015).

Table 6.3: Curriculum content

Grade	Core areas	Objectives	Topics and issues
8	<p>Human and sexual development</p> <ul style="list-style-type: none"> • Reproductive anatomy and physiology • Puberty and physical, psychological, socio-cultural changes • Conception and puberty • Development of awareness and self-esteem 	<ul style="list-style-type: none"> • To identify structures of the male and female reproductive systems • To understand physiological and emotional changes taking place during puberty • To learn how to care for sexual and reproductive organs • To develop self-awareness and self-esteem 	<ul style="list-style-type: none"> • Human anatomy and physiology and how it relates to sexual and reproductive development • Functions of the reproductive systems • Physiological, emotional and social changes during puberty • Care for sexual and reproductive organs • Human reproduction and conception • Cultural myths and misconceptions about physiological changes and menstruation

			<ul style="list-style-type: none"> • Ways to develop self-awareness and self-esteem.
9	<p>Human sexuality</p> <ul style="list-style-type: none"> • Sexuality and sexual behaviours • Reducing sexual risks • Masturbation • Abstinence • Human sexual response • Sexual dysfunctions • Sexuality orientations 	<ul style="list-style-type: none"> • To define what sexuality is and how it affects behaviours • To describe different types of sexual behaviours • To correct myths related to sexuality and reproduction • To acknowledge the existence of sexual feelings • To identify safe and unsafe sexual behaviours and how to reduce risks • To be aware of different kinds of sexual dysfunctions • To promote 	<ul style="list-style-type: none"> • Definition of sexuality • Various types of sexual behaviours • How knowledge of human sexuality can promote sound physical and emotional development • Myths and misconceptions about sexuality • Human sexual response • Sexual dysfunctions • Safe and unsafe sex, reducing sexual risks • Creative problem solving and decision-making skills related to

		<p>tolerance of different sexual orientations</p> <ul style="list-style-type: none"> To enhance self-esteem and acceptance of own sexuality 	<p>sexuality</p> <ul style="list-style-type: none"> All sexual orientations require love and support
10	<p>Reproductive health and family planning</p> <ul style="list-style-type: none"> Teenage pregnancies Understanding conception Abortion STDs/HIV/AIDS/RTI Sexual abuse and violence Contraception Human rights 	<ul style="list-style-type: none"> To define reproductive and sexual health To identify different reproductive health risks To identify reproductive health services and information resources in the community To understand the process of conception and how contraception works To discuss the pros and cons of early marriage and teenage 	<ul style="list-style-type: none"> Definition of SRH Places to go for SRH information and services Safe and risky sex practices Conception process Safe motherhood, prenatal and antenatal care for pregnant teenager Different contraceptive methods Different types of STIs including HIV/AIDS Definition of sexual abuse

		<p>pregnancy</p> <ul style="list-style-type: none"> • To identify different methods of contraception and how to use them correctly • To understand the transmission of STIs • To develop awareness of HIV/AIDS • To define rights and responsibilities • To prevent sexual abuse and violence • To develop skills to counter sexual pressure 	<p>and causes</p> <ul style="list-style-type: none"> • Handling/coping with sexual abuse • Myths about sexual abuse
11	Responsible parenthood	<ul style="list-style-type: none"> • To understand the meaning of the concept responsible parenthood • To explore the values of related to parenting • To understand 	<ul style="list-style-type: none"> • Responsible parenthood • Beliefs, values and attitudes related to parenting • Consequences of teenage parenthood

		<p>challenges for a teenage parent</p> <ul style="list-style-type: none"> • To understand the roles and responsibilities of both parents in parenting 	<ul style="list-style-type: none"> • Roles of fathers in parenting • Challenges of being a teenage mother and learner
12	<p>Life skills</p> <ul style="list-style-type: none"> • Values and attitudes • Assertiveness • Communicating • Decision-making • Negotiation 	<ul style="list-style-type: none"> • To explore personal, family and socio-cultural values • To create awareness values and personal priorities • To explore the relationship between values and behaviour • To learn how to communicate values • To learn about assertiveness • To learn communication skills • To understand 	<ul style="list-style-type: none"> • Meanings of the concepts values, assertiveness, communication, decision-making and negotiation • Values and behaviour • Assertiveness skills • Learning about effective communication skills • Decision-making steps • Negotiation techniques in sexual behaviour

		<p>the difference between assertive, aggressive and passive behaviour</p> <ul style="list-style-type: none"> • To learn about decision-making skills to assess positive and negative outcomes • To practice negotiation skills 	
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6.2.3.3 Curriculum placement

The programme should be offered as a school separate subject in the school curriculum in all secondary school grades. This is the best approach as it guarantees the inclusion of all elements and stakeholders of a comprehensive SRH programme.

6.2.3.4 Teaching strategies

Findings of this study showed that teachers mostly used the traditional formal lecture method, which might have little impact on changing attitudes and behaviours. The programme will employ a participatory approach which could enhance values exploration, active participation and equip learners with lifelong effectively SRH-related knowledge and skills. Teaching strategies to be used include the following:

- **Life skills**

A life skills approach provides learners with opportunities to learn to say ‘no’ and negotiate skillfully with peers and partners. This approach is also important for providing the learner with effective skills pertaining to communication, decision making, problem solving, self-awareness, coping with emotions and interpersonal relationships (Villanueva, 2015).

- **Role play**

Role play refers to the spontaneous acting out of a situation by two or more participants under the direction of an instructor (Mellish, Brink & Paton, 2014).

The use of role play will enhance the exploration of learners' emotions, reactions, thoughts, behaviours, attitudes and values. Role play is effective for enhancing communication skills, self-esteem and group cohesion.

- **Values clarification**

Values refer to attitudes, interests, feelings, aspirations, beliefs and convictions that drive one to act in certain ways and they form the decisions one makes in life (Mellish et al, 2014). This teaching strategy will assist learners to explore the socio-cultural influences on value formation regarding SRH.

- **Problem-solving, decision-making and critical thinking**

These approaches can be used by presenting a dilemma situation for the learners to suggest solutions. This will stimulate a process that can be useful in real-life situations.

- **Peer teaching**

The SRH programme will be more effective if learners themselves play a major role. Peer education will help shape the programme, provide opportunities to learners to be creative, design some materials, give presentations and serve as role models. This will influence learners to develop healthy behaviours and positive attitudes towards sexuality (Ehlers, 2013).

6.2.3.5 Teaching materials

The programme will require teaching and learning manuals. Teaching aids should be interesting and be able to attract learners' attention. Technology resources, demonstration models, videos, music and posters are relevant. Young people enjoy and respond well to videos and music (Villanueva, 2015).

6.2.3.6 Agents

Collaboration between the DOH and the DOE is of the utmost importance. For the programme to be successful, these two departments should work together to provide resources and continuous training of facilitators. Stakeholders in these departments are expected to give support to the providers of the programme. Nurses and teachers should

work together where teachers provide theoretical information, and nurses provide clinical health services.

6.2.3.7 Selection and training of teachers

Teachers can function effectively to implement the programme as healthy role models, learner advocates and gatekeepers for learners who need the services and resource learners with accurate information only if they are interested in the subject. Assessment should be done to identify relevant teachers who meet the requirements to become agents for effectively facilitating the implementation of the SRH programme. Teachers who are interested in and comfortable about teaching this sensitive subject and are sure that they could facilitate the programme's implementation should be requested to volunteer to do so. After careful selection of the suitable candidates, a training programme should commence. Training will be in the form of workshops and short courses. Teachers' roles include liaison, facilitation and coordination of the programme.

