

**AN INVESTIGATION OF THE KNOWLEDGE AND ATTITUDES OF
ADOLESCENTS TOWARDS THE SEXUAL AND REPRODUCTIVE
HEALTH SERVICES IN THE OMARURU DISTRICT, NAMIBIA.**

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**A mini thesis submitted in partial fulfilment of the requirements for the degree
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KEYWORDS

Adolescents

Sexual Health

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Sexual and Reproductive Health

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Sexual Activity

Contraceptive Methods

Drug use

Utilisation

Omaruru District

ABSTRACT

Background- Sexual and Reproductive Health (SRH) problems continue to affect adolescents' health and well-being even into their adulthood. Globally and especially within sub-Saharan Africa with a heavy burden of adolescent SRH problems, increased attention is being paid to these issues. This study looks at adolescents' awareness, utilisation of and experiences of the available SRH services in Omaruru District, Namibia.

Methodology- This analytical cross-sectional study used a two-stage cluster sampling method. Data from students aged 15-19 years in secondary schools were collected and analysed using a structured self-administered questionnaire and STATA statistical software respectively. Ethical approval was obtained from the Biomedical Research and Ethics Committee (University of the Western Cape) and the Namibian Health Ministry. Written parental/caregiver informed consent and written participant assent, as per the Namibian law were obtained.

Results- While 87% of respondents had heard of SRH, 46% had ever used SRH services. Of these 44% were contraceptive services. Fifty-one percent had ever had sex (of which 17% had given birth to or fathered their first child), 56% of their first sexual experiences were between ages 15-17 years. Twelve percent had used illegal drugs three months prior to the survey. In multivariate analyses female sex, urban residence and reported sexual debut had significant independent relationships with contraception use. Use of SRH services was independently significantly associated with having had sexual debut. Among SRH services users: 71% would recommend these services to their friends, 51% and 56% found health providers welcoming, with good attitudes, and guaranteeing their privacy and confidentiality.

Conclusion

Greater effort is needed to curb teenage pregnancy in school-going adolescents by promoting the use of all SRH services especially contraception among sexually active adolescents. It is encouraging that respondents who had used SRH service reported that their privacy and confidentiality were respected and that healthcare providers' attitudes generally satisfactory. Lower SRH knowledge, service use and use of contraception and condoms needs further investigation in rural youth and then programmatic and service changes tailored to their needs. Gender norms that underpin adolescent females disadvantage in a number of SRH areas needs to be addressed.

DECLARATION

I declare that **An investigation of the knowledge and attitudes of adolescents towards the sexual and reproductive health services in the Omaruru District, Namibia** is my work, has not been submitted for any degree or examination at any other university, and that all the sources I have used have been indicated in text and acknowledged in the references section.

Full Name: Daniel Kweku Adabo Mensah

Date: November 2019



Signature

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DEFINITIONS, ABBREVIATIONS AND ACRONYMS

Adolescent

The World Health Organization (WHO) defines an adolescent as a person between 10 and 19 years of age (WHO, 2010).

Sexual health

According to WHO, sexual health is defined as “a state of physical, emotional, mental, and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled” (WHO, 2006,p.5).

Reproductive Health

The International Conference on Population and Developments’ Programme of Action defined Reproductive health (RH) as a “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 and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capacity to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant” (WHO, 2006, UN, 1995, p. 4).

Sexual and Reproductive Health Services

Sexual and Reproductive Health services for adolescents should focus on the following broad areas: appropriate prevention and planning of pregnancies, safe abortion, STIs prevention and treatment including HIV, female reproductive care and menstruation, voluntary medical male

circumcision, sexual violence and addressing problems related to female genital mutilation (Rankin et al., 2016).

ABBREVIATIONS

SRH-Sexual and Reproductive Health

UNICEF-United Nations Children's Emergency Fund

HIV-Human Immunodeficiency Virus

MOHSS- Ministry of Health and Social Services

STIs- Sexually Transmitted Infections

AFHS-Adolescent Friendly Health Services

WHO-World Health Organization

LMICs-Low- and Middle-Income Countries

UNAIDS-Joint United Nations Programme on HIV/AIDS

ICPD -International Conference on Population and Development

CEDAW-Convention on the Elimination of All Forms of Discrimination against Women

SADC- Southern Africa Development Community

MGECW-Ministry of Gender Equality and Child Welfare

NAPPA- Namibian Planned Parenthood Association

SFH-Society for Family Health

GBV-Gender Based Violence

WCPUs- Woman and Child Protective Units

BMREC-Biomedical Research and Ethics Committee

CHAPTER ONE-INTRODUCTION

1.1-Background

There are more than a billion adolescents in the world (Dick and Ferguson, 2015). The largest proportion reside in sub-Saharan Africa (UNICEF, 2016b), where nearly one-fifth of the region's population is between the ages of 10 and 19 years. A population projection to the year 2050 estimates that sub-Saharan Africa will remain the only region whose adolescent population is expected to grow substantially. In Namibia, one third of the population falls between the ages of 10 and 24 years, with 11 percent from 15 to 19 years (Hervish and Clifton, 2015).

Adolescent poor health is important. Globally, adolescents face specific sexual and reproductive health (SRH) challenges. This is because the stage of adolescence is associated with a series of broad biological, psychological and social changes that impact on their health, particularly their SRH (Fatusi and Hindin, 2010). Adolescent SRH is closely related to these changes. World-wide, amongst girls aged 15-19 years, the second leading cause of death is due to complications that occur during pregnancy and childbirth. Moreover, annually, approximately 3 million girls aged between 15-19 years have unsafe abortions (Dick and Ferguson, 2015). The United Nations Children's Emergency Fund (UNICEF) estimates that globally, as of 2017, about 1.8 million adolescents were living with the Human Immunodeficiency Virus (HIV) of which 85% are in sub-Saharan Africa. Additionally, 42% of global estimates of new HIV infections occur in adolescents in the age group of 15-19 and more than two-thirds of these are in sub-Saharan Africa (UNICEF, 2016a). Not unusual in sub-Saharan Africa, is cross-generational sex between unmarried adolescent girls and older males. This puts adolescent girls at further risk of becoming HIV-infected, since they tend to have poor bargaining power in negotiating for the use of condom use during sex; and older males are much more likely to be infected with HIV than their young counterparts. Contraceptive use among 15-19 year old's remains low in most of sub-Saharan Africa i.e. from 1-3 % in some West African countries and a relatively higher use (31-43%) in East and South African countries (Hervish and Clifton, 2015).

In Namibia, there is a high prevalence of HIV among people in their reproductive years. The Demographic and Health Survey of 2013 put this at 14.0% and 16.4% for adults aged 15-49 and 50-64 years respectively, with 8.1 per cent of young people aged 15-24 are reportedly infected.

However, nationally only 10 percent of adolescents aged between 15-19 had ever tested for HIV, so this may be higher. Most new HIV infections in Namibia occur in adolescents and young women aged 15-24 years (MOHSS, 2014). These concerning data on the SRH status of adolescents may negatively affect their general health, economic well-being, level of educational achievement and future employment potential (Conde-Agudelo et al., 2005, Chandra-Mouli et al., 2013). There is the need for well concerted efforts to address the SRH needs of adolescents.

Adolescent health also impacts adult health. Studies have shown that many health problems and risk behaviours in adulthood began during adolescence (Cooper et al., 2015). There is a need to improve health services accessibility and quality for adolescents to advance their opportunities to attain better health during this period of their lives. This additionally contributes to laying the basis for better health status during adulthood (Mutangadura, 2004).

Health services barriers can hinder adolescents and young people in seeking SRH services. Several studies have found the following to be the main barriers to the uptake of SRH services by adolescents: inadequate information, knowledge and education on the subject matter; poor confidentiality and privacy at facilities that provide these services; lack of health facilities and welcoming care; social stigma; and the absence of adolescent friendly health facilities (Mattebo et al., 2019, Birhan et al., 2018, Senderowitz, 1999, Self et al., 2018). With respect to the latter, studies have also found that adolescents report encountering health providers who are often judgmental or rude towards them when they seek SRH services and/or refuse to provide services. This is especially the case at government-owned maternal and child health/family planning facilities (Erulkar et al., 2005). This may deter adolescents from seeking the services they need.

Given the large adolescent populations in the sub-Saharan African region and Namibia, if appropriate policies are put in place to address the challenges adolescents face, this can have a significantly positive effect on the region and country's socio-economic development (Hervish and Clifton, 2015). Investment in the appropriate SRH and rights policies for adolescents could develop their knowledge and skill base and keep them healthy so that they can remain economically productive. These can assist in reducing unplanned pregnancies, sexually transmitted infections (STIs), increase contraceptive use and promote more positive attitudes and

behaviour (Hervish and Clifton, 2015). Finally, appropriate policies for promoting adolescent sexual and reproductive health (ASRH) can benefit them during adolescence, throughout their lives and contribute to improved health status opportunities for the next generation of adults (Patton et al., 2016). Every adolescent in Namibia should receive comprehensive, age-tailored, and appropriate SRH targeted to their specific needs, so that they can achieve their full SRH potential.

This study seeks to investigate the sexual and reproductive health needs of school-going adolescents, aged 15-19 years, and their awareness, utilisation of and satisfaction with the available SRH services in the Omaruru District, Namibia. The situation in Omaruru District mirrors the national picture in Namibia and can therefore provide insights for similar contexts within the country. Adolescent perceptions of SRH services in the Omaruru District will assist health and education authorities in the district to identify gaps and deficiencies in the delivery of ASRH services. They can also contribute to helping reduce the prevalence of HIV, other STIs and teenage pregnancy among adolescents in the district and beyond. The research results may also be of relevance to other similar countries in the sub-Saharan Africa region.

1.2-Problem Statement

In Namibia, the Ministry of Health and Social Services (MOHSS) has established a standard that guides health services in all districts to become adolescent friendly (Chakare, 2013). Adolescent health services should be comprehensive, provide counselling, education and information on topics relevant to the lives of adolescents and offer a broad range of clinical services. These include those in primary health care and SRH services such as family planning. The National Policy for Reproductive Health has identified specific SRH challenges that adolescents and youth in general face. Key problems identified include early sexual debut, pregnancy, HIV infection and STI. The implementation of national standards for adolescent friendly health services (AFHS) does not seem to have greatly improved addressing adolescents' SRH needs, especially at the district level. The existing services that are currently being provided in Namibian hospitals have inadequately focused on knowledge improvement and progressive changes in safer sexual activity of adolescents. It is therefore necessary to investigate where

these services are lacking and how to tailor these services to focus on more specific issues related to healthy youth SRH i.e. STI and early pregnancy prevention and promoting gender inequality.

There is a paucity of research data in Namibia on how to best facilitate policy changes and implement improvements in the current SRH services so that they are more adolescent friendly. It is therefore important to produce a research evidence base on adolescent SRH needs and service requirements that can inform improved SRH policy and service provision in Namibia.

1.3-Research Questions

What are the socio-demographic characteristics of adolescent participants?

What is the reported sexual activity among adolescents?

What is the level of illegal drug use among respondents?

What is the level of adolescents' knowledge of SRH and their awareness of sexual and reproductive health services in the Omaruru District?

What SRH services do respondents use? What are the views on use of SRH services?

1.4- Aim and Objectives

Aim

The aim of this study was to investigate school-going middle and older adolescents' SRH knowledge, awareness, utilisation of and views on the available sexual and reproductive health services in the Omaruru District, Namibia.

Objectives

The objectives were:

- To describe the socio-demographic profile of the adolescent participants.
- To describe adolescents reported sexual activity.
- To describe reported illegal drug use among respondents.
- To determine the adolescents' SRH knowledge and the sources of their knowledge.

- To determine respondents' awareness of the existence of SRH services in the district.
- To describe the different types of SRH services used by adolescents in the district.
- To determine adolescents' views or experiences of SRH services.
- To examine associations between sexual debut; SRH knowledge and use of services; use of contraception and other variables.

1.5-Study Purpose

The results from this study will assist in identifying the specific needs of adolescents' SRH in areas such as contraception and appropriate and accessible SRH care services. This will help in developing services to more aptly suit adolescent needs. They will contribute valuable information in guiding the MOHSS and the Namibian Youth Task Force to reposition their policies to better address the sexual and reproductive health needs of adolescents in Namibia

1.6-Conclusion

This chapter provided information on the background of the study. It then explains the basis on which this work is premised and documents the study problem and the research questions that needed to be answered. It describes the, aim and objectives of the study and the purpose. The next chapter of this thesis examines the relevant literature that relates to the subject matter under discussion.

CHAPTER TWO-LITERATURE REVIEW

2.1-Introduction

This chapter examines the available relevant studies that relate to adolescent sexual and reproductive health globally, in sub-Saharan Africa and in Namibia, thus providing an overview. It also examines the SRH service use and needs of adolescents and the instruments, protocols and treaties promoting access to SRH rights and services. The last part of the chapter examines the sexual and reproductive health services in Namibia, adolescent uptake of these services and the possible barriers and facilitators to their use.

2.2-Overview of Sexual and Reproductive Health-Global and Sub-Saharan Africa

Adolescence is a defining health stage for later adult health, especially for females. After the onset of puberty, they are vulnerable for example to early pregnancy and its related problems of frequently dropping out of school, HIV, sexual exploitation, coercive sex and violence. These health issues continue to negatively impinge on the well-being of adolescents more than any other age group. Approximately 16 % of births occur annually among women aged 15-19 years (Sawyer et al., 2012) and 95 % of such births are in Low- and Middle-Income Countries (LMICs) (Morris et al., 2015). Specifically, in sub-Saharan Africa, girls 15-19 years old have a birth rate of 143 per 1000 births as compared to the global average of 65. Additionally, of the 6000 young people who are estimated to be infected with HIV daily, a large proportion live in sub-Saharan Africa. Of these numbers, nearly two-thirds are female (Sommer and Mmari, 2015). The challenges faced by adolescents during this stage, highlight the need for well-designed sexual and reproductive health services (UNFPA, 2012).

Several studies show that pregnancy at an early age places adolescents at increased risk of unsafe abortions, maternal mortality and morbidity (Blanc et al., 2013, Nove et al., 2014, Ganchimeg et al., 2014, Woog et al., 2015, Cooper et al., 2015). This is related to pregnancy and childbirth associated complications. Estimates show that during childbirth, girls below the age of 15 are at more risk of dying than those aged 20 and above (UNFPA, 2012). Globally, complications linked with adolescent pregnancy include anaemia, HIV and STIs, post-delivery haemorrhage, malaria, and depressive illnesses. Furthermore, because adolescents have a body whose growth

has not been completed, they are more at risk of developing obstetric fistulas with their prolonged, ongoing problems. The health outcomes of their offspring may also be poor, spanning prematurity, reduced birth weight with breathing difficulties and death during or within weeks of delivery. Pregnancies of unmarried adolescents are usually unplanned and may lead to unsafe abortions (Morris et al., 2015). Fifteen percent of all unsafe abortions annually occur in girls and young women aged 15-19 years. Compared to older women, adolescent girls are less likely to access sexual and reproductive health care especially modern contraception and trained assistance during pregnancy and childbirth (UNFPA, 2012).

Adolescents in some countries are faced with problems related to female genital mutilation. Early marriage together with gender-based violence is also a key problem in many African countries (Watts and Mayhew, 2004) The WHO reports that 30% of adolescent girls between 15-19 years of age experience intimate partner violence (Chandra-Mouli et al., 2015). The above-mentioned statistics point to how dire the challenges faced by adolescents and young people, especially adolescent females, are.

Manzini (2001) suggests that usually the first sexual intercourse a girl engages in is not planned and puts her at risk of sexually transmitted diseases including HIV and unwanted pregnancies (Manzini, 2001). In Africa, not dissimilar to elsewhere, more than two-thirds of the youth become sexually active by age 20. This mostly occurs outside marriage and often without correct sexual and reproductive health knowledge (Gorgen et al., 1998). However, Sub-Saharan Africa has some the worst indicators related to adolescent sexual and reproductive health.

