

PATTERNS OF UTILIZATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES
BY SECONDARY SCHOOL-GOING ADOLESCENTS IN GABORONE, BOTSWANA, 2012

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Abstract

Background: Adolescents in Botswana, especially women, face many sexual and reproductive health (SRH) challenges including high maternal mortality, sexually transmitted infections (STIs) including HIV, and unintended pregnancies, despite available SRH services. The youth friendly service (YFS) concept has been initiated and various strategies developed to address adolescents concerns. However, services remain underutilized and barriers to accessing services still exist.

Aim: The aim of this study was to determine patterns of utilization of sexual and reproductive health services by adolescents attending senior secondary schools in Gaborone in 2012. The specific objectives were to: identify SRH services utilized by adolescents in the district; identify factors associated with adolescent utilization of YFS in the district; and determine barriers and facilitators to utilization of available YFS by adolescents.

Design: This was a health systems research, which was conducted through an observational study, with descriptive and analytic components.

Methods: 506 adolescents attending at the three (3) senior secondary schools in Gaborone were sampled through a simple random sampling strategy in each school. Parental consent and assent from participants was requested before respondents completed a self-administered questionnaire which was designed for the data collection. The questionnaire was pilot tested prior to the study. SPSS version 16 was used to analyse the data. A chi-squared test and logistic regression were used investigate association, and a p -value <0.05 was considered as statistically significant.

Results: The findings of this study revealed that utilization of SRH by adolescents was low and the level of awareness of youth friendly services was also low. The study revealed that utilization of SRH was higher among female adolescents compared to their male counterparts. The study identified factors which hinder adolescents YFS utilization, which include: location of the facility, no interest in YFS, staff attitudes and behaviours, and inconvenient hours of operation.

Conclusion: Identifying patterns of utilization of SRH services by adolescents attending senior secondary schools in Gaborone can help strengthen programmes at all levels of service delivery and the country at large. The Botswana Ministries of Health, and Education and Skills Development can re-orientate, or develop new initiatives that will deal with barriers to access and assist adolescents to fully utilize the available services.

“As the candidate’s supervisor I agree/do not agree to the submission of this dissertation”

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Declaration

I Tshegofatso Maotwe, declare that:

The research reported in this dissertation, except where otherwise indicated, and is my original work.

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Table of Contents

Abstract	i
Declaration.....	v
Acknowledgements.....	vi
Table of Contents.....	vii
List of Tables	xii
List of Figures.....	xiii
List of Appendices	xiii
Definition of Terms.....	xiv
List of Abbreviations.....	xv
CHAPTER 1	1
1.1 Introduction and Background.....	1
1.2 Problem Statement	3
1.3 Research Questions	4
1.4 Research Aims and Objectives	5
1.4.1 Study aim	5
1.4.2 Objectives of the study	5
1.5 Relevance of the study.....	5
1.6 Overview of the research report.....	5
CHAPTER 2	7
2.1 Literature Review	7
2.2 Search Strategy	7
2.3 Conceptual Frameworks	7
2.3.1 Anderson Health Services Utilization Framework.....	7

2.4 Socio-demographic factors associated with SRH utilization.....	9
2.4.1 Age	10
2.4.2 Sex	10
2.4.3 Level of Education	11
2.4.4 Relationship Status	11
2.4.5 Socio-economic Status	12
2.4.6 Living arrangements	13
2.5 Social-psychological factors associated with SRH Utilization.....	13
2.5.1 Adolescent knowledge of SRH	13
2.5.2 Practices	13
2.5.3 Attitudes and Beliefs	14
2.6 Organizational factors associated with utilization of SRH services	15
2.6.1 Provider-related factors	15
2.6.2 User-related factors	17
2.7 The adapted Health Services Utilization conceptual framework.....	18
2.8 Methodologies to study adolescent SRH service utilization	21
2.9 Conclusion	23
CHAPTER 3	24
3.1 Research Methodology	24
3.2 Study Location	24
3.3 Type of Research.....	24
3.4 Study Design	24
3.5 Study Population	24
3.5.1 Inclusion criteria.....	25

3.5.2 Exclusion criteria.....	25
3.6 Sampling.....	25
3.6.1 Strategy.....	25
3.6.2 Size.....	26
3.7 Data Collection.....	28
3.7.1 Variables.....	29
3.7.2 Data collection/ instruments and process.....	29
3.7.3 Pilot study.....	30
3.8 Ensuring Validity and Reliability.....	31
3.9 Data Management and Storage.....	32
3.9.1 Data quality.....	32
3.9.2 Data safety and storage.....	32
3.10 Data Analysis Processes.....	32
3.10.1 Descriptive Statistics.....	32
3.10.2 Analytic Statistics.....	33
3.11 Ethical Considerations.....	33
3.12 Conclusion.....	34
CHAPTER 4.....	35
4.1 Study Findings.....	35
4.2 Sample Realization.....	35
4.3 Socio-demographic Characteristics.....	35
4.4 Socio-psychological Characteristics.....	37
4.4.1 Knowledge of SRH services.....	37
4.4.2 Source of information about YFS.....	38