6.2.3.8 Health care providers

Health care providers will basically comprise professional nurses, who will serve as a point of connection between medical and educational communities. The role of the school-linked nurse's role will include:

- Screening, immunization, and treatment of learners
- Provide counselling for pregnant learners who are pregnant, suffer from STD, pre and post HIV testing, sexual assault and rape
- Dispense condoms and contraceptives
- Referring learners appropriately to health care services according to identified needs
- Serve as resource persons for teachers

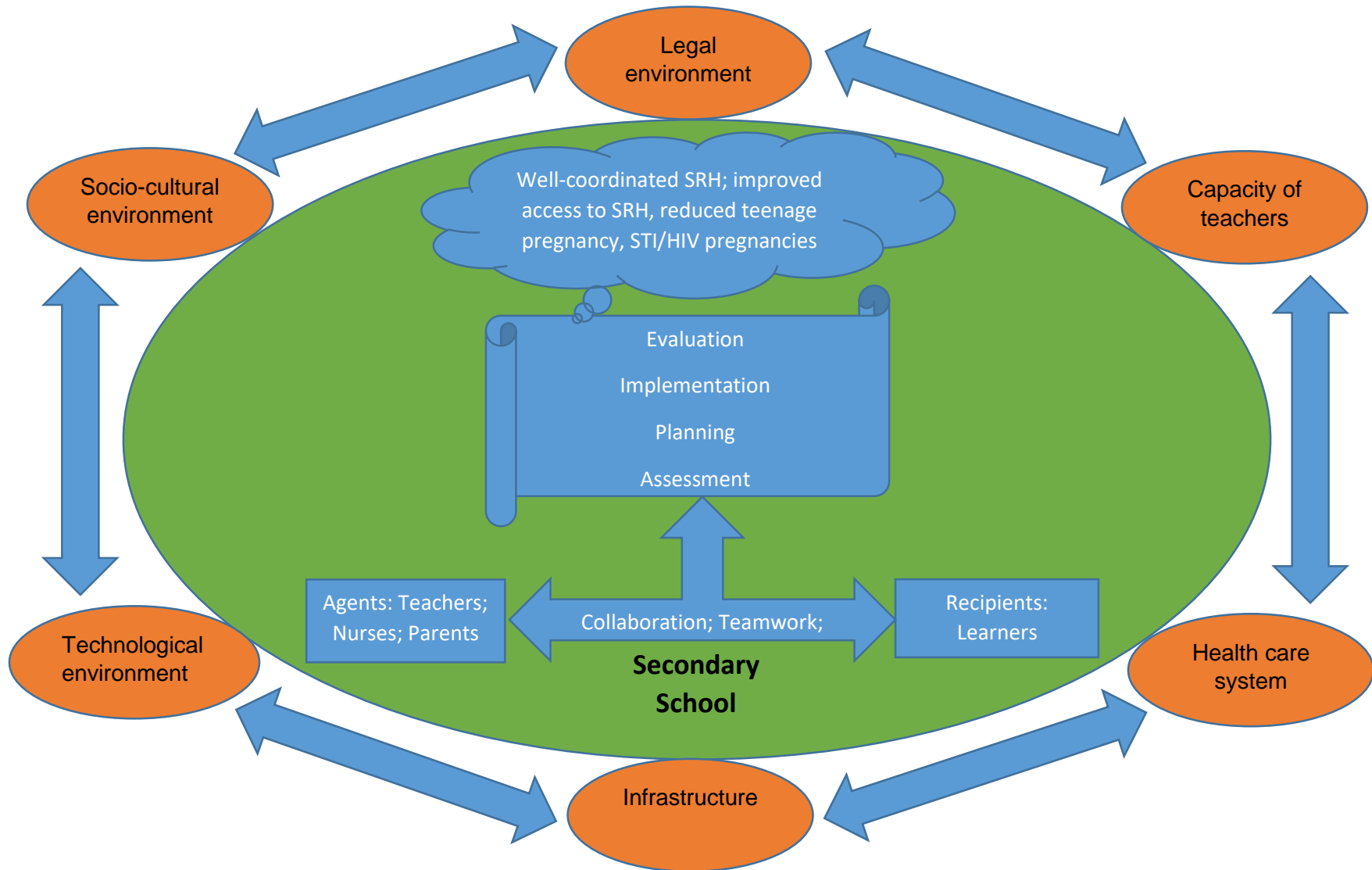


Figure 6.4: Structure of a comprehensive SRH programme

6.2.4 Evaluation of the programme

Evaluation is the last step of the nursing process. This is done to determine whether the programme includes all the elements of a comprehensive SRH programme. Evaluation of the programme was done according to Chinn Kramer's (2014) guidelines, which consist of five questions.

- **How clear is the programme?**

In answering this question, the concept comprehensive SRH was analysed by using Walker and Avant's (2016) concept analysis steps. The researcher reviewed literature through to identify as many uses as possible of the concept "*comprehensive*". The search was combined with additional search of terms used for the purpose of directing the search towards the context of comprehensive SRH in secondary schools. Sources like dictionaries, encyclopedias, the Internet, journal articles and books were reviewed in order to clarify the meaning of comprehensive as used in SRH. The term "comprehensive" was directed towards SRH services for secondary school learners. Saturation point was reached when the defined concepts from medicine, nursing, psychology, education and business had been exhausted and shown to be overlapping. The review of literature helped in supporting and validating the defining attributes' connotations, all uses of the concept and related cases. Empirical evidence from participants was used to lay the foundation for the programme. Two teachers experienced in teaching Life Orientation, two school health nurses, one DOE manager and one DOH manager were consulted to evaluate the programme and the feasibility thereof.

- **How simple is the programme?**

The programme should be simple for agents to be able to implement it without difficulties. The layout of the programme and steps to be followed in its implementation were explicit. Teachers will be granted opportunities to undergo training to achieve clear understanding of the programme.

- **How general is the programme?**

Generalisation implies that the breadth of scope and purpose of the programme can be applied to a broad array of situations. Empirical evidence and research findings from other studies revealed that sexual and reproductive health needs of learners was neglected (Thang, 2015). The current study's findings (see chapter 4 of this thesis) revealed that parents, teachers and learners lacked awareness of some issues related to adolescent SRH, which could be addressed effectively by a comprehensive SRH programme in the Limpopo Province. Provided that pilot small scale studies are conducted in other parts of South Africa, Africa and globally, this suggested comprehensive SRH programme could be implemented nationally and internationally.

- **How accessible is the programme?**

The Provincial Department of Education of the Limpopo Province will be provided with copies of the comprehensive SRH programme. The programme would also be made accessible on-line, in libraries and published in accredited academic journals.

- **How important is the programme?**

This question addresses the extent to which the programme has the potential to influence changes in the learners' sexual behaviours. Responses provided by learners, teachers and parents (see Chapter 4 of this thesis) indicated that a comprehensive SRH programme is important for addressing learners' SRH needs. Findings also showed that learners had insufficient knowledge about SRH issues (see Chapter 4 of this thesis). Access to SRH services remained a challenge, as evidenced by the persistently high teenage pregnancy rate. According to the South African Department of Health report (2015), one million teenagers become pregnant each month worldwide, and 33% of these teenagers terminate the pregnancy. The programme will assist in providing accurate SRH information, equip learners with the capacity to make informed decisions and to have access to SRH services. Teachers will also have the opportunity to be trained to facilitate the programme's implementation.

6.3 Purpose/outcome/terminus

To treat activity from the aspect of the terminus is to view activity from the perspective of the end-point or accomplishment of an activity (Dickoff, et al., 2008). Outcomes or terminus determine whether or not the set goals had been achieved.

The outcome for this study was that a well-coordinated comprehensive SRH programme for secondary school learners was developed, which could empower learners with knowledge to make informed decisions and to enhance access to SRH services. Well informed learners could contribute to reduced risky sexual behaviours and consequences such as teenage pregnancies and STIs including HIV/AIDS, thus the whole society will be healthier. Social benefits include that more secondary school learners, especially girls, would be able to complete their schooling successfully and enroll at tertiary education institutions (by delaying their first pregnancies). Such academic accomplishments would help learners to provide more financially secure futures for themselves and for their future families.

6.4 SUMMARY

Chapter 6 focused on programme development. The identified concepts of a comprehensive SRH programme were classified using the six elements of the survey list as outlined in Practice Oriented Theory developed by Dickoff et al (2008). The agents were identified as teachers, health care providers and relevant stakeholders. Recipients of the programme are secondary school learners, the context included the school environment, and socio-cultural issues included beliefs and misconceptions about SRH. The nursing process was used as the procedure for developing the programme. The dynamics reflected the relationship between the agents and the recipients, and the terminus highlighted the expected outcomes which could be brought about by the implementation of the programme. The next chapter will outline the operationalisation of the developed comprehensive SRH programme.

CHAPTER 7

OPERATIONALISATION OF THE PROGRAMME

7.1 Introduction

Operationalisation refers to the process through which concepts are put into measurable actions. It is the implementation phase of the nursing process. Gradual orientation and implementation would be necessary so that those who are skeptical about the programme would realise its importance. The following guidelines should be considered during operationalisation of the comprehensive SRH programme.