2.3-Access to and use of SRH services for adolescents

About 2.4 million sexually active adolescent girls aged 15-19 in East and Southern Africa have unmet needs for family planning and it is projected that this number could increase to 3.4 million by 2030 if family planning access is not improved. Though countries in these regions are guided by regional and international treaties and protocols which they have ratified in their bid to provide adequate adolescent sexual and reproductive health services and rights, many of them have not formulated national policies that succinctly and pertinently address the needs of adolescents for these services (UNFPA, 2017). Evidence from numerous sources on sub-Saharan Africa show that women aged 15-24 years are more likely to be exposed to STIs, HIV and

unwanted pregnancies. This is often due to transactional sex, for example, sex for basic needs, school fees and personal items like mobile phones (Svanemyr et al., 2015). In South Africa, the burden of sexual and reproductive ill health is unequally high among young women due to the high risk of unwanted pregnancies, STIs and HIV infection which are linked to social issues such as peer pressure, intimate partner violence, rape as well as poor SHR knowledge (Cooper et al., 2015). A cross-sectional study of primary and secondary school students in Mwanza region, Tanzania found that nearly a third of participants reported past experiences of STIs. The rate was lower however, in students with good STIs knowledge and in those who frequently used condoms (Matasha et al., 1998). Recent estimates by the Joint United Nations Programme on HIV/AIDS (UNAIDS) have shown that more than one million new HIV infections occur in people aged 15-24 years. This accounts for more than 40% of global new infections (Wilson et al., 2010)

Reports from the UNAIDS suggest that efforts to reduce new HIV transmission in young people in Eastern and Southern Africa have stalled over the past few years and there are concerns that the 2030 target of ending HIV as a public health threat will not be achieved (WHO, 2017).

The challenge of decreasing new HIV infections could be due to practices of high-risk sexual behaviours among a certain section of adolescents, owing to poor sexual health and reproductive knowledge. A case study of Zimbabwean adolescent girls found that due to a gap in accessing information (needed for healthy sexual behaviour). Although they had knowledge of risky sexual behaviours, they still engaged in higher risk practices (Ngwenya, 2016). This perhaps shows a gap between knowledge and self-risk perception. The high prevalence of HIV in Southern Africa makes unprotected sex particularly risky for these adolescents.

In such circumstances, adolescents are exposed to a myriad of sexual and reproductive health challenges, which puts them at risk of illness and sometimes death (Okonofua, 2007). For example, in Nigeria and Tanzania, most abortions (be it safe or unsafe) cases have occurred in adolescent patients (Morris et al., 2015).

In sub-Saharan Africa, the lack of political will including in the presence of evidence of the decline in focus on the general health status of the population, further hampers the drive to improve adolescent SRH (Okonofua, 2007). In sub-Saharan Africa, there is an increased narrow

focus on HIV among adolescents instead of on the broad aspects of sexual and reproductive health. This may be due to funding restrictions (Diaz, 2016). For example in Namibia, the “Roadmap for Stepping up the Pace for HIV/AIDS Care and Treatment among Children and Adolescents” programme with support from UNAIDS and UNICEF, focuses on the challenges adolescents face concerning HIV care (MOHSS, 2015) . While this is important, this vertical approach has led to a neglect of other adolescent SRH problems.

2.4-Sexual and Reproductive Health Needs of and SRH Services for Adolescents

More than two-thirds of the world’s adolescent population lives in developing countries of which many are poor with low income in addition to low sexual and reproductive health knowledge (UNFPA, 2012). Such challenges may be exacerbated by the absence of or low quality and underutilised sexual and reproductive services in several countries. Low utilisation of sexual and reproductive services may be due to individuals’ not being comfortable with discussing sexual and reproductive health related issues. Additionally, religion intermixed with strong cultural and political forces has often acted against progress in SRH service use achieved since the 4th International Conference on Population and Development in Cairo in 1994 (Glasier et al., 2006).

Research in 70 developing countries including those in sub-Saharan Africa, showed that SRH services are underutilized by adolescents. Most of the time they were unaware of pregnancy preventive measures (Woog and Kågesten, 2017). Also, in sub-Saharan Africa, although very young adolescents have knowledge of HIV, it is unfortunately not in-depth (Woog and Kågesten, 2017).

2.5-Contraceptive Use among Adolescents

According to data collected from 212,819 women (about 45,000 were 15-19 years) from 18 of the least developed countries in Sub-Saharan Africa, the unmet need for contraception among unmarried adolescents was high (40%) in most Sub-Saharan African countries as compared to Latin American countries (10-31%). Adolescents’ preference for contraceptive methods vary, and it is linked to which method type is available in the clinics. Close on 40% and 31% of adolescents mentioned injectable contraception and contraceptive pills as their respective future preferred methods (McCurdy et al., 2014). It is unclear if this is related to what they knew to be available in their clinics.

McCurdy et al. (2014) also found that there was a mismatch between desire for contraception and its use among respondents. The majority (92.4%) of the respondents had not used contraceptives although about a fifth of them reported recent sexual activity. In addition, discontinuation rates of contraceptive use have been found to be higher in adolescents (McCurdy et al., 2014). For instance, the discontinuation rate for a contraceptive method in Namibia was found to be about 20%. Two percent and 6% respectively discontinued contraceptive use because they wanted to get pregnant and avoid side effects (Tsui et al., 2017). Concerns about side effects being the most common reason for discontinuation, as well as infrequent sex, being single, lactating or wanting to menstruate after birth and opposition from partners are some reasons given by young African women for not using contraceptives despite wanting to avoid pregnancies (Sedgh et al., 2016). Hence, there is evidence of an unmet need for contraceptives among adolescents in this region. In developing countries, 15% of adolescents aged 15-19 have an unmet need for contraception. Specifically, younger adolescents (aged 15-17 years) in sub-Saharan Africa have been shown to have a higher unmet need compared to those aged 18-19 (Darroch et al., 2016). These figures paint a picture of a pressing need for proper management of contraceptive service delivery especially for younger adolescents, who are sexually active.

2.6-Illegal Drug use among adolescents

Several studies have shown that illegal drug use affects the sexual and reproductive health of adolescents (Smith et al., 2019, Ahmad et al., 2014, Yusoff et al., 2014, Odejide, 2006). Smith et al. (2019) analysed data from a global school-based health survey of adolescents aged 12-15 years. The study found that those who used cannabis had higher odds of engaging in sexual intercourse than those who had never been exposed to it (Smith et al., 2019). Ahmad et al. (2014) concurred with this assertion. Their study on Malaysian adolescent students aged 12-17 years revealed that there was a positive significant association between having ever had sex and having ever used illicit drugs (Ahmad et al., 2014). A review by Odejide (2006) on the status of drug use or abuse within Africa showed a link between the use of psychoactive substances and HIV infection (Odejide, 2006). In Namibia, a qualitative study of illicit drug use by secondary school learners found that adolescents who were involved in illegal drug use were at a higher risk of engaging in risky sexual behaviours, including being exposed to teenage pregnancy and STIs (Chibaya, 2016).

2.7- Instruments, protocols and treaties promoting access to SRH rights and SRH services

It is the duty of every government, in collaboration with non-governmental organisations to provide adolescents with comprehensive Sexual and Reproductive Health Services which comply with the prevailing international agreements and conventions. These services should be specific, appropriate, easy to access, adolescent-friendly and consider broad religious and cultural diversity (UNFPA, 1996). In 1994, the International Conference on Population and Development (ICPD) following broad consultations, stipulated that nations should cover these areas in their bid to provide adolescent Sexual and Reproductive Services (UNFPA, 1996):

- Adolescent education and counselling on gender relations and equality, violence against adolescents, responsible sexual behaviour, responsible family-planning practice, family life, reproductive health, sexually transmitted diseases, HIV infection and AIDS prevention.
- Prevention and treatment of sexual abuse and incest.
- Fortify positive social and cultural values.
- Distinct family-planning information, counselling and services, and early childcare.
- Total involvement of adolescents in the planning, implementation and evaluation of these programmes including due consideration for parental guidance and responsibilities.
- Proper training and involvement of health professionals involved in these programmes as well as parents and families, communities, religious institutions, schools, the mass media and peer groups (UNFPA, 1996).

Human rights that pertain specifically to reproductive rights are not codified in one document but rather in different United Nations and local or regional human rights instruments, which require nations that are signatories to such conventions to abide by them. Hence the statements on reproductive health rights can be drawn from several international documents as well as national laws. Namibia has signed some of these conventions and hence the requisite authorities need to implement the recommendations to the fullest degree, as per the strengths and capabilities of the nation's implementing apparatus (Pearce, 2019). Some of the conventions that Namibia is

signatory to are as follows: In 1999, the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) Committee spelt out in its general recommendation number 24, that health care access including reproductive health is a basic right under the convention (Pearce, 2019, Turkey et al., 2000). In 2000, the Human Rights Committee, emphasised equality of rights between men and women, in its general comment number 28. This includes addressing women's reproductive health problems, encompassing unsafe abortions and preventable maternal mortality. The Committee also affirmed that countries are obliged to make efforts to prevent unwanted pregnancies and its accompanying unsafe abortions. It also placed the responsibility on government of organising alternative health services when health workers refused to offer abortion care based on their conscience (Pearce, 2019). In 2003, the Committee on the Right of the Child adopted a General Comment on Adolescent Sexual Health. Comment number 4 mentions that child's rights are inseparable and interconnected including the right to enjoy health and development. It also takes note of the right of adolescents to confidential reproductive health services, which includes abortion and contraception use. Included is the need for adolescents to have access to adequate information and participate in decision-making processes that relate to them (Pearce, 2019). The above-mentioned conventions and documents reflect a push for a holistic effort to stem unnecessary and preventable problems related to the sexual and reproductive health needs of adolescents on a global scale.

Within the African and the Southern Africa Development Community (SADC), other treaties and conventions have been agreed upon by member nations, which push for the recognition and proper provision of sexual and reproductive health services, especially for adolescents (van Eerdewijk et al., 2014). Namibia is a signatory to these treaties, conventions, and protocols. Firstly, Articles 5, 14 and 26 of Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa also known as the 'Maputo Protocol' speaks succinctly to issues relating to sexual and reproductive health of women (AU, 2003). Article 3 and 5 mention that women at risk of being exposed to harmful practices like violence, including sexual violence, abuse and intolerance should be protected. Article 14 urges signatory nations to respect, promote and provide various aspects of the women's health including sexual and reproductive health, especially in rural areas. Finally, Article 16 expects nations to ensure proper implementation of the protocols through legislative and monitoring and evaluative processes as well as provide adequate budgetary allocation for such purposes (AU, 2003).

As a signatory to the SADC Gender and Development Protocol, Namibia is expected to adopt and implement legal documents, programmes and services that strive for the improvement of gender sensitive, appropriate, affordable quality health care including programmes to tackle sexual and reproductive health needs of women and men and reduce maternal mortality ratio by 75% (Morna and Dube, 2014).

Nationally, Namibia has the National Gender Policy and National Health Policy Framework, which address pertinent issues relating to sexual and reproductive health in adolescents. They encompass topics like adolescent pregnancy, HIV /AIDS, maternal health, reproductive autonomy, and prevention of harmful cultural practices (MOHSS, 2010, MGECW, 2008). Additionally, the Namibian constitution protects the reproductive and sexual rights of its citizens, especially women through the following Acts: Combating of Rape Act Number 8 of 2000, Combating of Domestic Violence Act Number 4 of 2003, Children's Status Act Number 6 of 2006, Abortion and Sterilization Act and the Married Persons Equality Act I of 1996 (Pearce, 2019, MOHSS, 2015). In Namibia, all health facilities are supposed to provide adolescent-friendly health services. These include; adolescent participation (adolescents should know the services available for their use and take part in deciding how best to run the programme), community support or participation and adolescent-friendly staff (i.e. well-trained with good interpersonal skills, easily accessible and trustworthy) (MOHSS, 2009). Additionally, the services should be provided in an adolescent-friendly environment, have adolescent friendly procedures and be based on network and collaboration between the different sectors that deal with adolescent issues (MOHSS, 2009). Although Namibia is a signatory to these protocols, a lack of political will coupled with lack of capacity and skills could account for its inability to fully implement many aspects of these protocols and policies, regardless of the national commitment to following them. The state of SRH services in Namibia is discussed below.

2.8-Sexual and Reproductive Health Services in Namibia

The MOHSS in collaboration with the Ministry of Gender Equality and Child Welfare (MGECW) are the main governmental agencies responsible for the delivery of sexual and reproductive health services. They are supported by international and national agencies like the UNAIDS, UNFPA, Namibian Planned Parenthood Association (NAPPA), Society for Family Health (SFH) and I-Tech Namibia. These agencies act as advocates for broad sexual and

reproductive health issues, especially among adolescents. They also augment the services provided by the government, thereby reducing the financial and capacity burden on the state. They are responsible for ensuring the government is accountable to the people for the provision of sexual and reproductive health services, performs monitoring and evaluative research and monitors that the programmes are being properly implemented. They also liaise with communities to promote their sexual and reproductive health needs through advocacy (Pearce, 2019). Agencies like the Society for Family Health (SFH) continues to reach out to adolescent sex workers and adolescent Men who have Sex with Men (MSM) regarding HIV preventive measures (MOHSS, 2015b). However, the indicators of adolescent sexual reproductive health in Namibia are unsatisfactory. The percentage of condom use among sexually active adolescents aged 15-19 is 81%. The adolescent pregnancy rate is 19% with only 24% of sexually active adolescents on a family planning method.

Although guidelines exist for delivery of health services to adolescents, they have been poorly implemented in health facilities. Data on the reasons for the poor implementation is not available. This study will investigate if poor implementation stems among other causes, from lack of capacity of primary health care units in health facilities and/or possible bias against providing services to adolescents. Evidence from a focus group discussion of adolescents and adolescent stakeholders on sexual and reproductive health services in Namibia showed that most stakeholders are not even aware of this policy and the existence of the Namibia Planned Parenthood Association (Pearce, 2019). Adolescents who participated this research mentioned that although sexuality education is taught in schools as part of the Life Skills subject, there is a lack of openness from teachers and students are not afforded the opportunity to ask questions (MOHSS, 2015). This points to the fact that issues of adolescent sexual and reproductive health are not properly addressed as anticipated in the schools' curriculum.

A nationwide collaborative study by the MOHSS, UNICEF and UNAIDS involving adolescents, concerning their well-being and perspectives on HIV was conducted in 2015. It found that HIV testing among adolescents aged 15-19 years was low over a twelve-month period regardless of their sexual activity history. The figures were 28% and 13% respectively for males and females. Anti-retroviral coverage of adolescent boys and girls aged 15-19 years living with HIV was 61% and 76% respectively. These were, however, lower than the national target for this age group

which was 90%. Adolescents had no knowledge of the policies that address the needs of key populations like sex workers, men who have sex with men, gay and lesbians. The study additionally mentioned the following as drawbacks in adolescent HIV/ SRH service delivery: poor state of Adolescent Friendly Health Services (AFHS) due to a weak implementation of the AFHS policy and inadequate parental and community support. The results highlighted that it was important for the nation to have a clear definition of who an adolescent is, to facilitate a proper and focused situation analysis (MOHSS, 2015).

Globally, studies have pointed to the links between gender-based violence and poor sexual or reproductive health. High risk sexual practices have been identified as resulting from unequal gender relationships in which men have greater power over women and girls. Women who are subjected to GBV usually have poor control over their SRH leading to unplanned pregnancies. These occur especially through rape and include gynaecological problems, teenage pregnancies, sexually transmitted infections and prevention by their partners from using contraceptives. On the other hand, due to the need to show off normative masculinity, men and boys are pushed into initiating early sexual activities, having multiple sexual partners and failing to access health services (MGECW, 2012).

A school-based survey of learners from grade 6 -10 and aged between 11 years and younger, and 16 years and older in Namibia in 2004 found that 20% of participants had been physically forced to have sexual intercourse and this did not vary between males and females. Another study conducted by UNICEF in Windhoek in 2006, which included 1000 respondents aged 10-30 years found that one-fourth and nearly one-fifth of the participants aged 10-14 and 15-24 years had been sexually abused in one or more ways by a parent or caregiver respectively (MGECW, 2012).

Namibia established several Woman and Child Protective Units (WCPUs) in 1993 to deal with violence against women and children and has a National Policy on GBV which covers sexual abuse and violence (MGECW, 2012). The policy is hinged on sections of Namibia's constitution that address the prevention of gender-based violence. Articles 8 (1) and (2) mention that 'The dignity of all persons shall be inviolable' and 'No person shall be subject to torture or to cruel, inhuman or degrading treatment or punishment' respectively (MGECW, 2012, p. 6).

Additionally, Article 10 states that ‘All persons shall be equal before the law,’ and that “No persons may be discriminated against on the grounds of sex, race, colour, ethnic origin, religion, creed or social or economic status’ (MGECW, 2012, p. 6). The Combating of Rape Act 8 (2000) as well as the Combating of Domestic Violence Act 4 (2003) compliment the above-mentioned aspects of the constitution. The policies aim to reduce the incidence as well as improve responses to GBV through four cardinal ways: to prevent GBV; to swiftly respond to GBV concerns; to collect data and carry out research about survivors of rape and other GBV ; and coordinate or monitor all activities related to GBV (MGECW, 2012).