4.4.3 SRH service utilization (Practices).....	39
4.5 Organizational Characteristics	43
4.5.1 Facilitating factors to YFS use.....	43
4.5.2 Challenges experienced by YFS users in accessing SRH services	44
4.5.3 Reasons why adolescents did not visit YFS	45
4.6 Socio-demographic factors associated with adolescents knowledge of SRH services	46
4.7 Socio-demographic factors associated with adolescent utilization of SRH services	49
4.8 Summary of the findings	51
CHAPTER 5	53
5.1 Discussion of Findings	53
5.2 Factors associated with adolescent knowledge of SRH services	53
5.2.1 Socio-demographic factors	53
5.2.2 Socio-psychological factors	54
5.2.3 Organizational factors.....	55
5.3 Factors associated with adolescent utilization of SRH services	56
5.3.1 Socio-demographic factors	56
5.3.2 Socio-psychological factors	57
5.3.3 Organizational factors.....	58
5.4 Study Limitations	59
5.4.1 Representativeness of the sample.....	59
5.4.2 Probable selection biases	59
5.4.3 Recall and response biases.....	59
5.4.4 Information bias	59
5.5 Conclusion	60

CHAPTER 6	61
6.1 The Study Conclusion and Recommendations	61
6.1.1 Conclusion	61
6.1.2 Recommendations	61
APPENDICES	70

List of Tables

Table 2.1: Examples of studies implemented to study adolescent SRH service utilization	22
Table 3.1: Adolescents sampled from 3 senior schools in Gaborone, in 2012.....	27
Table 3.2: Variables which guided data collection drawn from the Conceptual Framework.....	29
Table 4.1: Socio-demographic characteristics of respondentsow.....	36
Table 4.2: SRH services that adolescents know about	37
Table 4.3: Source of information about YFS by sex	39
Table 4.4: SRH services used by adolescents in the last 12 months.....	40
Table 4.5: Number of visits to YFS in the last 12 months by sex.....	42
Table 4.6: Reasons given by respondents for not visitng YFS by sex.....	43
Table 4.7: Challenges experienced by YFS users in accessing SRH services by sex	44
Table 4.8 Reasons why some adolescents have never visited YFS in the last 12 months	45
Table 4.9: Socio-demographic factors associated with knowledge of SRH services(bivariate analysis).....	47
Table 4.10: Socio-demographic factors associated with knowledge of SRH services (multivariate analysis).....	49
Table 4.11: Socio-demographic factors associated with utilization of SRH services (multivariate logistic regression).....	50

List of Figures

Figure 2.1: The Conceptual framework on factors associated with utilization of SRH.....	20
Figure 4.1: SRH services that respondents know, by sex.....	38
Figure 4.2: SRH services used by respondents in the last 12 months, by sex.....	41
Figure 4.3: Ever utilized a health facility for SRH services.....	42

List of Appendices

Appendix 1: Self-Administered Questionnaire	70
Appendix 2: Letters requesting permission to conduct the study.....	82
Appendix 3: Study documents for parents and participants.....	86
Appendix 3a: Parent/ Guardian Information sheet (English)	86
Appendix 3b: Parent/ Guardian Information sheet (Setswana)	88
Appendix 3c: Information document to participants	90
Appendix 4: Informed Consent Documents	92
Appendix 4a: Parent/Guardian Consent Form (English)	92
Appendix 4b: Parent/Guardian Consent Form (Setswana)	93
Appendix 4c: Participant Consent Form	94
Appendix 5: Post- Graduate Education Committee Approval	95
Appendix 6: Biomedical Research and Ethics Committee Approval.....	96
Appendix 7: Botswana Ministry of Health Ethics Committee Approval.....	98
Appendix 8: Botswana Ministry of Education and Skills Development Ethics.....	100

Definition of Terms

For the purposes of this study, the following terms or concepts are defined as follows:

Adolescence: The period between the ages 10 and 19; a phase during which enormous physical and psychological changes occur (WHO, 2009).

Adolescent: A young person aged between 15 and 19 years of age inclusive (Olukunle, 2007)

Service utilization: The ability to access and make use of, in an appropriate manner, the available sexual and reproductive health services (Anderson, 1973).

Sexual and reproductive health services: These are services that promote a state of physical, mental and emotional well-being and not merely the absence of disease in all aspects of sexuality and the reproductive system (MOH, 2008a).

Youth friendly services: Services that are accessible, acceptable and appropriate for adolescents, provided at the right place and right time to be acceptable to young people (MOH, 2008a).