7.1.1 Vision

The programme seeks to achieve the full potential of SRH for all, where human rights related to SRH are respected, protected and realised, reducing inequalities and discrimination.

7.1.2 Mission

The programme is developed to meet the SRH needs of secondary school learners through providing knowledge and information and enhancing learners' access to SRH services.

7.1.3 Funding

Joint and collaborative efforts between the ministries of health and education are required for funding the programme, which would involve the national and the provincial government, NGOs as well as donors.

7.1.4 Curriculum

The curriculum would be offered as a separate subject in all secondary school grades.

This is the best approach as it guarantees the inclusion of all elements of a comprehensive SRH programme, as recommended at the 1994 International Conference on Population and Development (ICPD) in Cairo (UNFPA, 2015). The content for each grade would be established to guide teachers on what to teach so that no topic is left out. Three sessions of 45 minutes each should be allocated per week in each grade. The periods would be long enough to allow learners to participate and complete important activities. The curriculum content and teaching methods should be operationalised as outlined in Table 6.2 of this thesis.

7.1.5 Selection of teachers

Posts need to be advertised for interested teachers to apply. Shortlisting would be done and interviews conducted. The following criteria should be used during interviews:

- A person who feels comfortable talking about SRH issues
- A person who is prepared to educate learners about this sensitive topic
- A person who believes that SRH education is necessary
- A person with positive SRH values, attitudes and beliefs
- A person who is committed and enthusiastic
- Has respect for privacy and treats personal information confidentially

7.1.6 Training of teachers

The managers of the DOH and DOE, as well as NGOs, should collaborate to provide relevant training for teachers. Selected teachers would formally receive specialised SRH training by the designated service provider. Training would not be a once-off activity, as continuous training would be done in the form of in-service training, continuing education classes, workshops, seminars. A minimum of four teachers per school would be trained to enhance coverage of grades 8-12.

7.1.7 Roles of teachers

Teachers' role would include liaison, facilitation and coordination of the programme. Classroom facilitation would be conducted according to a specific time-table. Team teaching would be used to ensure that learners receive complete and accurate

information.

7.1.8 Roles of Health care providers

Health care providers would also serve as resource persons for teachers whose role would be to assist teachers in presenting difficult topics in the classroom, and to provide clinical SRH services such as contraception, condom use, screening, counseling, treatment of minor ailments, and referrals to appropriate health care services where necessary.

Health care providers would visit schools at least once a month but more often when necessary. At the school environment, a private place should be identified where learners could consult health care providers and where counseling sessions could be conducted. A school-linked nearby clinic will receive referrals from school personnel, provide priority appointments for further management of learners' SRH needs.

7.1.9 Role of parents

It is important for parents to feel comfortable about the programme in which their teenager children will participate. Empirical evidence of the current study (refer to Chapter 4.10 of this thesis), as well as other researchers' reports indicated that most parents perceived the programme as being important (DiCenso et al. 2013, Linda et al, 2015).

The following strategies should be used to involve parents:

- Members of advisory committees that review the programme content
- Required to assist learners with homework activities so as to gain opportunities to influence their children's development and improve communication about SRH issues
- Sessions should be conducted to help parents to become more effective in communicating with their children about SRH-related issues

7.1.10 Involving mass media

Local radio stations will be used to broadcast information about the comprehensive SRH

programme and to create community awareness.

7.1.11 Teaching materials

Teaching and learning manuals will be printed by the government. Teaching aids like, technology resources, demonstration models, videos, charts will be provided by both the ministries of health and education and the NGOs.

7.1.12 Teaching strategies

Teaching strategies that enhance learners' active participation will be used as outlined in 6.2 of this study.

7.1.13 Infrastructure

Like any other subject, classrooms would be required for the accommodation of learners. The setting would promote active participation of all learners. A private room should be created for nurses to do consultations and screening services.

7.1.14 Linking school SRH education to health services

The programme will be linked to a nearby clinic to enhance effective and sustainable services. Linking the programme with health services will promote learners' access to the SRH services.

7.1.15 Learners' assessments

Assessments will be done in the form of tests, essays, presentations, projects and assignments.

7.2 VALIDATION OF THE PROGRAMME

Validation is the process which certifies that the programme's recipients are receiving the relevant information and services, and that the programme meets the expected outcomes. It is important to validate the programme with end users (learners, teachers and parents) before it can be adopted or implemented, to determine its relevance and feasibility. The comprehensive SRH programme was validated by visiting one school. A

once off meeting was held with learners, teachers and parents. The programme was presented to five respondents in each category, for their evaluation. After the presentation, respondents were requested to complete questionnaires. The questionnaire consisted of Likert scale questions where respondents had to indicate how much they agreed or disagreed with each statement or item (see Annexure O). A space for was provided for additional comments. Data were analysed and the findings were as follows:

- Respondents indicated that the programme should commence at primary school level.
- The teachers suggested that the two 45-minute periods per week for each grade should be increased to three periods per week, which was effected.
- Another recommendation was that the once a month visit by nurses to schools should be increased to twice a month. The DOH was consulted and it was indicated that twice a month would be impossible due to staff shortages.

The respondents' suggestion that the comprehensive SRH programme should also be implemented in primary schools has been recommended for further study.

7.3 SUMMARY

This chapter outlined the guidelines on how to implement the programme. The next chapter which is the final chapter will present the summary of the study, conclusions and recommendations.

CHAPTER 8

EVALUATION, JUSTIFICATION, LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

The previous chapter discussed the operationalisation of the programme. In this last chapter evaluation, justification, limitations, conclusions and recommendations pertaining to the study will be discussed.

8.2 EVALUATION

The overall purpose of this study was to develop a comprehensive SRH programme for secondary school learners. The objectives for this study were to:

- assess the knowledge about SRH issues
- assess teachers' views about the impact of the existing SRH programmes for adolescents.
- explore the perceptions of parents towards the provision of SRH services in schools
- develop a comprehensive SRH programme for secondary school learners

Orem's Self-Care Theory was applied as the theoretical framework. A comprehensive SRH programme has been developed particularly to meet the self-care deficit of the learners which was evidenced by high pregnancy rate.

Reviewed literature was discussed and appropriately acknowledged in chapter 2. The literature review assisted the researcher in getting more information related to the title of the study, the research methodologies, concept analysis and programme development.

The study employed a sequential mixed methods approach. A quantitative, non-experimental design was used to achieve objective 1 and 2 (to obtain information from learners and teachers respectively), while a qualitative explanatory design addressed

objective 3 (involving learners' parents). Questionnaires were used to collect quantitative data which were analysed using SPSS (version 23) with the assistance of a statistician, whereas in-depth individual interviews were conducted to collect qualitative data which were analysed by using Tesch's method with the assistance of an independent coder. Themes and subthemes were developed, the main themes reflected that parents lacked SRH knowledge, experienced difficulty to discuss SRH issues with their teenage children and parents viewed SRH services as being important.

The quantitative findings for objective 1 indicated that learners lacked knowledge about SRH issues as evidenced by non-utilisation of contraception and protection. Existing programmes were ineffective as they were not comprehensive and were not well coordinated. Teachers lacked capacity, SRH programmes included limited information and SRH services were not accessible.

Chapter 5 presented the process of concept analysis which employed Walker and Avant's (2014) steps. This laid the foundation for developing a comprehensive SRH programme using Dickoff et al (1968) survey list. The programme was operationalised and validated by the use of questionnaires completed by ten agents and five recipients. Validation comments reflected that the comprehensive SRH programme should commence during primary school because some learners start engaging in sexual activities at early ages (recommended for further investigation), the teaching periods were deemed to be insufficient (and were increased from two to three 45-minute weekly periods), and monthly visits by nurses was regarded as being inadequate. After consultation with the DOH, nurses' visits to schools could not be increased due to a shortage of nurses, rendering the implementation of the teachers' last recommendation unfeasible.

8.3 JUSTIFICATION

The reviewed literature has indicated that worldwide, adolescents' SRH needs and access have been ignored (Villanueva, 2015). National, provincial and school policies were found to be limited and only addressing pregnant school girls' issues, but nothing was done to prevent the pregnancies. The current study's findings identified secondary school learners' SRH needs, and a relevant comprehensive SRH programme was developed, which would enhance access to SRH information and services. The study

was conducted at the time when teenage pregnancy rate was high. According to the South African Department of Health report (2015), one million teenagers become pregnant each month worldwide.