Nevertheless, the practice of sexual abuse and GBV in Namibia has continued unabated and it has been suggested that sexual initiation practices which teach young ladies to groom themselves sexually for men remain a concern for some children in certain Namibian cultural environments (MGECW, 2012). Due to the strong economic position of men, they are the socially dominant group with respect to women and children. Their masculinity and the patriarchal society allow them to ‘own’ and control women. Woman and Child Protective Units are poorly structured to deal comprehensively with issues relating to gender-based violence. The WCPUs are unable to provide early and apt responses because they are restricted in the capacity to offer adequate responses due to understaffing (MGECW, 2012). Additionally, there are no clear standard operating procedures which push for the provision of integrated services for victims of GBV, especially the poor linkage of health and forensic information to specific cases. One would expect that the health, security, justice and social services would be integrated into the WCPUs but this is not the case (MGECW, 2012).

Other factors that promote sexual abuse and GBV occurring without there being enough negative consequences include rape cases being withdrawn and victims compensated as per customary laws. One could assume that what really happens is that women are sometimes pressurized to let go especially when compensated. Namibian women have been socially ‘programmed’ to see themselves as inferior to the men, hence the former usually are either afraid to complain and or report men. On the other hand, some women see nothing wrong when a male partner abuses her (MGECW, 2012). Many cases involving sexual abuse reported to health facilities are not reported to the WCPUs due to above-mentioned factors. These reasons greatly

hamper efforts to promote the related sexual and reproductive health of women, especially for adolescents.

2.9-Sexual and Reproductive Health Services for Adolescents- Views and Experiences

Ideally, sexual and reproductive health services for adolescents should provide privacy, confidentiality, respect, informed consent and consider cultural and religious beliefs (UNFPA, 1996). The barriers faced by adolescents could be structural, cultural and/or legal in nature (Woog and Kågesten, 2017) and operate at the individual, family and community levels.

Structural determinants are for example economic, educational, political and social in nature. These determinants have been found to play a crucial role in shaping the adolescent sexual and reproductive health landscape globally (Sommer and Mmari, 2015). This is because, although it is essential to focus on developing positive individual sexual and reproductive adolescent behaviours, to achieve broad social impact, structural factors can either lead to hindering or contribute greatly to improving SRH service delivery to adolescents (Sommer and Mmari, 2015). According to Cohen et al (2000), the four major structural determinants that influence adolescent usage of sexual and reproductive health services are: social structures and policies, including media and cultural messages; availability and accessibility of resources for health service delivery and health provider quality of care (Cohen et al., 2000); and adequacy of the physical environment.

Sommer and Mmari (2015) suggest that SRH services (including contraceptive provision, antenatal care and sexually transmitted infection treatment) are like to be least accessed and used by adolescents. This scenario is worse for rural and urban poor adolescents (because of poor knowledge of SRHS, barriers to physical access and socio-cultural barriers) as compared to those from well to do homes (Sommer and Mmari, 2015).

A structural determinant that directly affects adolescents' response to their sexual and reproductive health needs is education (Sommer and Mmari, 2015). Young women's educational levels in addition to marital status, work status and their number of children affect their decision to use contraceptives. Educated women are more likely to use contraception and married women are less likely to use condoms than unmarried young women (Sommer and Mmari, 2015). According to Indongo (2007), young, urbanised women are more likely to use contraception

compared with those in rural settings. The former had more positive attitudes towards contraceptive use and their peers and parents were more positive about their contraceptive use than those in rural areas, which influences them positively in contraceptive use (Indongo, 2007). Education and SRH are interrelated. A healthy adolescent can more comfortably attend school and receive more education on how to remain healthy (Sommer and Mmari, 2015). In low and middle-income countries an increase in school participation and grade attainment, especially for adolescent girls, in turn have resulted in them being more likely to use contraception as well as delay their first pregnancy (Gupta and Mahy, 2003). In contrast adolescents from the poorest households usually have poor school participation and lower grades and this impacts negatively on their sexual and reproductive health choices (Sommer and Mmari, 2015). Adolescents who find themselves in environments riddled with negative social issues are less likely to refrain from riskier behaviours.

A study conducted in rural Burundi found, a climate of fear related to contraception use was a barrier to contraceptive use among women. Since religious leaders were against the use of contraceptives, women who used them feared being socially isolated and rejected by acquaintances who know this. They also feared that their use of contraceptive would be disclosed if confidentiality is breached by health providers (Ndayizigiye et al., 2017)

Social structures and policies can also affect uptake of SRH services by adolescents. These could either be enforced formally through governmental agencies or informally through families and neighbours. The low age for allowing marriage for girls in some low-and-middle income countries (LMICs) puts girls at risk of early pregnancies and not being able to negotiate for the use of condoms, especially if they are married to older men. In developing countries, one out of three adolescent girls marry before the age of 18 (UNFPA, 2012). Early marriage could even occur in countries with higher stipulated ages for marriage for girls due to poor enforcement of policies and laws by some LMICs governments (Sommer and Mmari, 2015). Arthur et al. (2017) mention that 50% and 53% of countries in sub-Saharan Africa and (Middle East and North Africa) respectively permit marriage below 18 years for girls with parental consent and based on customary or religious laws (Arthur et al., 2017). Educational policies which prohibit pregnant girls from continual school attendance negatively affect the attainment of their educational dreams and sexual health knowledge. For example, in a qualitative study in a Western Kenyan

community, norms about youth condom use revealed that some schools punish adolescents found with condoms (Tavrow et al., 2012). This promotes riskier sexual behaviours. Prohibitive abortion laws lead to adolescents who want to terminate their pregnancies resorting to illegal abortions which can lead to mortality and morbidity (Sommer and Mmari, 2015). Adults and teachers who exclusively promote adolescent sexual abstinence could lead to some adolescents engaging in unprotected sex and increasing their risk of HIV infection (Tavrow et al., 2012). In Namibia, older persons tend to have poor knowledge about the sexual rights of young women. This creates tensions when dealing with SRH concerns. Many of them do not understand why young women need contraception. Kambikambi (2014) described adolescents' fear of being recognised by friends and family members in a clinic waiting room when seeking SRH services, with its attached possible stigma, as a barrier to adolescent utilisation of SRHS (Kambikambi, 2014).

Media and cultural messages also influence adolescents' decision to utilise SRHs. These influences could be either positive or negative. On the one hand a study found that the more exposed adolescents are to mass media, the more likely they are to use condoms (Sommer and Mmari, 2015). On the other hand, a study by Chandra et al (2008) found that teenagers exposed to a lot of televised sexual content were more likely to fall pregnant in the following three years as opposed to those exposed to little televised sexual content. This was probably because some adolescents were negatively influenced into engaging in early sex and not use contraception without caution from parents or caregivers about the after-effects of their actions (Chandra et al., 2008).

In countries like Nigeria and Zimbabwe, studies have reported that there are financial barriers to adolescents obtaining family planning methods, as clients need to pay for them (Odo et al., 2018, Remez et al., 2014). In Namibia, these methods are provided free of charge in all government health facilities (PHCS, 2019), yet adolescents still seem to be reluctant to access to SRH services.

The physical environmental conditions within the adolescent's environment have been found to affect their sexual and reproductive health behavioural patterns. Though not clearly corroborated, disrupted institutions and poor social control have been linked to a deterioration of the physical

environment (Sommer and Mmari, 2015). For example, a South African study considered the following physical environmental factors to affect sexual and reproductive health: quality/size of housing, water access, electricity access and sanitation access. These factors were juxtaposed against age, race and gender. It found that barring any socio-demographic variable influences, adolescents in well organised physical environments were more likely to use a condom and have fewer sexual partners than adolescents in poorly organised environments. Females in poorer organised environments were less likely to use condoms and males more likely to have multiple sexual partners (Burns et al., 2012). In these environments, adolescents may lack the confidence to exert control over their own motivation, behaviour and social environments during the critical period of adolescent sexual development. This can contribute to them taking up riskier sexual and social behaviours (Sommer and Mmari, 2015)..

At a physical infrastructural level, in most developing countries, there are difficulties in capacity to provide adequate sexual and reproductive health services. This is due to a lack of trained health workers and inadequate supplies which hinder the smooth flow of service delivery (Lehmann et al, 2008). A systematic literature review showed that shortage of staff including stock outs add to the barriers faced by adolescents in accessing SRHs (Newton-Levinson et al., 2016). A South African study on youth friendly services in a rural setup concurred by finding that staff shortages as well as lack of specific physical space for the youth friendly services were barriers to youth service access. (Geary et al., 2014). Health providers who interact closely with patients have some discretionary power in how policies and guidelines are implemented. A key barrier to youth access to SRH services is the negative attitude of health professionals towards adolescents who seek SRHS (Sulemana et al., 2015).

Sommer and Mmari (2015) posit that SRH service providers may embarrass and sometimes deny adolescents access to these services. This negative treatment meted out to adolescents seeking to utilise such services is likely to be underreported. While some providers have been found to intentionally deny clients contraception because it was presumed that their clients were too young, others deliberately make adolescents wait for long hours in health facilities as a form of punishment for engaging in sexual activities (Sommer and Mmari, 2015). For example, studies in Kenya and Zambia found that more than half of providers concurred that sexually active schoolgirls should not be allowed to use contraception. This was because the providers did not

expect them to be having sex at that age (Warenius et al., 2006). A systematic review of studies on barriers adolescents face when seeking STI care showed that experience of shame and stigma from health care providers as well as from community leaders, friends and relatives remain the most powerful barriers for young people (Newton-Levinson et al., 2016). A review of literature from sub-Saharan Africa found that abusive and discouraging remarks in addition to a low knowledge base of health workers in SRH discouraged adolescents from visiting the health facilities. An Ethiopian study found that 81% of adolescent participants found health professionals unfriendly during a visit to health facilities for treatment of STIs (Amsale et al., 2012). Especially in rural areas, the judgmental and unwilling nature of nurses to provide young schoolgirls with contraceptives acts as a barrier to contraception access (Indongo, 2007). Hence improving adolescent uptake of SRHs demands in the first instance the improvement of provider-client relationships, especially in rural and urban poor areas. Poor adolescent uptake of SRH services could also be linked to poor communication and transport (Indongo, 2007). In Namibia, rural women/youth poorer access to SRHS is also likely to be related to clinic being far away from where they live, making it more difficult to reach health facilities for their contraception needs.

A qualitative study in Ghana showed that a lack of respect for the confidentiality of adolescents' health information of by health workers was a key reason for non-attendance at a health facility (Kumi-Kyereme et al., 2007). It also found the young people's misconception that contraception negatively affects younger women's fertility acts as a barrier (Sulemana et al., 2015).

2.10-Conclusion

This chapter has reviewed relevant literature on sexual and reproductive health services provided to adolescents from global, regional and national perspectives. It has further explored the international, regional and national policies, guidelines and laws that promote the establishment and proper delivery of sexual and reproductive health services, especially to adolescents. It lastly examined the barriers and facilitators to adolescents utilising sexual and reproductive health services. The next chapter focuses on the methodology of the study conducted.

CHAPTER THREE-METHODOLOGY

3.1-Introduction

The third chapter of this thesis examines the methodological process followed in this study. It includes the study setting, design and population. It further considers the sampling method, sample size calculation as well as the data collection, management and analysis. Moreover, it explains the rigour employed in terms of validity and reliability in order to make the collected data more reliable and reduce bias.

3.2-Study Setting

The study was conducted in the Omaruru District, Erongo Region in Namibia with an estimated population of 22,743 of which 6141 are aged 10-19 years. Annually, 22% of pregnancies in the district occur among teenagers, slightly higher than the national average of 21% (Ndishishi, 2014). The Omaruru district has five secondary schools: one in an urban area (Omaruru town) and four in rural areas i.e. Okombahe, Omatjete and Uis (MOE, 2018). The total school student population is 2100. The student population reflects variation, both in geographical location and the socio-economic or demographic status of the adolescents. Omaruru town is urbanised, with all social and health amenities; whereas the rest of the areas where the schools are located are rural, with only a clinic and local council. The Omaruru District Hospital, located in Omaruru town provides general medical and surgical services including for STIs, HIV, tuberculosis, family planning, social welfare, counselling, voluntary medical male circumcision and pap smears (Omaruru District, 2016). Each of the clinics provides basic medical care for STIs, HIV, tuberculosis and family planning services.

3.3- Study Design

A quantitative analytical cross-sectional research design was employed for this study. Firstly, this allowed for the duration of the study to be manageable within the scope expected from mini-thesis research as well being less costly since data collection could be done during a single contact session with participants (Mann, 2003). This study design allowed for the description of adolescents reported sexual activity and determination of adolescents' knowledge of SRH. It also incorporated the awareness of adolescents as to the existence, views or experiences of sexual and reproductive health services. This is as well as to different types of sexual and reproductive

services utilised by adolescents in the Omaruru District at a single point in time. In addition, a cross-sectional study design enabled me to identify what factors were associated with adolescents' knowledge, awareness, use and views on available sexual and reproductive health services.

3.4-Study Population

The study population for this research was adolescents aged 15 to 19 years, who were enrolled in any of the five secondary schools in Omaruru District. With a rise in teenage pregnancies in this district and its attendant problems, this was the appropriate age group to choose for this study.

The inclusion criteria for the selection of study participants included age, gender, geographic location (rural or urban), and education. Thus, eligible participants were students fulfilling the following criteria:

- aged 15-19 years
- male and female
- able to complete questionnaires on their own
- enrolled in any of the secondary schools in the geographic confines of Omaruru District.

Students below and above the age of 15 and 19 years were excluded from the study. Adolescents who were not enrolled in secondary schools or were home-schooled were also excluded from the study. In addition, those unable to self-administer a questionnaire as well as those who did not have the cognitive ability to do so were not included in the study.

3.5-Sampling Method

To obtain a representative sample of school going adolescents between the ages of 15-19 years in the Omaruru District, participants were selected from all the five secondary schools through a cluster sampling approach. Cluster sampling is a type of sampling where a group of population elements represent the sampling units (which are heterogeneous within clusters and homogenous among clusters) rather than single elements of the population. This method is cost efficient, saves time and more convenient when surveying institutions (Ahmed, 2009). Within each school, 80 adolescents aged 15-19 were randomly selected. This gave each student within the age range in the inclusion criteria, an equal chance of being selected. Thus, a two-stage cluster sampling

method was employed. Pre-numbered questionnaires were given to students based on the study ID numbers they picked.

3.6-Sample Size Calculation

The estimated population size of secondary school students in Omaruru District was approximately 2100, comprising 34% of the all adolescents in the district. The sample size was calculated by assessing random sampling error and then calculating 95% confidence intervals and P values. The Power of the study was set at 80%. The sample size was determined using the Epi Info software (Sergeant, 2017). At a 95% confidence interval, with a power of 80%, the estimated sample size was 345. This value was divided by five giving 69. Ten percent of 69, which is approximately 7 was added to the sample size of for each school. This allowed for possible withdrawal of participants from the study after data collection began and non-responses to some questions. This was the reason for arriving at a necessary sample size of 76 participants for each school. Hence the total sample size was intended to be 380.

3.7-Data Collection

The content, structure and length are vital factors to consider for a questionnaire, especially for adolescents. This is because adolescents have different levels of cognitive development and are at a specific development phase of communication and social skills. This can impact different stages of the question answering process (de Leeuw, 2011). Pre-testing is a vital aspect in construction of questions for adolescents, to evaluate if the wording and response options are appropriate for the different age groups. First an expert on the topic as well as in question drafting reviewed the questions. Before the survey was conducted, the questionnaire was pre-tested on a group of students aged 15-19 years to identify errors and test its feasibility. Prior to pre-testing the questionnaire, an information sheet provided assurances on confidentiality and consent and all participants and their parents/caregivers were given assent and consent forms, respectively, to sign. Permission was obtained from the relevant school authorities. To pre-test the questionnaire, eight participants from different classes at a secondary school in Omaruru were separated into two groups of ages 15-17 and 18-19 with the researcher serving as the moderator. Pre-testing was done in a room in the Omaruru community hall. The duration of the interview was approximately 40 minutes. Adolescents were addressed by first names and wore

colourful name tags. The pre-testing was preceded by a group game, which provided a 'warm up' for participants. Participants for the pretesting were excluded from the actual survey.

Data were collected by the researcher, with the help of four trained research assistants (one for each school) during the 2019 school year. This allowed time for prior academic institutional granting of ethical approval, and study permission to be obtained from the relevant Namibian authorities. Consultation took place with staff and management of participating schools and the process of obtaining informed consent and assent took place. The research assistants were trained by the researcher and performed the following tasks: distribution of information sheets, recruitment of study participants' and where needed (i.e. where students were less than 18 years) obtaining parent/caregiver written informed consent, questionnaire distribution, and provision of explanations to participants on how to complete the questionnaire. A researcher was available on site at the schools while students were self-administering the questionnaires to answer possible questions, check that questionnaires had been completed and collect the completed questionnaires from participants. All adolescents who answered the questions were literate enough including being cognitively literate; hence no one was excluded from the study due to this reason.

Data were collected using structured, self-administered, pre-numbered questionnaires, which were participant friendly. The questionnaire had not being used in previous studies, however sections of it were based on the literature review and finally it was not translated. Review of the questionnaire by an expert was done to validate it. Specifically, each questionnaire comprised an introduction, consisted of a logical flow of questions in simple English language, avoided leading questions and included a thank you statement. The questionnaire included succinct items, with each question speaking to a specific issue. It had both closed and semi-structured questions. It took approximately twenty to thirty minutes for students to complete a questionnaire. A total period of four weeks was used to collect data from all secondary schools in the district.

3.8-Data Management

After collecting the questionnaires from participants, they were checked for completeness. Unusual cases, extreme values and errors were identified and duly corrected. The researcher ensured the storage of hard copies of the questionnaire in locked cabinets. Data were entered into an Excel spreadsheet and then stored in a password protected format on the researcher's

computer. The data were also saved onto a password protected external hard drive as a backup source.

3.9-Data Analysis

Variables from the questionnaire were entered onto an Excel spreadsheet to help obtain an overview of the data. The STATA statistical software was used to analyse the results. Univariate analysis was conducted to generate a socio-demographic profile of participants (for example age, sex, geographic location of school, school grade etc.) and a descriptive analysis of key variables performed. The key outcome variables included calculating the proportion of participants who were sexually active and if so, age at first sex, knowledge of SRH and awareness of the different sexual and reproductive health services available in the district. It also included proportions of the different types of sexual and reproductive health services used by participants and participants' views on and experiences of the SRH services provided. Bivariate analysis was used to calculate significant associations between variables. Those variables testing significant in bivariate analyses, were used to build multivariate models so that independently significant associations between key outcomes and characteristics could be calculated.

3.10-Validity

To minimize recall bias, periods for recall were short in duration i.e. three months. Questions were posed in an adolescent friendly way for easy understanding. To reduce measurement bias, pre-testing of the questionnaire was conducted on a smaller group of adolescents from one of the schools to ensure that it could generate similar responses from participants when the actual study was carried out. It was also used to test the understanding of the question wording (Clancy, 2002, Paulhus, 1991). Furthermore, the sampling method and inclusion criteria were adhered to ensure reproducibility. During analysis of the data, the appropriate statistical approaches were used to avoid researchers' bias.

3.11-Reliability

To ensure reliability, questions were framed in a simple language and in a non-judgmental manner. This allowed participants to give the appropriate answers. The test/retest method and the Cronbach alpha calculation was used to check for reliability of the data (Brown and Newsletter, 2002, Tavakol and Dennick, 2011, Gliem and Gliem, 2003).

3.12-Ethical Considerations

Adolescents are a vulnerable population. Namibian law defines adults, able to participate independently as 18 years and above (Ambunda and Mugadza, 2009, Coomer and Hubbard, 2009). Therefore, all participants below 18 years first required written parental/caregiver informed consent and then their own informed assent to participate in the study. They did not participate if their parents/caregivers did not provide consent and if their assent was not obtained. The accepted school system was used to obtain written parental/caregiver informed consent for study participation for children under 18 years. Participants over 18 years were able to consent themselves to study participation (Coomer and Hubbard, 2009, Ambunda and Mugadza, 2009). A participant information sheet was given to each adolescent and to parents of adolescents below 18 years taking part in the study. This was prior to obtaining consent and assent for participation. The information sheet included information on the research aim; what participant involvement included; the likely risks and benefits of study participation; their right to privacy; and the researchers' disclosure obligations, should they choose to participate in the study. In the case of informed written consent being needed for participants less than 18 years, who were for example, orphans or children in child-headed households, we sought consent for them to participate in this study from a responsible adult appointed as their caregiver or guardian and the social welfare authorities respectively. The information provided in the information sheets was in simple English and a local language (for parents who are not English literate) (See Appendix 1). This was to facilitate easy understanding by the participants and their parents or caregivers. Participants were permitted to keep copies of the information sheets. The information sheets included the name and contact details of the researcher and other relevant study contact persons. Participants (and their parents or caregivers' in the case of adolescents below 18 years) were informed that participation in the study was purely voluntary and that it was their right to choose to participate or not to participate in the study at all, or to freely withdraw from the research at any stage. It also state clearly that the respondent's refusal to participate or withdraw could not lead to them being denied any benefits to which they were usually entitled and would not incur any other negative consequences (WHO, 2018, Ringheim and Medicine, 1995).

This study included the discussion of some sensitive topics that could have resulted in participant discomfort or distress. Participants were therefore able to choose not to answer any question if they felt too uncomfortable. Research assistants were trained to detect any signs of distress and

discomfort among participants who could be referred for counselling, if necessary. A referral strategy was available for participants who needed any medical or psychological help (Folayan et al., 2015). However, in this study, no participant was referred for counselling.

Participants were assured of confidentiality and anonymity by removing any information that could result in participant identification. Research documents stored in locked file cabinets and on password protected computer files in locked offices were restricted to research staff only. To ensure confidentiality and anonymity, study identity numbers rather than participant names were used as identifiers on the questionnaires. Consent forms were kept separately from the questionnaire so that they were not linked to each other to preserve the anonymity of participants' individual responses (WHO, 2018). The research data is being stored for five years after completion of the study and will then be destroyed as per standard research ethics practices.

This research proposal obtained ethics approval from the University of Western Cape Biomedical Research Ethics Committee (BMREC). Permission to conduct this research was obtained from the Namibian MOHSS Ethics Committee.

3.13-Conclusion

This Chapter has examined the methods employed in the study. Specifically, it elaborated on the study area of Omaruru District. It also discussed the research design, population, sampling method and size. Moreover, it examined the collection, management and analysis of data. The next chapter focuses on the results of the study.

CHAPTER FOUR -RESULTS

4.1-Introduction

This chapter presents the results from the study and is divided into different sections. The sections are as follows: socio-demographic profile of the adolescent participants; respondents' reported sexual activity; participants' reported illegal drug use; adolescents' SRH knowledge and the sources of their knowledge; respondents' awareness of the existence of SRH services in the district and the different types of SRH services used by adolescents in the district; and adolescent views and experiences of SRH services. Bivariate analyses to determine associations and multivariate analyses of factors remaining significantly associated with utilisation of SRH services and contraception use are presented.

4.2- Social demographic characteristics

The total number of adolescents sampled was 389. Table 1 presents descriptive statistics for various demographic attributes of the sampled population. The mean and median age of all adolescents as well as independently for females and males in the study was 17.0 years. The standard deviation of respondents' age was 1.22. Most of the respondents in this study (61%) were female. The majority of respondents were in grade 9 to 12 (77%). Most were living in urban areas (66%), with 59% of urban respondents living in what is known as a location and the remainder residing in the more spacious suburbs.

Table 1-Characteristics of Respondents

Characteristic		Female (%) (n=233)	Male (%) (n=146)
Current Age (N=364)	(15)	11	10
	(16)	29	29
	(17)	28	21
	(18)	20	23
	(19)	12	17
Sex (N=379)		61	39
Residence (N=330)	(Rural)	38	27
	(Urban)	62	73
Educational Level (N=377)	(8)	52	48
	(9)	62	38
	(10)	59	41
	(11)	68	32
	(12)	62	38

Note- In the table, the differences in total number of participants in the variables age, place of residence, educational level, and sex from the total number of participants enrolled, reflect missing values for these variables.

Table 2 shows the percentage of respondents' age by educational level.

Table 2-Percentage representation of age by educational level from the total study population

Age (%) (N=369)	15	16	17	18	19
Grade (8) (N=22)	2.2	3.0	0.5	0.3	0.0
Grade (9) (N=110)	5.1	7.3	11.1	4.9	1.4
Grade (10) (N=122)	3.0	14.9	4.6	5.4	5.1
Grade (11) (N=58)	0.0	4.1	6.0	3.8	1.9
Grade (12) (N=57)	0.0	0.0	3.0	6.5	6.0

Note- In the table, the differences in number of participants in the variable educational level and the total number of participants reflect missing values for these variable.

4.3-Sexual activity

Table 3 shows the results of reported sexual activity of respondents.

Out of the total number of respondents (n=366), just over half (51%) overall had ever engaged in sex. However, while nearly three-quarters of males (72%) reported ever having sex only just over a third (38%) of females reported this.

A small percentage (17%) of participants who have ever had sex reported having had a child. By age, 10% and 22% respondents aged (15-17) and (18-19) years respectively who had had sex before and had had a child. For respondents who had ever had sex, 77% reported having ever used condoms.

Table 3-Reported sexual activity

Characteristic	Female (%)	Male (%)	Age (15-17) years	Age (18-19) years	Total (%)
Ever had sex (Yes)(N=186)	38	72	25	26	51
(No) (N=180)	62	28	39	10	49
Age at first sex (N=184)					
10-14 years	12	29			22
15-17 years	58	54			56
>18 years	30	17			22
Sexual partners (N=195)					
1	54	25	22	16	38
2	19	24	13	9	22
3	13	13	5	8	13
>3	13	38	12	17	27

Note-The differences in total number of participants between the variables ever had sex and ever had a child and the total number of participants, reflect missing values for these variables. Additionally, the variable number of partners and age at first sex are calculated only for those who had ever had sex, hence the smaller number. In this table as well the discrepancy between number who reported having ever had sex and age at first sex was due to missing variables.

Tables 4, 5 and 6 show age and educational level of respondents against their sexual experience and age against number of sexual partners respectively.

Table 4- Respondent who have ever had sex by current age.

Age	15 (N=38)	16 (N=108)	17 (N=94)	18 (N=78)	19 (N=53)
% Ever had sex	30	35	44	62	85

Note-The differences in number of participants between the variables ever had sex and age, and the total number of participants, reflect missing values for these variables.

Table 5- Respondents who have ever had sex by current educational level.

Educational level (N=)	8 (N=22)	9 (N=110)	10 (N=122)	11 (N=58)	12 (N=57)
% Ever had sex	36	46	52	43	72

Note-The differences in total number of participants between the variables ever had sex and educational level, and the total number of participants reflect missing values for these variables.

Table 6- Current age and sex of respondents by number of sexual partners

Number of sexual partners	0% (N=71)	1% (N=40)	2% (N=24)	3% (N=53)
Age (15) (N=12)	2	2	1	2
(16) (N=41)	8	4	3	7
(17) (N=44)	12	7	2	3
(18) (N=47)	9	5	3	8
(19) (N=44)	7	4	4	9
Sex (Female)	24	9	6	6
(Male)	14	13	7	21

4.4-Illegal drug use

Table 7 shows the results of reported illegal drug use in the past three months (marijuana, cocaine, heroin etc.), which was higher in males than in females.

Table 7-Reported illegal drug use

Characteristic	Female (%)	Male (%)	Age (15-17) years	Age (18-19) years	Total (%)
Illegal drugs use (N=369)					
Yes	8	17	6	6	12
No	92	83	59	29	88

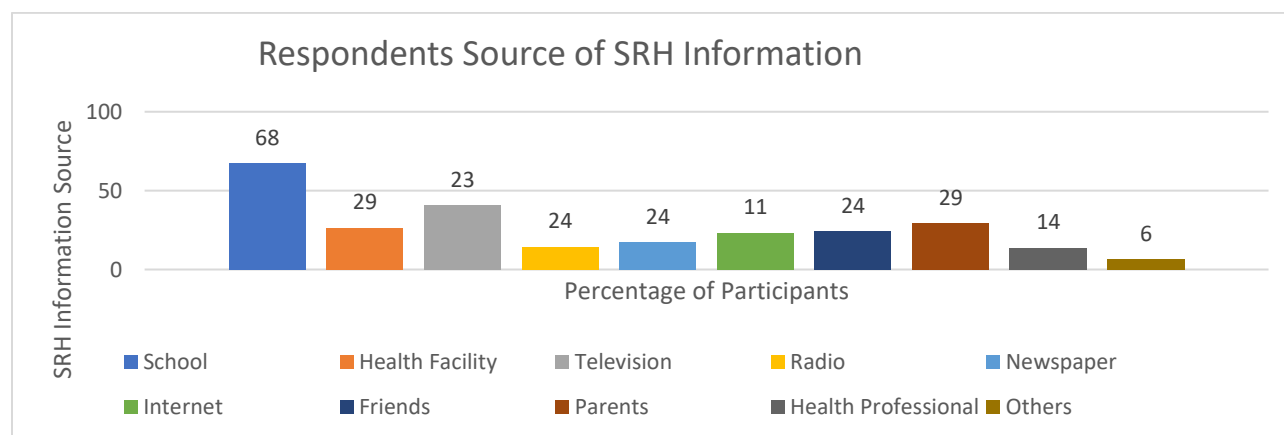
Note-The differences in total number of participants as regards illegal drug use from the total number of participants reflected missing values for this variable.

4.5-Knowledge of Sexual and Reproductive Health and SRH services utilization

Eighty-seven percent of respondents had heard of SRH. This did not differ by sex with, 88% and 87% of females and males respectively reporting having heard about SRH. A higher percentage of respondents from urban areas had heard of SRH (91% compared with 80% of rural respondents).

Figure 1 shows the percentage of participants who had heard of SRH by the different sources from which they had obtained their information and there was no significant different by sex.

Figure 1- Respondents Source of SRH Information



Respondents' knowledge of components of SRH is shown in Table 8.

Table 8- Overall participant knowledge of different components of SRH

Components of SRH	N= 376 Percentage of participant knowledge: components SRH
Family planning	32
Vaginal or penile discharge	29
HIV testing and treatment	21
Reproductive care and menstruation	24
Male circumcision	24
Sexual violence prevention	11

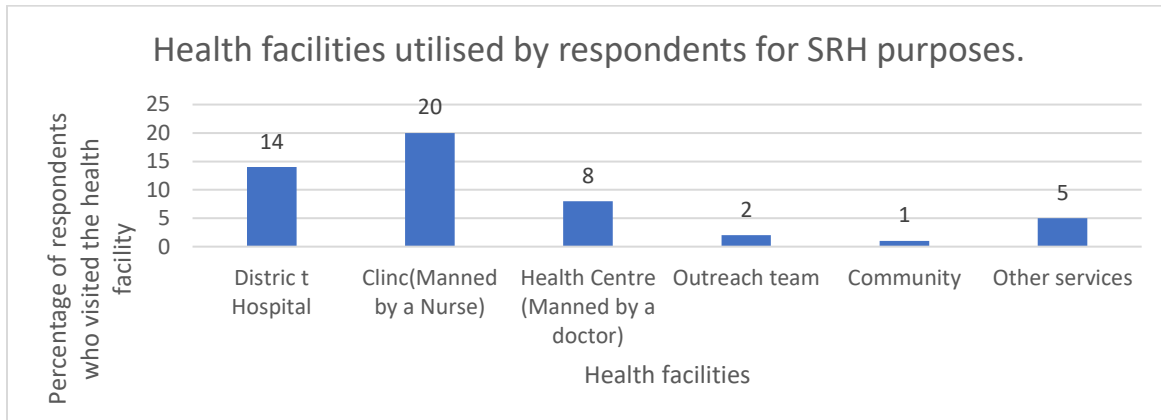
Table 9 shows knowledge of SRH services by sex.

Table 9- Participant knowledge of different components of SRH by sex

Components of SRH	Female (%)	Male (%)
Family planning	67	33
Vaginal or penile discharge	62	38
HIV testing and treatment	60	40
Reproductive healthcare and menstruation	61	39
Male circumcision	40	60
Sexual violence prevention	44	56

Less than half (46%) of participants reported utilising SRH services. The following chart (Figure 2) shows the type of facility used by respondents. By sex, there was no significant difference in frequency utilization of health services. However, by age, older respondents i.e. those above 16 years utilized the district hospital and clinic more than those below 16. There was no difference in utilization by age as regards the other facilities. More respondents who had ever had sex knew the components of SRHS i.e. sexual violence (76%), male circumcision (62%), reproductive healthcare and menstruation (56%), HIV testing (57%), vaginal or penile discharge (54%) and family planning (51%) than those who had not had sex.