This study is unique as it is the only one conducted in Limpopo Province. Findings from the current study's three phases contributed towards the development of a comprehensive SRH programme.

The programme would benefit teachers in that they would be trained and capacitated with knowledge and skills to facilitate and coordinate the implementation of the comprehensive SRH programme for secondary school learners.

The programme would ensure collaboration and commitment between the DOH and the DOE ministries towards enhancing the SRTH of learners.

The programme would ensure that SRH services would be provided on the school premises, maintaining confidentiality and privacy because consultations, screenings and treatment would be conducted in private rooms. Nurses, teachers and parents would cooperate for the benefit of learners. Therefore the developed SRH programme is comprehensive in nature.

8.4 LIMITATIONS

The study was contextual; was conducted in secondary schools of the Capricorn and Mopani Districts of the Limpopo Province, therefore the results cannot be generalised to schools in other districts without conducting similar studies elsewhere. Some parents refused to give consent for their minor learners (younger than 18 years of age) to participate in the study. Learners' and teachers' responses might have been limited by the structure of the questionnaires' items. Parahoo (2016) stated that the main disadvantage of a self-administered tool is that there is no opportunity to ask respondents to elaborate, expand and clarify their answers. Some respondents did not respond to some items on the questionnaire, which might have influenced the current study's results.

No health care providers were interviewed implying that their views remained unknown.

8.5 RECOMMENDATIONS

The study sought to develop a comprehensive SRH programme for secondary school learners. Sustained commitment from both the DOE and DOH is important for this programme successful implementation.

Recommendations pertaining to the Department of Education

- The programme needs more teachers to facilitate its implementation as a separate school subject for at least three 45-minute sessions per week per grade (for grades 8-12), therefore more teachers should be employed to offer this programme.
- Teachers require adequate SRH training.
- Convenient and private working spaces at schools are required by nurses to do their work properly and enough space for classroom facilitation is also required.
- Teaching and learning resources should be made available.

Recommendations pertaining to the Department of Health

- The department should provide more school health nurses to visit all schools at least once a month.
- Adequately qualified school health nurses should be available to ensure the successful and sustained implementation of the comprehensive SRH programme.
- The department should provide nurses with the necessary resources for providing SRH services to secondary school learners.
- Schools should be linked to nearby clinics, learners should be allocated a special person to attend to their needs at the clinic at any time.

Recommendations pertaining to learners:

- Learners must avail themselves to receive SRH information and services so that they are empowered with knowledge and skills.
- The programme requires learners to participate actively during facilitation.

Recommendations pertaining to parents:

- Parents form part of the agents for this programme, they should therefore be involved during the implementation and review processes. Training is recommended for parents to address their lack of knowledge that was identified by the current study's findings
- Parents should be urged to participate by assisting learners with homework and by engaging in SRH-related communication with their teenage children.

Recommendations for future research:

- There is a need to conduct similar studies in other districts of the Limpopo Province
- The programme should be developed that will cover primary school learners because some learners have early menarches, some start engaging in sexual activities at early ages, hence some learners become pregnant at primary school levels.
- Further research should be conducted to evaluate the effectiveness of this comprehensive SRH programme for secondary school learners. Implementation challenges should be identified and addressed.
- Future studies should investigate the views of health care providers concerning secondary school learners' SRH-related issues.

8.6 SUMMARY

The purpose of chapter 8 was to evaluate whether the objectives for the study had been accomplished. The purpose of conducting the study was justified. Limitations and recommendations were also highlighted.

8.7 CONCLUSION

The study was conducted to develop a comprehensive SRH programme for secondary school learners. The researchers was prompted by the high incidents of HIV infections and pregnancies among young people. Three objectives guided the development of the programme. Sequential mixed methods approach was applied where quantitative approach was followed by qualitative approach. Results revealed that learners, teachers and parents lacked knowledge about SRH, hence a programme was developed, operationalised and validated. Recommendations were made to the DOH, DOE, parents, learners and further research.

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ANNEXURE A

REQUEST FOR ETHICAL APPROVAL: UNIVERSITY OF VENDA

1064 Zone 8
Seshego
0751

To: UNIVEN Ethical Committee
Enquiries: Dilebo ME
Cell: 082 9443 730
Work contact: 015 267 1114

Ethical approval to conduct a research to: Ethical Committee University of Venda.

I **Matete Enia Dilebo** a PHD student at the University of Venda request permission to conduct research at secondary schools in the Capricorn and Mopani District, Limpopo Province.

The title of the study is: **A comprehensive sexual and reproductive health programme for secondary school learners in the Limpopo Province, South Africa.**

The purpose of the study is to develop a comprehensive sexual and reproductive programme to reduce teenage pregnancies and sexually transmitted infections, including HIV/AIDS, among secondary school learners

The significance of the study

The findings of the study may be of significance to curriculum developers at schools as comprehensive sexual and reproductive health information may be included in the syllabus and all the children may be taught life skills from grade R to grade 12.

The study may assist curriculum developers to design and implement a comprehensive sexual and reproductive health component in the learning content of learners which must be medically accurate and developmentally appropriate to learners in secondary schools in the Limpopo Province.

School health nurses may be updated and some may be appointed and be allocated to schools to care for the wellbeing of the learners. The study's findings might influence the formulation of new policies and guidelines for learners to meet Sustainable Development Goals 3, 5 and 10.

Educators may be trained and updated regularly by the state and regional health coordinators so

that they learn about the latest information and strategies for addressing issues related to sexual and reproductive health.

Parents may benefit as they could be notified in advance about the content of the curriculum, their right to review study materials, programmes and activities implemented to build support and collaboration with teachers for providing effective sexual and reproductive health education at schools.

The results of this study may create awareness about sexual and reproductive health services among school children thereby delaying sexual debuts or returning to abstinence, reducing the incidence of teenage pregnancies, HIV and sexually transmitted infections and teenage maternal deaths. Finally, the current study's research findings might give rise to further research.

If you have any queries on any matter which is not reflected in this correspondence, the researchers' contact details are as follows:

Promoter: _____

Co-promoter: _____

Researcher: Dilebo ME

Thank you in anticipation

Researcher: _____

ANNEXURE B

UNIVERSITY CLEARANCE CERTIFICATE

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:
Mrs ME Dilebo

Student No:
11618167

PROJECT TITLE: Developing a comprehensive sexual
and reproductive health programme for secondary
school learners in Capricorn and Mopani Districts
of Limpopo Province, South Africa.

PROJECT NO: SHS/15/PH/19/0110

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Prof RT Lebesse	University of Venda	Promoter
Dr DU Ramathuba	University of Venda	Co-Promoter
Dr NJ Ramakuela	University of Venda	Co-Promoter
Mrs ME Dilebo	University of Venda	Investigator - Student

ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE

Date considered: 14 January 2016
Decision by Ethical Clearance Committee: Granted
Signature of Chairperson of the Committee:

Name of the Chairperson of the Committee: Prof. G.E. Ek



University of Venda

PRIVATE BAG X5050, THOHoyANDOU, 0950/, LIMPOPO PROVINCE/, SOUTH AFRICA
TELEPHONE (015) 962 8504/8313 FAX (015) 962 9060

"A quality driven financially sustainable, rural-based Comprehensive University"

ANNEXURE C

ANNEXURE: REQUEST FOR PERMISSION: DEPARTMENT OF EDUCATION ETHICAL COMMITTEE

1064 Zone 8

Seshego

0751

To: DOE Ethical Committee

Enquiries: Dilebo ME

Cell: 082 9443 730

Work contact: 015 267 1114

Request for permission to conduct a research in the Limpopo Province, Department of Education: Ethical Committee

I **Matete Enia Dilebo** a Ph D student at the University of Venda request permission to conduct research at secondary schools in the Capricorn and Mopani Districts, Limpopo Province.

The title of the study is: **A comprehensive sexual and reproductive health programme for secondary school learners in the Limpopo Province, South Africa.**

The purpose of the study is to develop a comprehensive sexual and reproductive programme to reduce teenage pregnancies and sexually transmitted infections, including HIV/AIDS, among secondary school learners

The significance of the study

The findings of the study may be of significance to curriculum developers at schools as comprehensive sexual and reproductive health information may be included in the syllabus and all the children may be taught life skills from grade R to grade 12.

The study may assist curriculum developers to design and implement a comprehensive sexual and reproductive health component in the learning content which must be medically accurate and developmentally appropriate to learners in secondary schools in the Limpopo Province.

School health nurses may be updated and some may be appointed and allocated to schools where they care for the wellbeing of the learners. The study's findings might influence the formulation of new policies and guidelines for learners to meet Sustainable Development Goals 3, 5 and 10.

Educators may be trained and updated regularly by the state and regional health coordinators so that they learn about the latest information and strategies for addressing issues related to sexual and reproductive health.

Parents may benefit as they could be notified in advance about the content of the curriculum, their right to review study materials, programmes and activities implemented to build support and collaboration with teachers for providing effective sexual and reproductive health education at schools.

The results of this study may create awareness about sexual and reproductive health services among school children therefore delaying sexual debuts or returning to abstinence, reducing teenage pregnancies, HIV and sexually transmitted infections and teenage maternal deaths. Finally, the current study's research findings may give rise to further research.

If you have any queries on any matter which is not reflected in this correspondence, the contact details are as follows:

Promoter: _____

Co-promoter: _____

Researcher: Dilebo ME

Thank you in anticipation

Researcher: _____

ANNEXURE D

PROVINCIAL DEPARTMENT OF EDUCATION LETTER OF APPROVAL



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

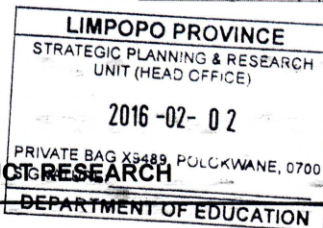
Ref: 2/5/6/1

Enq: MC Makola PhD

Tel No: 015 290 9448

E-mail: MakolaMC@edu.limpopo.gov.za

Dilebo ME
164 zone 8
Seshego
0727



RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

1. The above bears reference.
2. The Department wishes to inform you that your request to conduct research has been approved. Topic of the research proposal: **"A COMPREHENSIVE SEXUAL AND REPRODUCTIVE HEALTH PROGRAMME FOR SECONDARY SCHOOL LEARNERS IN LIMPOPO PROVINCE, SOUTH AFRICA."**
3. The following conditions should be considered:
 - 3.1. The research should not have any financial implications for Limpopo Department of Education.
 - 3.2. Arrangements should be made with the Circuit Office and the schools concerned.
 - 3.3. The conduct of research should not anyhow disrupt the academic programs at the schools.
 - 3.4. The research should not be conducted during the time of Examinations especially the fourth term.
 - 3.5. During the study, applicable research ethics should be adhered to; in particular the principle of voluntary participation (the people involved should be respected).
 - 3.6. Upon completion of research study, the researcher shall share the final product of the research with the Department.
4. Furthermore, you are expected to produce this letter at Schools/ Offices where you intend conducting your research as an evidence that you are permitted to conduct the research.

Request for permission to Conduct Research: Dilebo ME

CONFIDENTIAL

ANNEXURE E

Participant information sheet

Title: A comprehensive sexual and reproductive health programme for secondary school learners in the Capricorn and Mopani Districts, Limpopo Province, South Africa

Purpose:

- To develop a comprehensive sexual and reproductive health programme for secondary school learners in the Capricorn and Mopani Districts, Limpopo Province, South Africa
- The study is a requirement for acquisition of my Ph D degree.

Objectives:

2. To assess knowledge of secondary school learners about sexual and reproductive health issues.
3. To assess the existing sexual and reproductive health programmes provided in schools.
4. To explore and describe the perception of teachers, parents and learners about sexual and reproductive health services provided in schools.
5. To develop a comprehensive sexual and reproductive health programme for secondary school learners.

SIGNIFICANCE OF THE STUDY

The significance of the study

The findings of the study may be of significance to curriculum developers at schools as comprehensive sexual and reproductive health information may be included in the syllabus and all children might be taught life skills from grade R to grade 12.

The study may assist curriculum developers to design and implement comprehensive sexual and reproductive health aspects in the learning content which will be medically accurate and developmentally appropriate to learners in secondary schools in the Limpopo Province.

School health nurses might be updated and some might be appointed and allocated to schools where they would care for learners' wellbeing. The study's findings might influence the formulation of new policies and guidelines for learners to meet Sustainable Development Goals 3, 5 and 10.

Educators might be trained and updated regularly by the state and regional health coordinators so that they could learn about the latest information and strategies for addressing issues related to sexual and reproductive health.

Parents might benefit as they would be notified in advance of the content of the curriculum, their right to review study materials, programmes and activities implemented to build support and collaboration with teachers for providing effective sexual and reproductive health education at schools.

The results of this study might create awareness about sexual and reproductive health services among school children and therefore delaying sexual debuts or returning to abstinence, reducing the incidence of teenage pregnancies, HIV and sexually transmitted infections and teenage maternal deaths. Finally, the current study's research findings might give rise to further research projects.

What are the risks?

There are no risks anticipated except some tiredness during interviews. You might experience some temporary discomfort from sharing your experiences. It should take you 10-15 minutes to complete the questionnaire.

What are the benefits?

Participation is voluntary and you may end participation at any time without any penalties or loss of benefits to which you are entitled. Secondary school learners will benefit from participation. The results of the research will be made available to you on request on completion of the study.

Maintaining confidentiality

To protect your identity you are assured that your interview and questionnaire was numbered and only the number will be used for analysis purposes. All your personal details will be treated with the strictest confidentiality. Information obtained during the interviews and from the completed questionnaires will be shared with the study supervisor, persons assisting with the interpretation and analysis of the data acquired during the interviews and from the completed questionnaires.

Who to contact

Your participation in this project is appreciated. If you have any queries, please contact the researchers at the numbers listed below:

Researcher: DILEBO ME Cell number: 082 944 3730

Promoter: _____ Cell number: _____

Co-promoter: _____ Cell number: _____

If you agree to the above conditions please give your informed consent for participating in this study by signing and dating the provided consent form.

ANNEXURE F1

Informed consent form for learners 18 years and above

I _____ on the _____ of
_____ 2016 hereby consent to:

1. Be a participant in the research on the topic: **A comprehensive sexual and reproductive health programme for secondary school learners in the Limpopo Province, South Africa.**

The interviews will be audio taped and the questionnaires will be completed by the learners.

I also understand that:

1. I am free to end my involvement or to withdraw my consent to participate in this research any time.
2. Information given up to the point of my termination of participation could however still be used by the researcher.
3. No reimbursement will be made by the researcher for information provided during my participation in this project.
4. I may refrain from answering questions should I feel that they invade my privacy
5. By signing this agreement, I undertake to give honest answers to reasonable questions and not to mislead the researcher

I hereby acknowledge that the researcher/interviewer has:

- 1 discussed the aims and objectives of this research project with me
- 2 informed me about the content of this agreement
- 3 informed me about the implications of signing this agreement

In co-signing this agreement the researcher undertakes to:

- 1 maintain confidentiality, and privacy regarding my identity and information provided by me
- 2 arrange in advance a suitable time and place for an interview to take place
- 3 safe guard a duplicate of this agreement

Participant: -----

Date: -----

Researcher: -----

Date: -----

ANNEXURE F2

Informed consent form for learners below 18 years

I _____ parent/guardian to _____ on the _____ of _____ 2016 hereby consent to:

2. My child be a participant in the research on the topic: **A comprehensive sexual and reproductive health programme for secondary school learners in the Limpopo Province, South Africa.**

The interviews will be audio taped and the questionnaires will be completed by the learners.

I also understand that:

6. I am free to end my child's involvement or to withdraw my consent to participate in this research any time.
7. Information given up to the point of termination of participation could however still be used by the researcher.
8. No reimbursement will be made by the researcher for information provided during my child's participation in this project.
9. My child may refrain from answering questions should he/she feel that they invade his/her privacy.
10. By signing this agreement, my child undertakes to give honest answers to reasonable questions and not to mislead the researcher.