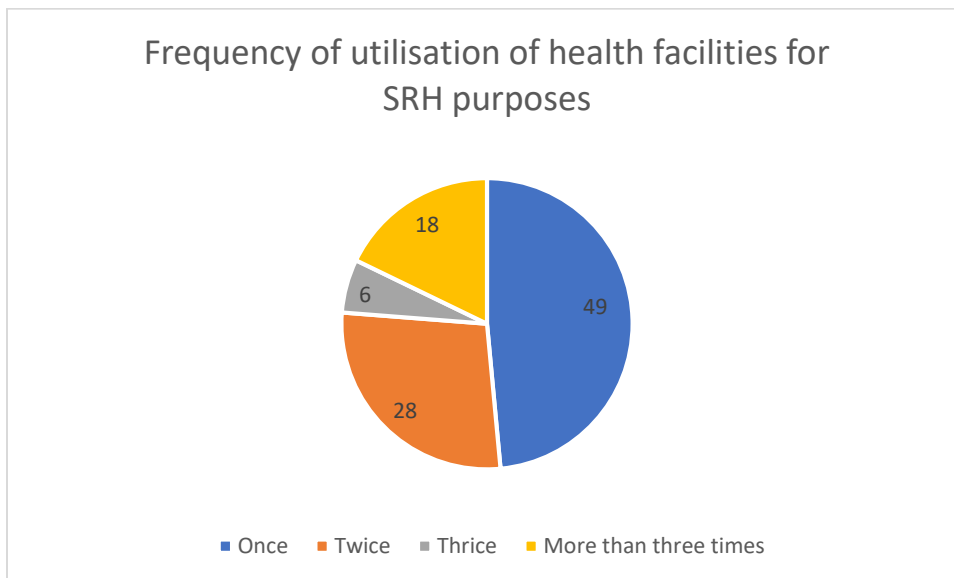
Figure 2- Health facilities utilised by respondents



Among those who had ever utilised SRHS in the district, doctors, and nurses/midwives each provided services in 17% of cases. Five percent were seen by a peer educator and 3% by other services providers.

The pie chart below shows the frequency of utilisation of health facilities for SRH purposes by respondents.

Figure 3- Frequency of utilisation of health facilities by respondents



The greatest proportion of respondents had only used a SRHS once.

Respondents were surveyed for the type of health provider they would prefer to offer SRH Services. Respondents' preferences were as follows: doctor (42%), nurse/midwife (12%), counsellor (13%), peer educator (5%), other preferences (2%). Twelve percent reported that they did not know (12%). Adolescents utilised the SRH services for their needs as shown in the chart below.

Figure 4- Sexual and Reproductive Health Services Utilisation by respondents

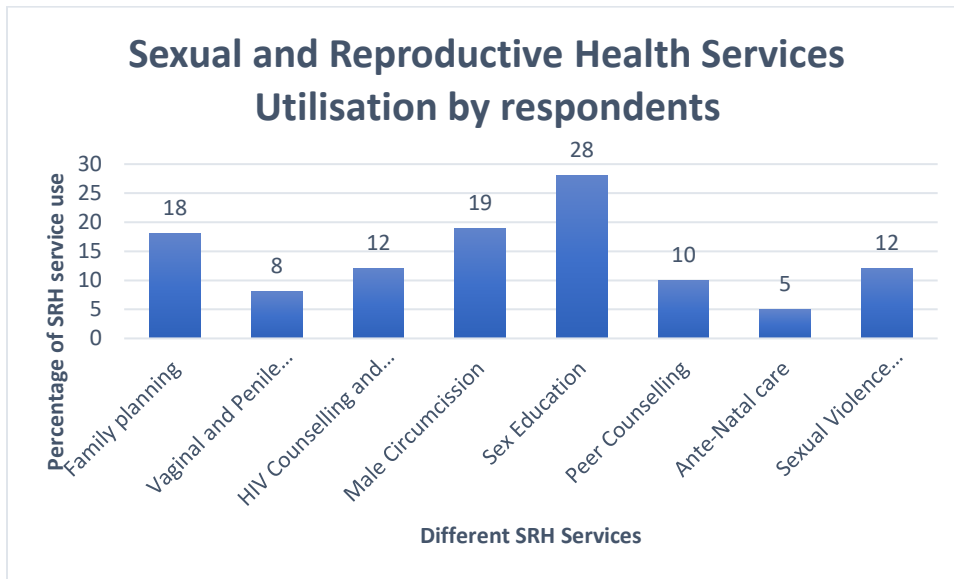


Table 10 shows adolescents' utilization of SRH services by sex as opposed to in Table 9, which deals with knowledge of the components by sex.

Table 10- Utilisation of SRH services by sex of participants

SRH services	Female (%) (N=91)	Male (%) (N=72)
Family planning	13	5
Vaginal and penile discharge treatment	5	3
HIV counselling and testing	6	6
Male circumcision	0	19
Sex education	16	12
Peer counselling	6	4
Ante-natal care	2.5	2.5
Sexual violence prevention	6	6

Of those using SRH Services, 44% had used contraception, with the distribution between males and females the same. There was no important difference for SRH services use by participant age.

Table 11 shows the distribution of contraceptive methods used by respondents by sex of respondents. There was no important difference as regards contraception use against participant age. Only females would have been able used the three methods.

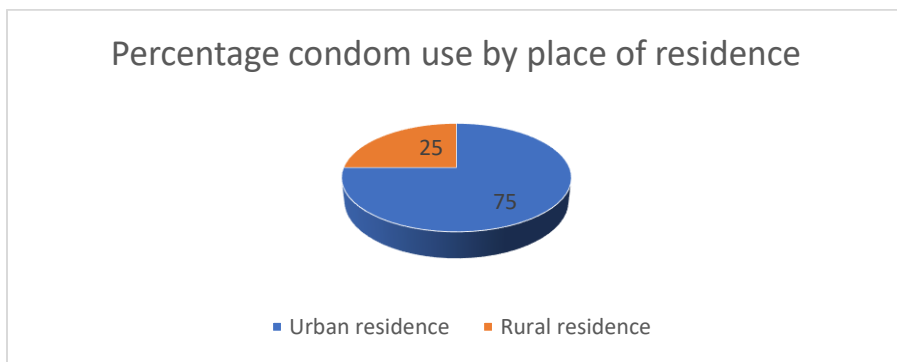
Table 11- Contraception method use by sex as per the total respondent population

Contraceptive Methods	Female (%) N=79	Male (%) N=78
Injectable hormonal contraceptives	5	0
Hormonal Contraceptive Implants	2	0
Oral contraceptive pills	6	0
Condoms*	13	20

* There was no option for dual use of condoms

For female and male respondents who had ever had sex, 80% and 71% respectively had ever previously used contraception. Of those who had ever had sex, 61% had ever used condoms, while 39% of those who had had sex had never used condoms. Additionally, for male and female respondents who had ever had sex, 68% and 52% respectively were found to have previously used condoms. Among those using a contraceptive method, the majority of those who used condoms, (61%) were males. Among respondents, for those who had had more than two sexual partners, percentage condom use for males and females were 83% and 46% respectively.

Figure 5- shows distribution of condom use by respondents by place of residence.



Among those who lived in urban areas and had used condoms before, 57% of them lived in suburban urban areas rather than locations.

4.6-Views of respondents on the Sexual and Reproductive Health Services Offered in Omaruru District

Table 13 and 14 (by sex) illustrate the responses of respondents with respect to SRH services offered in Omaruru District. The salient aspects of the views expressed by respondents are mentioned below.

Regarding privacy and confidentiality, 54% of participants agreed that their privacy and confidentiality were assured when visiting SRH services. Sixty-eight percent of these lived in urban areas and the rest in rural areas. Sixteen percent disagreed with this assertion. For those

who had ever had sex, 58% of participants agreed that they are assured of confidentiality when visiting an SRH service.

Regarding respondents recommending SRH services, 85% of participants responded to this question of which 70% would recommend SRH services to a friend and 16 % would not while the remainder were undecided. Of those who would not recommend these services to a friend, 46% had used the services while 54% had never used the services before.

As shown in Table 12, more female participants than male participants preferred a provider of the same sex.

Table 12 Health provider preference of participants by sex (N= 350)

Sex of participants	Female provider (%) (N=113)	Male provider (%) (N=52)	No special preference (%) (N=185)
Female	42	9	49
Male	17	24	59

Table 13 documents respondents' views on their involvement and quality of care in the public sector SRH services.

Table 13- Respondents responses to statement about SRH Services (N=350)

Response statement	Yes (%) N=	No (%) N=	Do not know (%) N=
Adolescents involved in design and monitoring of SRHS	20	15	66
Adolescents can access services without an appointment	34	25	41
Less than an hour waiting time receive SRH services	27	25	48
Adolescents do not pay for these services	39	27	36
Availability of publicity materials	60	14	26
The services are friendly to both male and female adolescents	73	8	19
SRHS as a “one stop shop” for any medical problem	40	23	37
Referred for more specialised care available	52	11	38
It works with adolescent support groups	33	17	50
Trained adolescents present to educate on SRH	46	19	35
Teaching aids e.g. dolls, are used inform adolescents	25	24	51
I am assured of privacy and confidentiality	53	16	31
Health professionals’ attitude-supportive and welcoming	47	16	37
I will recommend these services to a friend	70	16	14
Who will you prefer as a provider of SRH services	Male 15	Female 32	Anyone 53

Table 14 shows these views disaggregated by sex and shows that the percentage of males who would recommend services to a friend, were assured of their privacy and confidentiality as well

as those found the attitude of health providers supportive. These proportions were greater for males than females. However, a large (75 and 71% respectively) and nearly equal proportion of males and females found the services friendly to both sexes.

Table 14- Respondents responses to statement about SRH Services by Gender

Response Statement	Yes (%)		No (%)		Do not know (%)	
	M	F	M	F	M	F
Adolescents involved in design and monitoring of SRHS	24	17	15	15	61	68
Adolescents can access services without an appointment	30	36	29	23	41	41
Less than an hour waiting time receive SRH services	31	24	24	26	45	50
Adolescents do not pay for these services	39	36	23	29	38	25
Availability of publicity materials	65	56	10	17	25	27
The services are friendly to both male and female adolescents	75	71	5	10	20	19
SRHS as a “one stop shop” for any medical problem	41	38	22	24	37	38
Referred for more specialised care available	54	50	11	11	35	40
It works with adolescent support groups	38	29	17	18	45	53
Trained adolescents present to educate on SRH	45	46	21	19	35	35
Teaching aids e.g. dolls, are used inform adolescents	27	24	22	26	51	51
I am assured of privacy and confidentiality	56	52	14	16	30	32
Health professionals’ attitude-supportive and welcoming	55	43	14	17	31	40
I will recommend these services to a friend	75	65	10	20	15	15

Table 15 show some views of respondents who had utilised SRHS before. More than half of SRHS users were assured of their privacy and confidentiality as well as found the attitude of

health providers supportive and welcoming. An even larger proportion of users were pleased with the friendliness of SRHS and thus would recommend them to friends.

Table 15-Views of respondents who had utilised SRHS before (N= 163).

View	Yes (%)	No (%)	Don't know (%)
I am assured of privacy and confidentiality	56	14	30
Health professionals' attitude is supportive and welcoming towards giving SRH services to adolescents	51	17	32
The services are friendly to both male and female adolescents	75	7	18
I will recommend these services to a friend	71	17	12

4.7- Associations between Socio-demographic characteristics and Utilisation of SRHS

The results in a bivariate analysis in Table 16 show significant associations between key variables and use of sexual and reproductive health services.

Table 16- Associations between Socio-demographic characteristics and Utilisation of SRHS

Variable	Characteristics	% Utilisation of SRHS	P value
Sex	Male	72 (51%)	0.04*
	Female	91 (40%)	
Age (years)	(15)	9 (25%)	0.04*
	(16)	47 (46%)	
	(17)	38 (42%)	
	(18)	34 (45%)	
	(19)	31 (59%)	
Educational level	Grade (8)	9 (41%)	0.02*
	Grade (9)	59 (55%)	
	Grade (10)	49 (41%)	
	Grade (11)	18 (31%)	
	Grade (12)	36 (54%)	
Place of residence	Rural	50 (45%)	0.80
	Urban	100 (47%)	
Contraception use	Yes	98 (62%)	0.00*
	No	71 (36%)	
Illegal drug use	Yes	31 (70%)	0.001*
	No	134 (42%)	
Ever had sex	Yes	99 (53%)	0.002*
	No	64 (37%)	
Age at first sex experience	(10-14)	18 (46%)	0.40
	(15-17)	53 (52%)	
	(>18)	25 (61%)	
Number of sexual Partners	(1)	37 (49%)	0.40
	(2)	24 (57%)	
	(3)	12 (44%)	
	(>3)	33 (61%)	
Ever had a child	Yes	21 (64%)	0.02*
	No	132 (43%)	

Note- Significant association denoted with an * and the level of the p value used for significance is <0.05

Sex of respondents (male), age (being older), educational level (being in grade 8,9, and 12), reported use of illegal drugs, reportedly ever having had sex, having had a child, and use of contraception were associated with utilisation of sexual and reproductive health services in the Omaruru District.

4.8-Associations between Socio-demographic characteristics and Contraception Use

The results from Table 17 show that the significant relationships between key variables and contraceptive use.

Table 17- Association between Socio-demographic characteristics and Contraception use

Variable	Characteristics	% Ever used Contraceptives	P value
Sex	Male	78 (55%)	0.001*
	Female	78 (37%)	
Age(years)	(15)	6 (16%)	0.000*
	(16)	24 (24%)	
	(17)	40 (46%)	
	(18)	39 (53%)	
	(19)	38 (75%)	
Place of residence	Rural	38 (36%)	0.014*
	Urban	107(51%)	
Illegal drug use	Yes	30 (68%)	0.001*
	No	126(45%)	
Ever had sex	Yes	140(76%)	0.000*
	No	14 (8 %)	
Age at first sex experience	(10-14)	26 (68%)	0.34
	(15-17)	81 (78%)	
	(>18)	32 (82%)	
Number of sexual Partners	(1)	51 (69%)	0.78
	(2)	30 (73%)	
	(3)	21 (78%)	
	(>3)	40 (75%)	
Ever had a child	Yes	28 (82%)	0.000*
	No	125(42%)	

Note- Significant association denoted with an * and the level of the p value used for significance is <0.05

Use of contraceptive methods was associated with the sex of respondents (male – this included condoms), place of residence (urban), reportedly used illegal drugs, reportedly ever having had sex and having a child.

There was a significant association between having ever had sex and place of residence (urban, $p, <0.05=0.03$), educational level (higher education level, $p, <0.05=0.005$), sex of respondents (male, $p, <0.05=0.000$) and age of respondents (older respondents, $p, <0.05=0.000$).

Table 18 shows that condom use among respondents is significantly associated with their sex (male), place of residence (urban) and age (older).

Table 18- Associations between Socio-demographic characteristics and Condom use

Variable	Characteristics	% Condom use	P value
Sex	Male	77 (61%)	0.000*
	Female	49 (39%)	
Age (years)	(15)	4 (3 %)	0.000*
	(16)	21 (18%)	
	(17)	29 (25%)	
	(18)	29 (25%)	
	(19)	33 (29%)	
Place of residence	Rural	29 (25%)	0.01*
	Urban	87 (75%)	

Note- Significant association denoted with an * and the level of the p value used for significance is <0.05

4.9- Multivariate analysis of relationship between utilisation of SRH services and socio-demographic characteristics

Table 19 shows which variables remain independently associated with use of SRH services in a multivariate analysis. In a multivariate analysis there was an independently, significant relationships between utilisation of sexual and reproductive health services and educational level.

In a multivariate analysis, only sexual debut remained independently associated with use of SRHS. Those who had their first sexual experience at more than 18 years were more likely to have utilised SRHS than those who had their sexual debut younger (5.17). However the confidence intervals were wide (1.03-26.0).

Table 19- Multivariate analysis of relationship between utilisation of SRH services and socio-demographic characteristics

Variable	Characteristics	% Utilisation of SRHS	Crude OR (95% CI)	Adjusted OR (95% CI)
Sex	Male	72 (51%)	1	1
	Female	91 (40%)	0.65 (0.42-0.98)	0.82 (0.33-2.01)
Age (years)	(15)	9 (25%)	1	1
	(16)	47 (46%)	2.52 (1.08-5.88)	2.57 (0.17-39.62)
	(17)	38 (42%)	2.15 (0.91-5.09)	3.52 (0.24-52.70)*
	(18)	34 (45%)	2.49 (1.03-6.00)	3.47 (0.23-53.89)*
	(19)	31 (59%)	4.23 (1.67-10.73)	4.16 (0.25-70.41)*
Educational Level	Grade (8)	9 (41%)	1	1
	Grade (9)	59 (55%)	1.61 (0.63-4.13)	0.19 (0.00-10.59)
	Grade (10)	49 (41%)	0.91 (0.36-2.32)	0.05 (0.00-2.72)
	Grade (11)	18 (31%)	0.60 (0.22-1.67)	0.01 (0.00-0.63)
	Grade (12)	36 (54%)	1.55 (0.58-4.16)	0.04 (0.00-2.43)
Place of Residence	Rural	50 (45%)	1	1
	Urban	100 (47%)	1.07 (0.68-1.70)	1.18 (0.44-3.14)
Contraception Use	Yes	98 (62%)	1	1
	No	71 (36%)	0.35 (0.22-0.53)	0.38 (0.13-1.07)
Illegal Drug Use	Yes	31 (70%)	1	1
	No	134 (42%)	0.30 (0.15-0.60)	0.39 (0.13-1.14)
Ever had sex	Yes	99 (53%)	1	1
	No	64 (37%)	0.52 (0.34-0.79)	0.70 (0.06-8.60)
Age at first sex experience	(10-14)	18 (46%)	1	1
	(15-17)	53 (52%)	1.24 (0.60-2.60)	2.18 (0.70-6.84)
	(>18)	25 (61%)	1.82 (0.75-4.43)	5.17 (1.03-26.0)*
Number of sexual Partners	(1)	37 (49%)	1	1
	(2)	24 (57%)	1.40 (0.66-3.00)	1.30 (0.42-4.04)
	(3)	12 (44%)	0.84 (0.35-2.04)	1.54 (0.40-5.70)
	(>3)	33 (61%)	1.66 (0.82-3.36)	2.78 (0.74-10.42)
Ever had a child	Yes	21 (64%)	1	1
	No	132 (43%)	0.42 (0.20-0.89)	1.02(0.31-3.38)

*represents independently significant relationship after adjustment with other variables

Table 20 shows which variables associated with ever heard of SRH services in the bivariate analysis remained independently associated with SRH service use in a multivariate analysis. Only place of residence and educational level remained independently significantly associated with ever having heard of SRHS. Those living in an urban area were more likely than those in a rural area (OR 2.95, 95% CI 1.41-6.20) and those in Grade 11 were more likely to ever having heard of SRHS than those lower grades (OR 10.2, 95% CI 1.02-103.11). The C.I are rather wide than expected.

Table 20- Multivariate analysis of relationship between ever heard of SRH services and socio-demographic characteristics

Variable	Characteristics	Crude OR (95% CI)	Adjusted OR (95% CI)
Sex	Male	1	1
	Female	1.09 (0.59-2.03)	1.31 (0.62-2.78)
Age (years)	(15)	1	1
	(16)	0.61 (0.19-1.96)	0.46 (0.11-1.90)
	(17)	0.82 (0.25-2.72)	0.89 (0.21-3.81)
	(18)	1.46 (0.38-5.50)	1.87 (0.34-0.22)
	(19)	0.95 (0.25-3.63)	0.82 (0.16-4.35)
Educational Level	Grade (8)	1	1
	Grade (9)	2.53 (0.79-8.09)	7.55 (0.90-63.18)
	Grade (10)	2.37 (0.75-7.46)	7.30 (0.85-62.30)
	Grade (11)	3.93 (0.09-15.48)	10.2 (1.02-103.11)*
	Grade (12)	2.30 (0.67-7.95)	3.93 (0.38-40.88)
Place of Residence	Rural	1	1
	Urban	2.57 (1.34-4.91)	2.95 (1.41-6.20)*

*represents independently significant relationship after adjustment with other variables

4.10-Multivariate analysis of relationship between socio-demographic characteristics and utilisation of contraceptive methods

Table 21 shows which variables associated with use of contraception were independently associated in the multivariate analysis.

Table 21- Multivariate analysis of relationship between socio-demographic characteristics and utilisation of contraceptive methods

Variable	Features	% Ever used Contraceptives	Crude OR (95% CI)	Adjusted OR (95% CI)
Sex	Male	78 (55%)	1	1
	Female	78 (37%)	0.49 (0.32-0.75)	3.81 (1.38- 10.51)*
Age	(15)	6(16%)	1	1
	(16)	24(24%)	1.65 (0.62-4.44)	1.52 (0.25-9.07)
	(17)	40(46%)	4.44 (1.67-11.61)	5.80 (0.92-36.60)
	(18)	39(53%)	5.76 (2.15-15.43)	3.44 (0.57-20.93)
	(19)	38(75%)	15.1 (5.14-44.36)	3.60 (0.60-21.72)
Place of residence	Rural	38(36%)	1	1
	Urban	107(51%)	1.82 (1.13-2.95)	3.43 (1.38-8.54)*
Illegal drug use	Yes	30(68%)	1	1
	No	126(45%)	0.71 (0.23-2.16)	0.32 (0.16-6.14)
Ever had sex	Yes	140(76%)	1	1
	No	14(8%)	0.03 (0.02-0.06)	0.03 (0.00-0.32)
Age at first sex experience	(10-14)	26(68%)	1	1
	(15-17)	81(78%)	1.63 (0.71-3.71)	1.31 (0.37-4.60)
	(>18)	32(82%)	2.11 (0.73-6.13)	1.89 (0.27-13.36)
Number of sexual Partners	(1)	51(69%)	1	1
	(2)	30(73%)	1.23 (0.53-2.87)	2.92 (0.84-10.11)
	(3)	21(78%)	1.58 (0.56-4.43)	2.81 (0.67-11.88)
	(>3)	40(75%)	1.39 (0.63-3.08)	2.58 (0.71-9.34)
Ever had a child	Yes	28(82%)	1	1
	No	125(42%)	0.16 (0.06-0.39)	0.97 (0.23-4.09)

*represents independently significant relationship after adjustment with other variables

There were independently significant relationships between use of contraceptive methods and sex (females more likely than males) of respondents, place of residence (urban respondents more likely than rural respondents) ever having use contraception. However, CI's were wide.

Table 22 shows that it was more likely for respondents in urban areas (OR: 2.21; CI 95% (1.19 - 4.11) and older respondents (17 years and more) to report using condoms. Females (OR: 0.23; CI 95% (0.13 - 0.40) were less likely to report using condoms than males.

Table 22- Multivariate result of relationship between socio-demographic characteristics and utilisation of condom use

Variable	Features	Crude OR (95% CI)	Adjusted OR (95% CI)
Sex	Male	1	1
	Female	0.24 (0.15-0.38)	0.23 (0.13- 0.40)
Age	(15)	1	1
	(16)	2.05 (0.66-6.42)	2.14 (0.55-8.40)
	(17)	3.80 (1.23-11.68)	5.33 (1.40-20.44)*
	(18)	5.03 (1.62-15.62)	5.58 (1.45-21.54)*
	(19)	14.0 (4.33-45.44)	22.1 (5.35-91.52)*
Place of residence	Rural	1	1
	Urban	1.90 (1.15-3.13)	2.21 (1.19-4.11)*

*represents independently significant relationship after adjustment with other variables

Table 23-Multivariate analysis of ever had sex and socio-demographic characteristics

Variable	Characteristics	Crude OR (95% CI)	Adjusted OR (95% CI)
Sex	Male	1	1
	Female	0.25 (0.16-0.39)	0.21 (0.12-0.36)*
Age (years)	(15)	1	1
	(16)	1.30 (0.57-2.89)	2.04 (0.72-5.83)
	(17)	1.88 (0.83-4.28)	3.37 (1.17-9.76)*
	(18)	3.91 (1.69-9.08)	5.61 (1.83-17.21)*
	(19)	13.0 (4.63-36.48)	25.6 (6.63-98.76)*
Educational Level	Grade (8)	1	1
	Grade (9)	1.51 (0.59-3.90)	0.78 (0.12-4.95)
	Grade (10)	1.87 (0.73-4.80)	0.62 (0.10-3.95)
	Grade (11)	1.31 (0.48-3.63)	0.36 (0.05-2.51)
	Grade (12)	4.42 (1.65-12.24)	0.82 (0.11-6.02)
Place of Residence	Rural	1	1
	Urban	1.65 (1.04-2.62)	1.60 (0.91-2.80)

*represents independently significant relationship after adjustment with other variables

Sex (males) and age of respondents (17 years and more) were independently associated with reportedly having ever had sex in multivariate analysis. However, the confidence intervals are very wide.

4.11-Conclusion

The results show that a vast majority of respondents who had heard of sexual and reproductive health had heard it from school. Though doctors and nurses were the main health providers of services to adolescents, about two-fifths of the respondents preferred to be attended to by a doctor. Educational level (higher grade) was independently associated with utilisation of sexual and reproductive health services. Sex (females were more likely than males), and place of residence (urban respondents were more likely than rural respondents) to use contraception. It was more likely for urban and older respondents reported using condoms. However, it was less likely for females to report use condoms than males. Respondents who had never had sex were less likely to use contraception. Additionally, the results showed that most respondents were reportedly happy with the attitudes of health providers as well as the confidentiality and privacy when using services. The next chapter interprets the results of the study including situating this within the context of the results of other studies.

CHAPTER FIVE -DISCUSSION

5.1-Introduction

This chapter discusses key results from the study. It offers interpretation of the results and juxtaposes the results of the study with the literature. It comments on similarities and differences between the results from this study and other studies conducted within and outside sub-Saharan Africa. The discussion chapter is divided into different sections. The sections are as follows: reported adolescent sexual activity patterns; knowledge of adolescents of sexual and reproductive health components and the services rendered; use of SRH services; adolescents' views of the SRH services in the district: and reported contraceptive and condom use

It was found that just over than half of respondents reported having been sexually active. Having been sexually active was reportedly much more common among males than females. While 72% of males reported having been sexually active only 32% of female were reportedly sexually active. This is a huge discrepancy, which will be discussed below. Although most respondents had heard of SRH (87%), their knowledge on its components was poor. Less than half of respondents knew most of the SRH service components. Females were much more likely to know about family planning, reproductive and sexual infection and HIV testing and reproductive healthcare services than males. Males were more likely to know about medical male circumcision services than females, which is to be expected. While this is in line with regular trends, clearly more needs to be done to improve adolescent males' knowledge of family planning. Sexual violence is more commonly experienced by females than males, however, a higher percentage of males (56%) knew about sexual violence prevention services than females (44%). While it is commendable that most males knew of these services, female adolescents' knowledge of sexual violence prevention services needs to be improved.

The proportion of respondents who had utilised SRH services was low (46%) and most had only used SRH service once. Clinics were the most commonly used health facility for SRH visits. Given that Namibia's policy is for services to be provided in the first instance at primary care level this is expected.

Contraceptive and condom use, even among sexually active respondents was low. This is discussed below.

Just over half of respondents who had used SRHs found the attitudes of health providers to be positive and mentioned that confidentiality and privacy was assured. This could be much improved. Despite this, most respondents who used SRHS reported that they would recommend the SRH services offered in the district to their friends. Although not probed for, it is possible that this may also indicate that although satisfaction levels with healthcare providers was sub-optimal, respondents did not see any other alternative to using the services.

5.2-Sexual activity

The results show that 51% of respondents from this study had ever had sex. This is the same as a quantitative study conducted in eight regions in Namibia among school attending adolescents aged 15-19 years which additionally showed that 51% respondents who had ever had sex were female (Phakati et al., 2015). This relatively high percentage calls for re-enforcement of health strategies geared towards health promotion of safe sex especially among adolescents, particularly when still at school.

The results show 12% and 29% of females and males respectively, had reported having had sex before the age of 15 years. This is higher than that reported in a United Nations Population Fund (UNFPA) study of Namibian adolescents (both school and non-school attending) which showed those who reportedly had had sex before age 15 was 7% and 19% for females and males, respectively (Hervish and Clifton, 2017). However, the research by Peltzer (2010) on early sexual debut among adolescents (both school and non-school attending) from eight African countries found slightly higher percentages to my study for females and males who had reportedly had sex before age 15 i.e. 16% and 38% respectively (Peltzer, 2010). The mean age at first sex was, however, like elsewhere in the world so it does not appear that Namibian adolescents are having earlier aged sex than elsewhere (Wellings et al, 2006). These variation from my study results could be due use of different populations i.e. both school and non-school attending as well as country differences.

By sex, much fewer females (38%) than males (72%) reported ever having had sex. This may be that indeed more males had sex than females of a similar age group. On the other hand, this reporting may be influenced by gender norms as more dominant male societies find it more acceptable for males to report having sex than females. Hence it is possible that male reported sexual activity is over reported and female's is under reported.

There was an independent significant relationship between respondents who had ever had sex and increasing age. This is expected given the mean age at first sex. Also, only sexual debut above 18 years remains independently significant but the C.I is so wide that it is unlikely that such true association would be true.

Also, sex (males) and age of respondents (17 years and more) were independently associated with reportedly having ever had sex in multivariate analysis. However, the confidence intervals are very wide and may not reflect a true association.

The Global School-Based Student Health Survey of Namibia of adolescents aged 13-17 conducted in 2013 found 37% of female respondents and 58% of male respondents reported ever having had sex. It however did not collect data on the mean age at first sex. In the 2013 Demographic and Health Survey of Namibia, 55% and 57 % of females and males aged 15-19 years (both school and non-school going) who were interviewed reported they had ever had sex before respectively. However, the mean age and median age at first sex was not available (Ndishishi, 2014). These two study results are consistent with the report percentage from this study for females but not with the percentage for males. The reasons for this difference are unclear. This may be a difference in reporting by males or a difference in methodology.

The findings from this study showed that males and urban respondents were more likely to report having ever had sex. These results are consistent with research conducted in the capital city of Namibia, Windhoek which found that 18.4 % of adolescent respondents were reportedly sexually active with more males (37%) reportedly sexually active than females (13%) (MOHSS, 2015). The reason for this difference is probably like that suggested for this study.

The numbers of sexual partners a respondent reportedly had ever had, increased with age. This makes logical sense because as age increases there is more opportunity, if sexually active, to have had more partners. These results are consistent with Phakati et al (2015) review of the demographic and health survey (2006) with Namibian adolescents aged 15-19 years. In Phakati et al's (2015) review the average number of sexual partners reported also increased with age and was influenced by sex (i.e. males and females have a mean of 3.2 and 1.7 sexual partners). The reasons are likely to be similar to this study. Phakati et al (2015) also mention that while 3% of females (15-19) reportedly had two or more sexual partners, 17% of males had two or more sexual partners (Phakati et al., 2015). It is possible that there was under reporting of the number of sexual partners overall. However, the discrepancy in reported number of partners for males and the females with those who reported ever having had sex, may be explained by gender related norms in which dominant masculinity is socially constructed in Namibia. Males having multiple sexual partners may be seen as virile and 'manly' (Brown et al., 2005). Hence the variance between male and female could be due to reporting gender biases, with it being more acceptable socially for males to report many partners, whereas in females this is viewed as indicating loose morals (Doyle et al., 2012).

5.2.1-Ever had a child

Seventeen percent of participants who have ever had sex reported having had a child. This needs to be addressed especially considering that this study was among school going adolescents. The Namibian Demographic and Health Survey (2013) found that there was a 4% increase in teenage pregnancy and that teenage mothers' percentage increase nationally to 19% from 2006/7 to 2013. This overall percentage of teenagers pregnant or mothers is similar to the study's proportion of 17 % of sexually experienced female respondents who had a child. Though relatively small in proportion, it still represents a problem for the Namibian government in successfully addressing teenage pregnancy. It is likely that a large number of teenage mothers were not captured in this study because they are now school dropouts, despite Namibian laws that discourage discontinuing school because of pregnancy or becoming a teenage mother. Studies have shown that educational policies which prohibit pregnant girls from continued school attendance negatively affect attainment of their educational dreams and sexual health

knowledge. Yet, some schools in LMICs punish adolescents found with condoms. This promotes risky sexual behaviours and puts them at risk of pregnancy and STI (Sommer and Mmari, 2015). In Namibia, having a child while in secondary school is not prohibited. This is a positive attempt by government to help girls reach their full educational potential, even if they become pregnant or have a child (Hubbard, 2009). However, this may or may not be properly enforced in its implementation by schools¹. In addition, there are likely to be social and practical pressures for girls to leave school when noticeably pregnant or when they become mothers.