I hereby acknowledge that the researcher/interviewer has:

- 1 discussed the aims and objectives of this research project with me and my child.
- 2 informed me and my child about the content of this agreement
- 3 informed me and my child about the implications of signing this agreement

In co-signing this agreement the researcher undertakes to:

- 4 maintain confidentiality, and privacy regarding my child's identity and information provided by him/her.
- 5 arrange in advance a suitable time and place for an interview to take place
- 6 safe guard a duplicate of this agreement

Participant's parent/guardian: -----

Date: -----

Researcher: -----

Date: -----

ANNEXURE G

QUESTIONNAIRE FOR LEARNERS

Objective: To assess the knowledge of learners about sexual and reproductive health services

SECTION A: DEMOGRAPHICAL DATA

Put a cross (X) in the appropriate space

Age in years

Gender

Male
Female

Population

African
Coloured
White
Indian

Type of school

Public
Private

Current grade

Location

Urban
Rural

District

Mopani
Capricorn

SECTION B: SEXUAL DEBUT

Put a cross (X) in the appropriate space

Are you sexually active	Yes	No
-------------------------	-----	----

If yes, at what age did you start having sex?

How many sexual partners do you have?

SECTION C: KNOWLEDGE ABOUT CONTRACEPTION

Do you use or have you ever used protection/contraception? Make a cross in provided space

Always	Sometimes	Never
--------	-----------	-------

If yes, what method do you use?

Condom	Injection	Pill	Implant	Other
--------	-----------	------	---------	-------

SECTION D: KNOWLEDGE ABOUT STI'S, HIV/AIDS AND PREGNANCY

Put a cross (X) in the appropriate space

Have you ever heard about STIs?

Have you ever contracted STIs?

Do you know how STIs are transmitted?

Do you know ways to avoid STI's?

Do you know symptoms of STI's?

Have you ever tested for HIV?

Yes	No
Yes	No
Yes	No
Yes	No
Yes	No
Yes	No

Do you know how pregnancy comes about?

Do know how to avoid pregnancy?

Yes	No
Yes	No

SECTION E: KNOWLEDGE ABOUT THE RISK FOR UNPLANNED PREGNANCY, STIs AND HIV

Put a cross (X) in the appropriate space

How much risk do you think you personally have of the following?

Risk	Great risk	Some risk	Small risk	No risk
Unplanned pregnancy				
Getting HIV/AIDS				
Getting STIs				

SECTION F: SOURCE OF INFORMATION ABOUT SRH

Put a cross (X) in the appropriate space

Has anyone ever talked to you about sexual and reproductive health issues?

Yes	No
-----	----

If yes who was it?

Parent	Teacher	Nurse	Doctor	Peer/Friends	Media	Other
--------	---------	-------	--------	--------------	-------	-------

Is SRH education taught at your school?

Yes	No
-----	----

SECTION I: ACCESSIBILITY OF SRH SERVICES BY SECONDARY SCHOOL CHILDREN

Are SRH services provided at the school?

Yes	No
-----	----

If no, is there a clinic nearby?

Yes	No
-----	----

If yes, have you ever visited the clinic?

Yes	No
-----	----

If yes, what sexual and reproductive health services did you go for?

Contraception	
Condoms	
Termination of pregnancy	

Pre-natal care	
Post-natal care	
STI's treatment	
HIV testing	
Cancer screening	
Other: Specify	

Were the services you went for available?

Yes	No
-----	----

How was the nurses' attitude?

Friendly	Unfriendly
----------	------------

Were you given counselling on the sexual and reproductive health services you went for?

Yes	No
-----	----

Thank you for your participation

ANNEXURE H

QUESTIONNAIRE FOR SCHOOL TEACHERS

INDICATE YOUR RESPONSE TO THE STATEMENTS ABOUT THE IMPACT OF THE EXISTING SEXUAL AND REPRODUCTIVE HEALTH SERVICES PROVIDED TO SCHOOL LEARNERS

SECTION A - DEMOGRAPHIC DATA

Indicate your response by marking a cross (X) in the appropriate space.

For office use only

1. Age in years

2. Indicate your highest professional qualification/s

Basic Diploma	
Basic Degree	
Post-Basic Diploma	
Post-Basic Degree	
Honours' Degree	
Master's degree	
Doctorate Degree	
Other(Specify)	

3. How many years of professional experience do you have?

SECTION B: Availability of sexual and reproductive health services at schools

Put a cross (X) in the column that most closely describes your opinion with each of the statements.

Is policy available for providing sexual and reproductive health services at schools?

Yes	No
-----	----

Is a sexual and reproductive health programme for schools available?

Yes	No
-----	----

How does the programme operate? Make a cross in provided space

Full-time	
Part time	
Once a week	
Once a month	
Quarterly	
Bi-annually	
Annually	
One stop-combined services	
Specific services on specific days	
According to gender	
According to age group	

In your opinion, are the existing SRH policies and programmes effective?

Yes	No
-----	----

Is sexual and reproductive health information included in the school curriculum?

Yes	No
-----	----

If yes, in which grades?

--	--	--	--	--

Who is teaching?

Teachers	Nurses	Others
----------	--------	--------

SECTION C: How sexual and reproductive health information is provided in schools

Make a cross (X) in the column that most closely describes your opinion concerning each statement

Item description	4. Always	3.Often	2.Seldom	2.Never
If it is taught by teachers are they adequately trained?				
Do teachers have the necessary manuals?				
Do teachers have external support?				

Do learners show enthusiasm for these lessons?				
--	--	--	--	--

SECTION D: Impact of the SRH services

Make a cross (X) in the column that most closely describes how much you agree or disagree with each statement

Item description	1.Strongly agree	2.Agree	3.Disagree	4.Strongly disagree
Improved learners' knowledge				
Pregnancy rate reduced				
STIs and HIV reduced				
Teenage birth rate declined				
Teenage maternal mortality decreased				
Absenteeism related to pregnancy decreased				

Thank you for your participation

ANNEXURE I

STATISTICIAN REPORT AND CV

Dear Sir/Madam, I Sam Ntuli have analysed data for Mrs Dilebo Matete Theses. I've also attached my CV.

Regards Sam

CURRICULUM VITAE

SAM THEMBELIHLE NTULI

PERSONAL DETAILS

First Name: Sam Thembelihle
Last Name: Ntuli
Date of Birth: 02 July 1968
Home Address: 151 Die Meer Street
Bendor Park
Polokwane
0700
Work Address: Provincial Department of Health and Social Development
Polokwane/Mankweng Hospital Complex
Private Bag X 9537
0700
Email: tsntuli@hotmail.com
Telephone Work: (015) 287-5000 ext 5114
Cell: 072 3010 832
Drivers Licence Code B

EDUCATIONAL BACKGROUND

Matric Lekhulong High School, Bloemfontein, South Africa
B.Sc Psychology, Mathematical Statistics, Medunsa, South Africa
B.Sc (Hon) Mathematical Statistics, Medunsa, South Africa
M.Sc Biostatistics, University of Massachusetts, USA
PhD Biostatistics and Epidemiology, University of Limpopo, South Africa

Computer skills Experience with:
Microsoft Word
Microsoft Excel
Microsoft Access

Workshops attended

Principle's of Good Clinical Practice
SANDF Ethics Committee videoconference training
Basic ICD-10 coding Training
DHIS, Child PIP

WORKING EXPERIENCE

Medunsa

National School of Public Health

Duties: Teach master of public health students Supervisor: Prof. Allen Herman

Lecturer (Sept 1998- Sept 2000)

Baystate Medical Center: United States of America

Intern (May – July 2001)

Duties: Manage database Data collection and analysis
Report-writing and dissemination
Supervisor: Prof Penny Pekow

Department of Health (Limpopo Province)

Biostatistician (Feb 2003 – present)

Pietersburg/Mankweng Hospital Complex (Community Health)
Co-ordinate and manage on-site data collection and analysis
Play a lead role in the development of maternal health surveillances
Play a lead role in the development of child health surveillances
Provide field supervision and training of the data collectors

Department of Public Health Medicine (Pietersburg Hospital)

Acting Head of Department (Jan-Dec 2009)
Pietersburg/Mankweng Hospital Complex (Community Health)
Manage the department

University of Limpopo School of Public Health

Part-time Lecturer (2005-2010)

University of Limpopo

Research Associate (2015-2017)

RESEARCH EXPERIENCE

Research Analyst, Health Services Research Unit

searches and assist in the development of reports.