5.3-Knowledge of Sexual and Reproductive Health and Services (SRHS)

The next section interprets the result for the knowledge base of respondents as regard sexual and reproductive health services in the Omaruru District, Erongo. Urban adolescents being more likely to have heard of SRHS than rural adolescents is not unexpected but clearly reinforces the need to reach out to rural adolescent with more information of the content and availability of SRHS.

5.3.1-SRH knowledge sources

Most adolescents in the study (68%) had heard about SRH from School. Other SRH sources, which included the media (radio, newspaper, television and Internet), parents (29.3%), friends (24.4%) and from the health facilities as well as health professionals, lagged far behind. A Nigerian study of in-school adolescents found that teachers (56%) and parents (66%) were the most common sources of information on sexual health (Nwagwu, 2007). However, in this current study, it is unclear whether with respect all sources of SRH knowledge, teachers were the key source of information in the school environment or whether this was acquired from peers or other school sources. As, this information is provided as part of the Life Skills curriculum in schools in Namibia this result is unsurprising and it is encouraging to know that the Namibian secondary school system, which is supposed to teach sexual and reproductive health as part of the curriculum has achieved some gains in terms of students having heard about SRH from school in the Omaruru District. However, it appears the influence of the radio, television, and the Internet as sources of information is insignificant compared to the school based SRH information. It would be worth enquiring from school going youth from where they would most like to receive information on SRH. Programmes could then focus on the promotion of SRH to

¹ Personal communication with the PHC Supervisor of the Omaruru District.

students additionally from these sought-after sources. The barriers to parents as sources of SRH information should be further investigated, so that parents may be encouraged to talk to their children about sexuality from an appropriate age. For this to be effective, however, parents may need better SRH knowledge and possible discomfort in discussing such topics with their children would need to be overcome (Hindin et al., 2009).

This study excluded non-school attending adolescents. Most school-going respondents receiving their information about SRH from school, could indicate a gap that needs to be filled for those not in school. Both school and non-school going adolescents have the right in Namibian law, to SRH knowledge and implementation of this right is important.

Only place of residence and educational level remained independently significantly associated with ever having heard of SRHS. Those living in an urban area were more likely than those in a rural area and those in Grade 11 were more likely to ever having heard of SRHS than those lower grades. The association between educational level and having ever heard of SRH especially for grade 11 respondents had a rather wide C.I. This could be explained by the relatively small study sample size of 389 and to a lesser extent the variation in student numbers from different grades, hence these findings might not precisely estimate the population characteristics. A larger sample size would have led to a little error margin.

5.3.2-SRH knowledge-Components

The results show knowledge of SRH was below 40% for most of the different SRH components. While study participants had heard about SRH in school, this indicates a need to improve the content of SRH knowledge transfer from teachers and others in the school environment to adolescents. According to Mufune et al (2014), sex education in schools in Namibia is inadequate. Mufune et al (2014) suggests that although all schools currently teach sexual and reproductive health as part of the Life Skills subject, the in-depth knowledge base of students is low. They argue that most teachers are not trained to adequately transfer this knowledge to students. Also, no set examinations are written on sexual and reproductive health. These factors may contribute to a lack of interest from both teachers and students alike in increasing their more detailed knowledge of SRH (Mufune et al., 2014). A comprehensive examination of the Life

Skills curriculum as well as revisiting teachers training on sexual and reproductive health topics is needed. In addition, as indicated above, effective, and preferred adolescent sources for gaining SRH knowledge need to be considered.

5.4-Utilisation of Sexual and Reproductive Health and Services

The results show that only 46% of respondents had ever utilised SRH services in the district. While some services, such as contraception and ante-natal care would only be used for those needing these services when sexually active or pregnancy occurred, the percentages of overall use of SRH services is low and discouraging. A qualitative study from Uganda on adolescents and their SRH needs similarly found that only half of respondents had ever visited SRH health facilities. This was linked to the inadequacy of information on the availability of these services and adolescents' fear of seeking such services concurrently with older community members. In addition, most boys in the Ugandan study reported that as most health providers were for females and they were not comfortable receiving care from them (Atuyambe et al., 2015).

Few participants had used SRH services more than once. This needs further exploration to ascertain if it this may be due to the inadequate knowledge of the different services or whether there no need to use SRH services. Lack of knowledge of specific SRHS and unavailability of services were noted by Newton et al. (2016) in their systematic review of barriers in access to STI care by adolescents in LMICs (Newton-Levinson et al., 2016) and more be a reason for this study finding.

Clinics (20% of respondents) and district hospitals (14% of respondents) were the two most common places where respondents had received sexual and reproductive health services. It is not possible to speculate whether respondents' low utilisation of outreach services (2%) and community services (1%) was due to health provider understaffing or poor promotion of such facilities as portals for the delivery of SRHS. This is an area needing further investigation.

After multivariate analysis utilisation of SRHS was remained independently associated only with age of sexual debut 18 years or older. It appears that use is therefore likely to only occur after

adolescents become sexually active. While there may be more of a need for some SRHS after sexual debut, those not yet sexually active should be encouraged to use the more general SRHS.

The literature generally finds that education and SRH are interrelated. A healthy adolescent can more comfortably attend school and then receive more education on how to be general healthy (which includes SRH) (Sommer and Mmari, 2015). This has been shown in low and middle income countries where the increase in school participation and grade attainment especially for adolescent girls have resulted in them being more likely to use contraception, as well as delay their first pregnancy (Gupta and Mahy, 2003). Adolescents from the poorest households need increased school participation to avoid their sexual and reproductive health choices being less (Sommer and Mmari, 2015)

Binu et al's (2018) study on adolescent utilisation of SRH services concurred with the results from this study (Binu et al., 2018). This finding was expected as those who have had sex would probably seek more knowledge on and use SRHS like HIV testing, treatment of STIs and family planning methods. The results confirmed that those who had ever had sex knew the components of SRHS better than those who had not had sex. In a study involving adolescents in Amhara Region, Ethiopia adolescents who had been sexually active were more likely to have used SRHS (Negash et al., 2016). While not identical to this study result this is in keeping with this study's result that indicate greater use of SRHS after sexual debut.

5.5-Contraception Use

There was an independent significant relationship between the following variables: reportedly having ever had sex, sex of respondents as well as place of residence and contraception use. However, CI's were wide and so it is unlikely that such true association would be true.

Urban dwelling respondents were more likely to use contraception compared to rural dwellers and this applied to condom use too. A possibly explanation for this is that in the study, it was more likely for urban dwellers to have ever had sex and hence the possibly need for contraception and specifically condoms for prevention of unplanned pregnancies as well as STIs. On the other hand, a study of contraceptive use among young women in Lesotho aged 15-24 also

showed that respondents who lived in urban areas were less than half likely to use contraception methods than those in rural areas (Mabele, 2011).

An overview of contraceptive use research among adolescents in developing countries also concurred with our study finding. It found that contraceptive use was higher among those who were sexually active (Blanc and Way, 1998). This makes sense, as there would be no need to use contraception if not sexually active. Nevertheless, it is important to continue with provision and promotion of SRHS and contraception especially to younger adolescents to protect against STIs and teenage pregnancy. Respondents who reported contraceptive use reported using condoms as the most common method. The study did not collect specific data on whether condoms used were either female or male. However, most respondents who reported using condoms were males. This finding is expected as if these were male condoms, then males are those who use them. This likely also indicates greater male power in sexual negotiations over condom use.

Of those who had utilized SRHS, 44% had used contraception. However, the Demographic and Health Survey of Namibia, 2013, found that the percentage of contraceptive use among adolescents (both school and non-school attending) aged 15-19 was much lower at 24%. The possible reason for our study finding having a higher percentage than the national average could be because respondents were school attending adolescents and hence could have more knowledge on contraception and possibly translate this knowledge to use of the methods.

For respondents who had ever had sex, a larger percentage (77%) had previously used condoms. Disaggregated by sex, respondents who had had two or more sexual partners, showed that 83% and 46% of males and females respectively had ever used condoms. A report from Phakati et al. (2015) also found lower use among females but with a much smaller difference between males and females (84% and 77% of males and females, respectively), reporting having used condoms (Phakati et al., 2015). While it is encouraging that this study's respondents who had more than one partner were more likely to use condoms, use is low among females. Once again this is likely to be attributable to the condoms used being male condoms that involves male direct use and the lower sexual negotiating power of females.

Despite the promising findings on male use of condoms, this study did not collect information on consistent condom use, which is ultimately most important to prevent STI including HIV and pregnancy.

Further exploration on why usage of hormonal contraceptive implants and hormonal injectable contraceptives were low among those reporting having had sex is needed in Namibia. This could help to improve the general usage of contraceptive methods by adolescents. Cover et al. (2017) in their study on contraception choices by adolescents in a town in Uganda found that some adolescents avoided injectables as a contraceptive method due to it being linked to perceived later infertility problems (Cover et al., 2017). Nevertheless, it is encouraging that condoms are most commonly used as a contraceptive method provided, they are used consistently during sex. If condoms are used correctly and consistently, although they are only slightly less effective in preventing pregnancy, is the only method for preventing both STI and pregnancy. Adolescents may find condoms as a method most convenient as they may not have sex frequently and therefore may not have a need for a longer-term method (Weisman et al., 1991).

Use of family planning was higher in females (13%) than males (5%). Also, 19 % of males reported using a male circumcision service as a SRHS. This may have been for information rather than the procedure as this was not specifically asked. The reasons for these may be biological as only males can undergo medical male circumcision (Reed et al, 2013). Likewise, since females by virtue of their biological make-up tend to have more concerns not necessarily sexually related i.e. menstruation and vaginal discharges not due to STIs hence their increase use of family planning and other SRHS. Further, females due to the personal consequences of pregnancy and gender norms, tend to take more responsibility for contraception (Brown, 2015).

5.6-Reported illegal drug use

The study results show that 17% of male and 8% of female respondents reported having used illegal drugs in the previous three months. This result could be due in part that dominant norms of masculinity makes males more likely to engage in riskier behaviour than females. This study did not collect detailed data on the type of illegal drug use. Several studies have found that illegal drug use negatively affects the sexual and reproductive health of adolescents (Smith et al., 2019,

Ahmad et al., 2014, Yusoff et al., 2014, Odejide, 2006). Chibaya (2016) showed that Namibian secondary school adolescents who were involved in illegal drug use were at a higher risk of engaging in riskier sexual behaviours, including risk of teenage pregnancy and STIs (Chibaya, 2016). The Report of the 2013 Global School-based Student Health Survey of Namibia found that among male and female students, the percentage of marijuana use once or more times during their lifetime were 10% and 4% respectively. However, as this is reported use, respondents may be reluctant to admit use and so the data in both studies may not be accurate.

5.7- Responses of respondents on Sexual and Reproductive Health Services offered in Omaruru District.

Of the total study population, 58% of participants (of which 56% were males and 52% females) mentioned that they felt their confidentiality and privacy as regards SRHs was assured. The finding from the current study varies from a qualitative study, using focus group discussions, conducted in Uganda where most participants mentioned lack of confidentiality as the main threat to the adolescent friendliness of health facilities (Kipp et al., 2007). However, as a qualitative study is not generalizable but aimed at in depth insights, this study and the Ugandan study are not comparable.

Three-quarters of respondents who had used SRHS mentioned that health professionals were friendly. In a qualitative study of Ugandan adolescents, Atuyambe et al. (2015) found that the majority of respondents who had utilised SRHS mentioned that the overall quality of service (including privacy provision and friendliness of health providers) was poor and hence they were not willing to go back to health facilities (Atuyambe et al., 2015). The difference compared with this study may be due to country differences in policy and programme management and differences in methodology. It is also possible that adolescents in this study gave more socially desirable responses with respect to quality of care in SRH services. Where respondents viewed health services as lacking privacy, this could be due the absence of specific spaces allocated for adolescent sexual and reproductive health in the district. A lack of space for services was found in a study in Otjozondjupa Region, Namibia in which 90% of health facilities did not have dedicated spaces for adolescent health services (Muyenga et al., 2017). This is similar to a South

African study on youth friendly services in a rural setting that found that lack of specific space for the youth health services was a barrier to service access (Geary et al., 2014).

While a small minority of participants (15 %) reported that the attitudes of health professionals were unsupportive and unwelcoming, almost half of participants disagreed with this. By sex, 14% and 16% of those who were dissatisfied with the attitudes of health professionals were male and females respectively, showing no significant differences. Studies from Ghana, Malawi and Uganda of adolescents aged 12-19 also found that 10-18% and 5-11% of females and males respectively had expressed their dissatisfaction with the attitude of health professionals (Biddlecom et al., 2007). Though the dissatisfied respondents were relatively few, their displeasure could trickle down to their acquaintances and negatively affect uptake of SRHS. It also may be that respondents have no alternative comparisons to make. Attitudes of health providers could be improved through regularly staff training.

More than 50% of participants had never used SRH services. This likely explains the fact that about 36% of them expressed no views about health professional attitudes. A positive aspect of the results is that nearly two-thirds of respondents said they would recommend the SRH services provided in the Omaruru District to a friend. Additionally, more than two-thirds of respondents reported that the services are friendly to both males and females alike. Though not conclusive, this could have been because respondents' needs were adequately met with respect to SRH or that they did not have enough experiences of SRH services.

The results show that just over half of participants had no preference for whether the SRH health services provider was male or female. However, where there was a preference, more females preferred a female provider than males preferring male providers. A qualitative study conducted in Nepal and Ethiopia found that young participants preferred providers of the same gender (and also younger providers) (Regmi et al., 2010, Molla et al., 2009). A qualitative study in Uganda found that most adolescent boys preferred not to be attended to by female health providers. They perceived that female providers care more about females than male adolescents (Atuyambe et al., 2015).

5.8-Limitations

This is a cross-sectional study, which means it established temporal relationships and strength of associations between the variables measured. However, it cannot provide causal relationships between the demographic features of respondents, their knowledge of sexual and reproductive health and their views on barriers as well as facilitators of the uptake of such services.

Participants as adolescents may feel more vulnerable and therefore unwilling to participate in the study or if participating, disclose their true responses to some of the sensitive aspects of the questionnaire. To ameliorate this, the researcher sought to establish a good rapport with participants, without applying undue pressure, so that they were more likely to avail themselves for the study. The participants were also assured of the complete confidentiality of their individual responses and the self-administration of the questionnaire was aimed at enhancing this. Some questions were not asked in relation to each other such as for example, whether contraception was used when having first sex. Hence the relationship between the two could not be determined, neither could the use of illegal drugs. The researcher did not include adolescents as participants if they were in private or home schools or those who were not present at school on the day of the survey. Hence, the perspectives of the adolescent participants are restricted to those in public schools present during the survey. A positive feature of this study is the inclusion of boys/young men in addition to girls/young women. Moreover, adolescents below 18 years without parental or caregivers' informed consent were not allowed to participate in the study. It is unknown whether they were different to those who did receive permission to participate. In addition, some of the responses to questions may not be completely reliable due to socially desirable responses to questions. Some of the results from the study could also be affected by recall bias. The study nevertheless provides valuable representative information on urban and rural school-going adolescent views and experiences of SRH and SRHS in a region of Namibia. Also, considering the possibility of precision errors from the sample size of 389, inferences made from the multivariate analysis are more exploratory and more meaningful associations have to be explored further in a study with a larger sample size

5.9-Generalisability

This study can be generalised to a study population of secondary school-going adolescents in urban/peri-urban and rural areas, within the age range 15-19 years from different regions of Namibia. This is because sexual and reproductive health services remain relatively standardised throughout all regions of Namibia. Moreover, the adolescent population eligible for study participation in Omaruru District have a similar socio-demographic profile to adolescents in other districts/regions in the country. This means that adolescents were exposed to similar experiences in different areas. However, the generalisability of the results of this study may be limited if the data is obtained during a period when possible changes in the delivery of SRH services occurs in other districts or regions of the country (Polit and Beck, 2010, Onwuegbuzie, 2000).

5.10-Conclusion

The discussion chapter focused on interpreting the meaning of the results as well as comparing it to other studies which show commonality or difference. The final short chapter will draw brief conclusions and make recommendations.

CHAPTER SIX-CONCLUSIONS AND RECOMMENDATIONS

6.1-Conclusions

As already noted, the study showed that respondents reported largely finding health providers to be welcoming, have good attitudes and assured them of their privacy and confidentiality. Most of them reported that they would recommend these services to their friends. Specifically, most respondents who had utilised SRHS reported finding the services friendly to both sexes. This study has also shown that there is the need to promote other sources of information for sexual and reproductive health aside from teachers in school. It additionally found other areas of SRH knowledge and utilisation that could improve for school-going adolescents.

6.2-Recommendations

The Society for Adolescent Health and Medicine recommends that 'Adolescents should have universal access to comprehensive sexual and reproductive health information and services that are evidence based, confidential, developmentally appropriate, and culturally sensitive` (SAHM, 2014p491). This means that there should be no vacuum left as regards the needs of adolescents especially in sub-Saharan Africa where norms tend to be patriarchal, with men having more control than women (Madiba and Ngwenya, 2017, Ssenyonjo, 2007). In this context, women have less control over their sexuality and use of sexual and reproductive health services. Though correcting the untoward effects of male dominance on SRH is a herculean task, it is a move that is urgently needed. Addressing this issue requires the introduction of comprehensive sexual education at early stages of both formal and informal education. This would reduce the influence of and thereafter, female vulnerability to the current patriarchal based sexual health information system. An important aspect of SRH is that school and community-based sexuality education programmes can delay and decrease the incidence of sexual intercourse. It may also decrease sexual partner numbers, adolescent pregnancy, and sexually transmitted infections. If effectively implemented, they could promote the use of condoms and other contraception methods (SAHM, 2014p491).

The recommendations are geared towards an improvement in the knowledge base of as well as increased utilisation of sexual and reproductive health services by adolescents. These are based

on the study findings showing that knowledge of different components of SRH among respondents including the utilisation of SRH services among school-going adolescents in the district were low. The recommendations are that:

- There is the need for promotion of other sources of information for sexual and reproductive health for adolescents.
- While it is positive that among those using contraception, condoms were most commonly used, the proportion who are sexually active using condoms needs to be increased and consistency of use needs further exploration.
- Further exploration is needed of why usage of hormonal contraceptive implants and hormonal injectable contraceptives were low. These are very reliable methods to prevent pregnancy and could be promoted better if acceptable to adolescents and if the reasons for non-use when sexually active, are understood.
- An in-depth exploration through a qualitative study is needed to understand why approximately 50% of respondents had not utilised SRHS before. If this is due to access or other problems rather than a lack of need, this should be identified. This would help improve adolescent access, availability and use of the SRHS.

These few recommendations based on the study results, can inform policy, programmes and services in SRH for adolescents in Namibia.

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APPENDICES

Appendix 1-Consent, Assents and Questionnaire



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel : +27 21-959 2809, Fax : 27 21-959 2872

E-mail : soph-comm@uwc.ac.za

INFORMATION SHEET FOR PARTICIPANTS

Project Title: An investigation of the knowledge and attitudes of adolescents towards the sexual and reproductive health services in the Omaruru district, Namibia

What is this study about?

This is a pilot questionnaire of a research project being conducted by Daniel Kweku Adabo Mensah at the University of the Western Cape. We are inviting you to participate in this process because you are an adolescent and research work borders on adolescent sexual and reproductive health. The overall aim of this study is to investigate the sexual and reproductive health needs of older adolescents as well as their awareness, utilization of and satisfaction with the available sexual and reproductive health services in the Omaruru district, Namibia

What will I be asked to do if I agree to participate?

You will be asked to provide useful information on adolescent reproductive health. You qualify for participation if you are between the ages of thirteen and nineteen. You will be asked to provide information about what your views on adolescent reproductive health services in the Omaruru district. You will be required to complete a questionnaire on your own privately after school, which will take approximately 30 – 40 minutes. A researcher will be around to answer any questions you have. If you are under 18 years, we will need to ask your parent/caregiver first for permission for you to participate in the research. We will only

be able to allow you to participate if they agree. Examples of questions in the questionnaire are; your name, age, level of education and aspects of your sexual history if any as well as your knowledge of sexual reproductive health services available in Omaruru district.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, the surveys are anonymous and will not contain information that may personally identify you.

To ensure your confidentiality, pilot questionnaires will be stored in locked filing cabinets and storage areas and password-protected computer files will be used. If you agree to take part in the research you will need to sign a written consent form, which we will keep separate from your questionnaire information. If we write a report or article about this pilot process, your identity will be protected.

What are the risks of this research?

There may be some risks from participating in the piloting of this questionnaire for the research study. All human interactions and talking about self or others carry some amount of risks. This is especially so when you are younger than 18 years. We will nevertheless minimise such risks and act promptly to so that a researcher on site can assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention. If you tell us anything that shows that you are being harmed in any way by someone, by law we need to report this, but will tell you before doing so.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about adolescent sexual and reproductive health services delivery. We hope that, in the future, other people might benefit from this study through improved understanding of how best these services can be delivered.

Your participation in this process is completely voluntary. You may choose not to take part at all. If you decide to participate in the piloting of this questionnaire, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalised or lose any benefits to which you otherwise qualify. You can also not answer any questions you feel uncomfortable with. Participation in this process is not a course requirement at your school.

What if I have questions?

This process is being conducted by Daniel Kweku Adabo Mensah of the School of Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Daniel Kweku Adabo Mensah, Omaururu District Hospital, **Box 2021, 00264-817653891, dkamensah@hotmail.com.**

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to this pilot process, please contact:

Prof Uta Lehmann

School of Public Health

Head of Department

University of the Western Cape

Private Bag X17

Bellville 7535

soph-comm@uwc.ac.za

Prof Anthea Rhoda

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Research Ethics Committee. (REFERENCE NUMBER: BM19/1/25)

BIOMEDICAL RESEARCH ETHICS ADMINISTRATION

Research Office

New Arts Building, C-Block, Top Floor, Room 28

University of the Western Cape, Private Bag X17, Bellville 7535



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Tel : +27 21-959 2809, Fax : 27 21-959 2872

E-mail : soph-comm@uwc.ac.za

ASSENT FORM FOR PARTICIPANTS

Title of Research Project: An investigation of the knowledge and attitudes of adolescents towards the sexual and reproductive health services in the Omaruru district, Namibia

The piloting of the questionnaire has been described to me in language that I understand. My questions about the process have been answered. I understand what my participation will involve, and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from this process at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name.....

Participant's signature.....

Date.....



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E-mail : soph-comm@uwc.ac.za

CONSENT FORM FOR PARENTS/CAREGIVERS

Title of Research Project: An investigation of the knowledge and attitudes of adolescents towards the sexual and reproductive health services in the Omaruru district, Namibia

The process of piloting of the questionnaire has been described to me in language that I understand. My questions about the process have been answered. I understand what the participation of my child will involve, and I agree to his/her participation of my own choice and free will. I understand that his/her identity will not be disclosed to anyone. I understand that he/she may withdraw from this process at any time without giving a reason and without fear of negative consequences or loss of benefits.

Parents'/Caregivers' name.....

Parent's/Caregivers' signature.....

Date.....



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INFORMATION SHEET FOR PARENTS/CAREGIVERS

Project Title: An investigation of the knowledge and attitudes of adolescents towards the sexual and reproductive health services in the Omaruru district, Namibia

What is this study about?

This process of piloting of the questionnaire for a research project being conducted by Daniel Kweku Adabo Mensah at the University of the Western Cape. We are inviting your child to participate in this process because he/she is an adolescent and research work borders on adolescent sexual and reproductive health. The overall aim of this study is to investigate the sexual and reproductive health needs of older adolescents as well as their awareness, utilization of and satisfaction with the available sexual and reproductive health services in the Omaruru district, Namibia

What will your child be asked to do if you agree for him/her to participate?

Your child will be asked to provide useful information on adolescent reproductive health. Your child qualifies for participation if he/she is between the ages of fifteen and nineteen. Your child will be asked to provide information about what his/her views on adolescent reproductive health services in the Omaruru district. Your child will be required to complete a questionnaire on his/her own privately after school, which will take approximately 30 – 40 minutes. A researcher will be around to answer any questions your child has. If your child is under 18 years you will need to give your consent first for permission for him/her to participate in the piloting of this questionnaire. We will only be able to allow your child to

participate if you agree. Examples of questions in the questionnaire are; your child's age, level of education and aspects of his/her sexual history if any as well as his/her knowledge of sexual reproductive health services available in Omaruru district.

Would your child participation in this study be kept confidential?

The researchers undertake to protect your child's identity and the nature of his/her contribution. To ensure your child's anonymity, the surveys are anonymous and will not contain information that may personally identify your child.

To ensure your child's confidentiality, questionnaires will be stored in locked filing cabinets and storage areas and password-protected computer files will be used. If you agree that your child takes part in the research you will need to sign a written consent form, which we will keep separate from the questionnaire information.

If we write a report or article about this process, your child's identity will be protected.

What are the risks of this research?

There may be some risks from participating in the piloting of this questionnaire. All human interactions and talking about self or others carry some amount of risks. This is especially so when your child is younger than 18 years. We will nevertheless minimise such risks and act promptly to so that a researcher on site can assist your child if he/she experiences any discomfort, psychological or otherwise during the process of his/her participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention. If your child tells us anything that shows that he/she is being harmed in any way by someone, by law we need to report this, but will tell you before doing so.

What are the benefits of this research?

This process is not designed to help your child personally, but the results may help the investigator learn more about adolescent sexual and reproductive health services delivery. We hope that, in the future, other people might benefit from this study through improved understanding of how best these services can be delivered.

Your child's participation in this pilot process is completely voluntary. You may choose that your child does not to take part at all. If your child decides to participate in this pilot process,

your child may stop participating at any time. If your child decides not to participate in this pilot process or if he/she stop participating at any time, he/she will not be penalised or lose any benefits to which he/she otherwise qualify. Your child can also not answer any questions he/she feels uncomfortable with. Participation in this pilot process is not a course requirement at your child's school.

What if I have questions?

The piloting of this questionnaire is being conducted by Daniel Kweku Adabo Mensah of the School of Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Daniel Kweku Adabo Mensah, Omaururu District Hospital, **Box 2021, 00264-817653891, dkamensah@hotmail.com.**

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the process, please contact:

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E-mail : soph-comm@uwc.ac.za

Project Title: An investigation of the knowledge and attitudes of adolescents towards the sexual and reproductive health services in the Omaruru district, Namibia

QUESTIONNAIRE

- My name is Daniel Kweku Adabo Mensah and I am completing a research study for my thesis as a Masters+ in Public Health student at the University of the Western Cape, Cape Town, South Africa.
 - The purpose of this research is to identify students' view on adolescent friendly sexual and reproductive health services.
 - Your responses will be confidential. Do NOT write your name on this questionnaire, so your responses will never be linked to you personally. Only the researchers involved in this study will see your responses. You will need about 20-30 minutes to complete this questionnaire.
 - Your participation in this study is voluntary. If you do not want to participate, please return the questionnaire to the researcher. You also do not have to answer any question that makes you uncomfortable.
 - Please return the completed questionnaire to me or the research assistant when you are done filling it. Thank you for your cooperation
1. Sex: Male Female
 2. Age: 15-17 18-19
 3. Level of education-Grade: _____

4. Place of living: Rural Urban if urban is in location Town
5. Have you ever heard of **Sexual and Reproductive Health (SRH)**? Yes No
- If yes, can explain what you have heard or know _____

If yes from where

School Health facility Television Radio Newspaper Internet

from friends from parent/guardian health professional Others _____ (tick as many as apply)

6. Have you ever used SRH services? Yes No

7. If response to question 22 was YES,

How many times have you visited a health facility for SRH services? (Circle appropriate response)

First time More than once More than three times others (specify)

8. Where did you seek the service from? District hospital Clinic Health Centre Outreach Team Community Others _____

9. Which type of provider would you like to see for SRH services?

Doctor Nurse/midwife Counsellor Peer educator other (specify) _____ . Don't know.

10. Which provider have you seen before?

Doctor Nurse/midwife Counsellor Peer educator other (specify) _____ . Don't know

11. What SRH service was used? You can tick more than one

<input type="checkbox"/>	Contraceptive counselling or collection	<input type="checkbox"/>	Sex education
<input type="checkbox"/>	STDs screening and treatment	<input type="checkbox"/>	Peer Counselling
<input type="checkbox"/>	HIV Counselling and testing	<input type="checkbox"/>	Ante-natal Care

12. Have you ever used contraception before? Yes No

If yes, which type did you use?

Injectable Contraceptive e.g. depo or nusterate	Tablet contraceptive (the pill)
Implant (inserted under the skin of upper arm)	Condoms

What are your views on the Sexual and Reproductive Health Services Offered in Omaruru District?

Response Statement	Yes	No	Do not know
Adolescents are involved in design and monitoring of the services			
Adolescents can access services without an appointment			
Adolescents don't wait for long to receive SRH services			
Adequate time is available for each visit			
Adolescents do not pay for these services			
Publicity materials e.g. Posters and notice boards to inform and reassure me about the services			
The services are friendly to both male and female adolescents			
I consider the services as a "one stop shop" for any medical problem I have			
Adolescents can be referred for more specialised care if needed			
It works with adolescent support groups			
Trained adolescents are available to educate me on sexual and reproductive health			
Teaching aids e.g. dolls, are used inform adolescents			
I am assured of privacy and confidentiality			

The attitude of health professionals is supportive and welcoming towards giving SRH services to adolescents			
I will recommend these services to a friend			
Who will you prefer as a provider of SRH services	Male	Female	Anyone

13. Have you used any illegal drugs in the past three months? Yes No

14. Have you ever had a sex before? Yes No

If yes at what age did you have this first sexual experience?

10-14 years 15-17 years 18 years and above

15. How many sexual partners have you had ever had? 1 2 3 more than 3

16. Have you ever had a child? Yes No

Appendix 2: Ethics Approval: University of the Western Cape



OFFICE OF THE DIRECTOR: RESEARCH RESEARCH AND INNOVATION DIVISION

Private Bag X17, Bellville 7535
South Africa
T: +27 21 959 4111/2948
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20 March 2019

Mr DKA Mensah
School of Public Health
Faculty of Community and Health Science

Ethics Reference Number: BM19/1/25

Project Title: An investigation of the knowledge and attitudes of adolescents towards the sexual and reproductive health services in the Omaruru district, Namibia.

Approval Period: 15 March 2019 – 15 March 2020

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report in good time for annual renewal.

The permission to conduct the study must be submitted to BMREC for record keeping

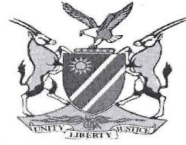
The Committee must be informed of any serious adverse event and/or termination of the study.

A handwritten signature in black ink, appearing to read 'Patricia Josias'.

*Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape*

BMREC REGISTRATION NUMBER -130416-050

Appendix 3: Ethics Approval: Ministry of Health and Social Services



REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198
Windhoek
Namibia

Ministerial Building
Harvey Street
Windhoek

Tel: 061 – 203 2537
Fax: 061 – 222558
E-mail: btjivambi@mhss.gov.na

OFFICE OF THE EXECUTIVE DIRECTOR

Ref: 17/3/3 DM
Enquiries: Mr. B. Tjivambi

Date: 03 May 2019

Dr. Daniel Mensah
PO Box 40286
Aussplanplatz
Windhoek

Dear Dr. Mensah

Re: An investigation of the knowledge and attitudes of adolescents towards the sexual and reproductive health services in the Omaruru district, Namibia

1. Reference is made to your application to conduct the above-mentioned study.
2. The proposal has been evaluated and found to have merit.
3. **Kindly be informed that permission to conduct the study has been granted under the following conditions:**
 - 3.1 The data to be collected must only be used for academic purpose;
 - 3.2 No other data should be collected other than the data stated in the proposal;
 - 3.3 Stipulated ethical considerations in the protocol related to the protection of Human Subjects should be observed and adhered to, any violation thereof will lead to termination of the study at any stage;

BT

- 3.4 A quarterly report to be submitted to the Ministry's Research Unit;
- 3.5 Preliminary findings to be submitted upon completion of the study;
- 3.6 Final report to be submitted upon completion of the study;
- 3.7 Separate permission should be sought from the Ministry for the publication of the findings.
4. All the cost implications that will result from this study will be the responsibility of the applicant and not of the MoHSS.

Yours sincerely,


MR. BEN NANGOMBE
EXECUTIVE DIRECTOR



"Health for All"