Division of Quality of Health, Baystate Medical Center, Springfield (USA), June 2001 – 2002 May. Duties: Conduct telephone interviews, collect, enter and analyze data, perform literature

Consultant

Duties: Data entry and analysis, perform literature searches, and participated in other aspect of the research process

Department of Community Dentist, Medunsa. Jan-Jun 2000.

Consultant

Duties: Data entry and analysis, perform literature searches, and participated in other aspect of the research process

Department of Environmental Health, Medunsa. 1999-2000.

Head, Health Service Research Unit

Department of Community Health (Limpopo Province), support Provincial Department of Health with health sy] research
Master students and Registrars teaching/training

PROFESSIONAL MEMBERSHIP

- 1) Former member of South African National Defense Force Research Ethics Committee
- 2) Provincial Research Committee (Dept. of Health and Social Development, Limpopo Province)
- 3) University of Limpopo Research Ethics Committee (Pietersburg/Mankweng Hospital Complex)
- 4) Limpopo Provincial monitoring response unit (MRU) technical committee member
- 5) WISN – Provincial Technical Committee Member

REFERENCES

Dr A Robertson Provincial Paediatrician
Pietersburg/Mankweng Hospital Complex
0700
(015) 287-5341/ 083 635 0535

Dr S Nesengani Head of Department of Obstetric and Gynecology
Pietersburg /Mankweng Hospital Complex
0700
(015) 287-5181

Prof. G. Ogunbanjo Director; Research & Partnership
University of Limpopo (Medunsa Campus)
Pretoria
(012) 521 4528



ANNEXURE J

INTERVIEW GUIDE FOR PARENTS ON THEIR PERCEPTIONS ABOUT SEXUAL AND REPRODUCTIVE HEALTH SERVICES PROVIDED AT SCHOOLS

Tell me your views about sexual and reproductive health services provided at schools

ANNEXURE K

PARTICIPANT VERBATIM TRANSCRIPT

PARTICIPANTS: PARENTS

DISTRICT: CAPRICORN

PARTICIPANT NO: 8

TITLE: DEVELOPING A COMPREHENSIVE SEXUAL AND REPRODUCTIVE HEALTH PROGRAMME FOR SECONDARY SCHOOL LEARNERS IN CAPRICORN AND MOPANI DISTRICTS OF LIMPOPO PROVINCE, SOUTH AFRICA.

Researcher: *“Good evening ... I am Matete Enia Dilebo, I am a student at University of Venda doing PHD degree in Nursing. My study is about Developing a Comprehensive Sexual and Reproductive health programme for secondary school learners in Capricorn and Mopani districts of Limpopo Province, South Africa. Let me take this opportunity to welcome you to this session and also to thank you for agreeing to take part in this study. Before we proceed, please fill for me the consent form as an indication that you have given me permission to interview you. Feel free to express your views, thoughts, opinions, feelings and experiences regarding the questions I am going to ask you. Let me also assure you that confidentiality will be maintained throughout and please note that the participation in this study is voluntary, and there will be no direct benefits to anyone who participates. Also note that there will be no penalties if you want to withdraw from the study or if you do not want to answer some of the questions you feel they are sensitive or violate your rights. I would like to request your permission to audiotape the interview as it will not be possible for me to write everything as we will be talking quickly. The digital data will be kept in a safe place. Do you have any question before we proceed?”*

Participant: *“No I don't have question, we can continue.”*

Researcher: *“Alright, here is the first question: what is your understanding of the concepts sexual and reproductive health?”*

Participant: *“I understand that is when our children start to grow and experience some changes in their bodies and knowing sexual intercourse and the body starting to tell them about this sexual intercourse things because they will be starting to develop some features which they did not have before as children.”*

Researcher: *“I heard you saying children start to develop features which they did not*

have before, which features are you talking about?”

Participant: *“Eh...things like ...what... breasts, beards, girls starting to develop hips, boys starting to develop some muscles, change in shape and their voices starting to become thick.”*

Researcher: *“What is your perception about sexual and reproductive health services being provided at schools learners?”*

Participant: *“Yes (boldly) I agree with the fact that sexual and reproductive health programme be available in schools because children spend much time at schools with teachers, they are much used to their teachers than to us parents, they are open to teachers than us parents. Teachers also know the characters of this learners, they know that this one is naughty or not and are able to accept the learner as she/he is than when you as a parent talk with him/her at home where she will not be open or hide his/her real behaviour that she display while at school”*

Researcher: *“You as a parent are able to freely discuss sexual and reproductive health issues with your daughter and is she free to get into such conversation with you?”*

Participant: *“Yes... to start I can start but she can't be free like when she is talking to friends or people she spends much time with like teachers. I can be open to her but she can't be open to me like that.”*

Researcher: *“Who do you think should provide this services?”*

Participant: *“I think that nurses will be much be much better, because they know a lot about things than teachers. Isn't teachers only read from the books, but nurses have been trained and are practicing them, they have attended nursing schools and I think children will be free to talk to nurses than to teachers who live with them every day. With teachers they will like... they will be judged when they ask questions, wanting to know more about this SRH issues or other things, teachers may say this is what you are capable of but you know nothing about school work. Now I think that nurses are the ones who can be better than teachers.”*

Researcher: *“How often do you think nurses should be available in schools?”*

Participant: *“At least once a month, I think if they can come once a month it will be better for both learners and teachers.”*

Researcher: *“If once a month, must they address both girls and boys in one class or separate classes?”*

Participant: *“Yes (boldly) they should be addressed in one class, isn't this things are*

for two people, they must be mixed and be taught about this together so that the learners can know and also assist one another if they want to engage in sexual activities and remind one another cos they do these things together.”

Researcher: *“Thank you for your time.”*

Participant: *“No problem.”*



ANNEXURE L

INDEPENDENT CODER'S REPORT

CODING REPORT

FOR: Dilebo ME

DATE: 2017/09/10

STUDY: Development of a comprehensive sexual and reproductive health programme for secondary school learners in Capricorn and Mopani district of Limpopo Province

BY: Prof TM Mothiba **Method:** 8 Steps of Tesch's inductive, descriptive open coding technique Creswell (2014) was used by following the steps below:

Step 1 – Reading through the data

The researcher got a sense of the whole by reading all the verbatim transcriptions carefully. This gave ideas about the data segments and how they look like/mean. The meaning emerged during reading were written down and all ideas as they come to mind. The researcher carefully and repeatedly read the transcripts of all the participants and understood them.

An uninterrupted period of time to digest and thought about the data in totality was created. The researcher engaged in data analysis and wrote notes and impressions as they come to mind.

Step 2 – Reduction of the collected

The researcher scaled down the data collected to codes based on the existence or frequency of concepts used in the verbatim transcriptions. The researcher then listed all topics that emerged during the scaling down. The researcher grouped similar topics together, and those that did not have association were clustered separately. Notes were written on margins and the researcher started recording thoughts about the data on the margins of the paper where the verbatim transcripts appears.

Step 3 – Asking questions about the meaning of the collected data

The researcher read through the transcriptions again and analyse them. This time the researcher asked herself questions about the transcriptions of the interview, based on

the codes (mental picture codes when reading through) which existed from the frequency of the concepts. The questions were “Which words describe it?” “What is this about?” and “What is the underlying meaning?”

Step 4 – Abbreviation of topics to codes

The researcher started to abbreviate the topics that has emerged as codes. These codes needed to be written next to the appropriate segments of the transcription. Differentiation of the codes by including all meaningful instances of a specific code’s data were done. All these codes were written on the margins of the paper against the data they represent with a different pen colour as to the one in Step 3.

Step 5 – development of themes and sub-themes

The researcher developed themes and sub-themes from coded data and the associated texts and reduced the total list by grouping topics that relate to one another to create meaning of the themes and sub-themes.

Step 6 – Compare the codes, topics and themes for duplication

The researcher in this step rework from the beginning to check the work for duplication and to refined codes, topics and themes where necessary. Using the list of all codes she checked for duplication. The researcher grouped similar codes and recoded others were necessary so that they fit in the description.

Step 7 – Initial grouping of all themes and sub-themes

The data belonging to each theme were assembled in one column and preliminary analysis was performed, which was followed by the meeting between the researcher and co-coder to reach consensus on themes and sub-themes that each one has come up with independently.

Table 1: Themes and sub-themes reflecting the views of parents related to Development of a comprehensive sexual and reproductive health programme for secondary school learners in Capricorn and Mopani district of Limpopo Province

Main themes	Sub-themes
<p>1. Views of parents related to discussion of SRH topics with their teenagers</p>	<p>1.1 Narratives that SRH issues are viewed as a subject that shouldn't be discussed with teenagers emerged</p> <p>1.2 A need to discuss SRH issues with teenagers viewed as important</p> <p>1.3 Existing importance that teenagers must be warned about ignorance of SRH problems</p> <p>1.4 Existing difficulty of discussing SRH issues with teenagers outlined</p> <p>1.5 Description that SRH services are viewed as important in disease prevention and teenage pregnancy</p> <p>1.6 An outline that SRH programme is viewed important for teenagers' development</p>
<p>2. Knowledge and practices of parents and their teenagers on SRH matters</p>	<p>2.1 Existence of positive versus negative relationship between teenagers and their parents outlined</p> <p>2.2 Existence of positive relationship leads to provision of advices and support to teenagers by parents on SRH matters</p> <p>2.3 Importance of positive relationship lead to awareness of situation teenagers are faced with by parents</p> <p>2.4 Description of the SRH matters included within the discussion of parents and teenagers</p> <p>2.5 An outline that SRH discussion between teenagers and parents not an easy subject to handle</p>
<p>3. Knowledge of parents on SRH matters</p>	<p>3.1 Lack versus existing knowledge of SRH matters by parents outlined</p> <p>3.2 Parents' lack of knowledge that SRH is included in school curriculum emerged</p> <p>3.3 Existence of knowledge of a link between SRH matters and other related aspects outlined</p>

	<p>3.4 Existing knowledge amongst parents of the start of puberty and its signs for both boys and girls</p> <p>3.5 Existence of knowledge related to menstrual cycle and its relationship with pregnancy</p> <p>3.6 Knowledge of facts of puberty and the process of boys impregnating girls exist</p>
<p>4. Suggested strategies by parents on how to implement the SRH programme</p>	<p>4.1 Parents, teachers and health professionals must be given responsibility to teach SRH on different levels of existence outlined</p> <p>4.2 Different frequency of teaching SRH matters suggested</p> <p>4.3 An outline that biological aspects related to SRH be included in SRH curriculum</p> <p>4.4 A suggestion that SRH must be a subject taught in schools</p> <p>4.5 A description of how teaching SRH matters must be taught in primary schools and the importance thereof</p> <p>4.6 A need for training both teachers and parents on SRH matters outlined</p> <p>4.7 A suggestion that female teachers must be the once to teach SRH matters and the reasons thereof</p> <p>4.8 Suggestion that teachers and nurses need to work together on SRH issues</p>

SUMMARY OF OBSERVATIONS MADE

Saturation of data

Data saturation was achieved related to all major themes and their sub-themes these confirmed through identification of four themes and their sub-themes and also the verbatim quotes/excerpts from the transcription provided used in the data analysis.

Limitations to interviewing process

Leading questions were sometimes asked which directed on how the participants have to answer the questions which resulted from the fact that the researcher didn't bracket her own ideas of what is known related to the phenomenon studied before data collection. Probing done was not satisfactorily.

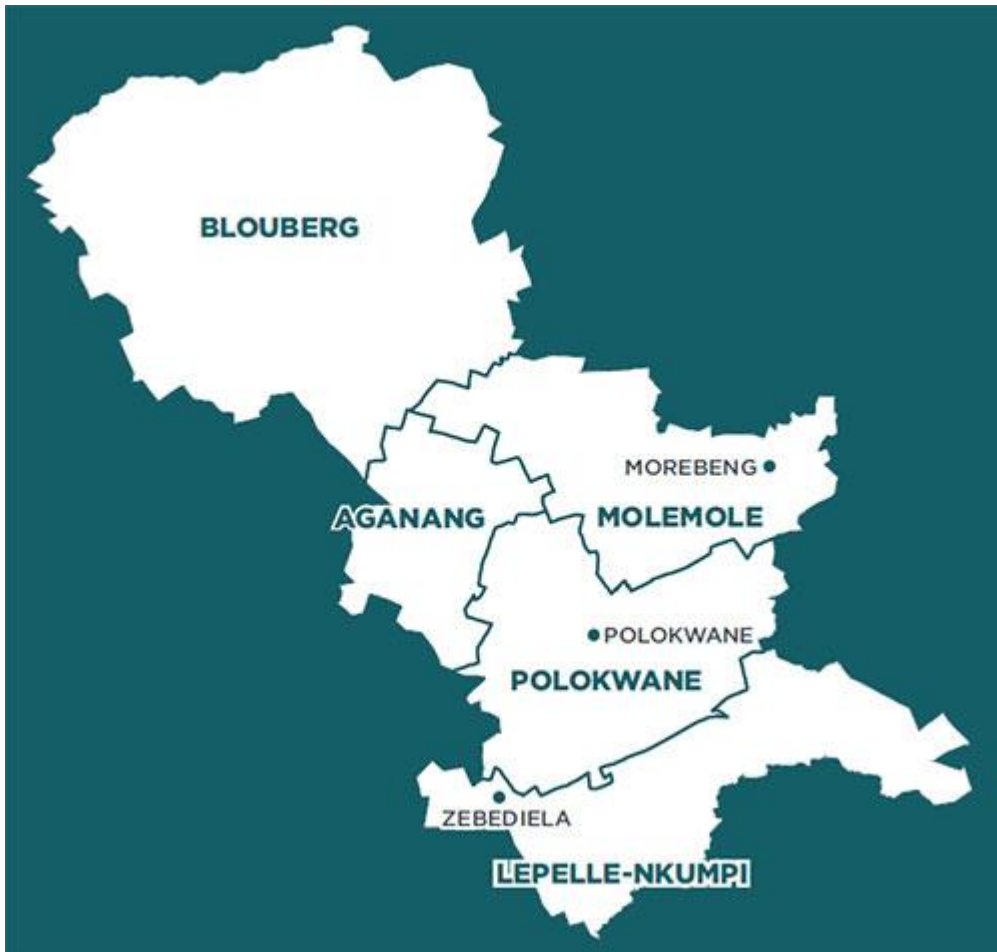
ANNEXURE M

MAP OF MOPANI DISTRICT OF LIMPOPO PROVINCE



ANNEXURE N

MAP OF CAPRICORN DISTRICT OF LIMPOPO PROVINCE



ANNEXURE O

VALIDATION QUESTIONNAIRE

INDICATE YOUR RESPONSE TO THE STATEMENTS ABOUT THE DEVELOPED COMPREHENSIVE SEXUAL AND REPRODUCTIVE HEALTH PROGRAMME FOR SECONDARY SCHOOL LEARNERS

Item description	1.Strongly agree	2.Agree	3.Disagree	4.Strongly disagree
Is the programme relevant to secondary school learners?				
Should the programme be offered as a separate subject?				
Is the content comprehensive?				
Are stipulated periods per week sufficient?				
Is the programme feasible				
Do you agree with the selection process for teachers?				
Do you agree with teacher training procedure?				
Are roles of teachers clear?				
Are roles of nurses clear?				
Is the once a month visit by nurses sufficient?				
Are roles of parents clear?				
Are teaching strategies relevant?				
Are learner assessment strategies relevant?				



Is the implementation setting conducive				
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Comments.....
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Thank you for your participation

ANNEXURE P

EDITOR'S REPORT

Valerie Janet Ehlers

Nurse Consultant and Researcher

Emeritus Professor and Research Fellow: University of South Africa

Associate Editor: International Nursing Review

(B Soc Sc, Honours B Soc Sc, BA Cur, Honours BA Cur, MA Cur, D Lit et Phil,

TAALKU-F for Diploma in Translation)

CONFIRMATION OF HAVING EDITED A DOCUMENT

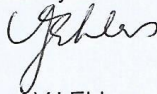
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23 April 2018	<p>To whom it may concern</p> <p>I hereby certify that I have done the language editing of the following doctoral thesis:</p> <p>Developing a comprehensive sexual and reproductive health programme for secondary school learners in Capricorn and Mopani Districts of Limpopo Province, South Africa</p> <p>by</p> <p>Matete Enia Dilebo</p>
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Thank you



Prof VJ Ehlers