List of Abbreviations

AIDS	Acquired immunodeficiency syndrome
ASRH	Adolescent sexual and reproductive health
BDS	Botswana Demographic Survey
BFHS	Botswana Family Health Survey
CSO	Central Statistics Office
HIV	Human immunodeficiency virus
ICPD	International Conference on Population and Development
MIS	Multiple Indicator Survey
MMR	Maternal mortality ratio
MOH	Ministry of Health
NACA	National AIDS Coordinating Agency
RH	Reproductive health
SACMEQ	Southern and Eastern African Consortium for Monitoring Education Quality
SRH	Sexual and reproductive health
STIs	Sexually transmitted infections
TAC	Technical Advisory Committee
UKZN	University of KwaZulu-Natal
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization
YFS	Youth friendly services

CHAPTER 1

1.1 Introduction and Background

Botswana is a landlocked, low-resourced country located in Southern Africa. It has land borders with Zimbabwe in the northeast, South Africa in the south and southeast, and Namibia to the west. The country has a population of about 1.8 million. Largely due to the devastation caused by the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), the population of Botswana is currently declining (Mimi, 2009). Botswana is amongst the countries in the world with the highest HIV burden, with a national HIV prevalence of 17.6% (UNAIDS, 2010). According to the Botswana Population Projections for 2001 to 2031, the population aged 10 to 24 years in 2009 was 611 091 (MOH, 2010). Of these, 308 063 were male and 303 028 were female (MOH, 2010). This group of young people is the largest group ever to be entering adulthood in the history of Botswana.

The current World Health Organization (WHO) terminology defines adolescence according to age. It defines adolescence as the period between the ages 10 and 19, and it is classified into two: early adolescence between 10 and 14 years and late adolescence between 15 and 19 years (Olunkunle, 2007). However, the Botswana Ministry of Health defines adolescents as individuals aged between 10 and 24 years (MOH, 2008a). For the purposes of this study, Olunkunle's definition has been adopted and an adolescent is defined as a young person aged between 15 and 19 years of age.

Adolescents in Botswana, especially young women, face many sexual and reproductive health (SRH) challenges, albeit that the median age of sexual debut has indeed increased from 17 to 18 years for females and to 19 years for males (NACA, 2008). Adolescent SRH challenges include high rates of maternal mortality and increased risk of violence and HIV, which may be associated to widespread alcohol abuse (MOH, 2008a). Adolescents in Botswana have the second highest HIV prevalence of any nation. The HIV prevalence amongst adolescents aged 15 to 24 years, is reported to be 15%. The HIV prevalence is much higher among female adolescents (15%) compared to male adolescents of the same age (5.1%) (UNAIDS, 2010).

The 2005 to 2007 Sexual and Reproductive Health report (SRH, 2008) clearly shows that there was a drastic drop in the number of adolescents who accessed SRH services in 2006 as compared to 2005. Facility based data reveals that 8 409 adolescents were reported to utilize the services in 2005, while 1 538 did so in 2006. Furthermore, the report states that only 2.3% of adolescents utilized SRH services in 2008, which further indicates that services are being underutilized. In order to address all adolescents' SRH problems, the International Conference on Population and Development (ICPD) Programme of Action of 1994, urged governments to make reproductive health (RH) services available, accessible, acceptable and affordable to all adolescents, more so as it is reported that adolescent girls aged 15 to 19 years are twice as likely to die in childbirth as women in their twenties (Ancil *et al.*, 2004). Various strategies have been put in place to address the SRH problems of adolescents in Botswana, which include the provision of youth friendly services (YFS), re-orientation of health workers to the provision of care to adolescents and the distribution of relevant, specific adolescent sexual and reproductive health (ASRH) materials (WHO, 2009).

However, barriers to accessing YFS by adolescents still exist. Barriers are related to individual health provider, service and health facility factors. An assessment of youth friendly facilities in Botswana by Senderowitz *et al.* (2003) revealed that government clinics were not meeting the needs of adolescents because of long queues, excessive waiting times in facilities and limited provider-client interaction. Additionally, the Ministry of Health (MOH) states that ASRH needs have been largely neglected in Botswana and this exerts a detrimental impact on the development potential of Botswana. The health consequences of this neglect have resulted in interrupted studies and reduced life expectancy (MOH, 2003).

1.2 Problem Statement

Available SRH services are underutilized, despite being offered free to all individuals regardless of age. Underutilization of SRH services by adolescents leads to low contraceptive prevalence among adolescents, high teenage pregnancy as well as high prevalence of HIV and sexually transmitted infections among the youth (MOH, 2008a). The Guttmacher Institute (2010) reports that, each year, there are 2.2 million unintended pregnancies in sub-Saharan Africa. The Botswana Family Health Survey (BFHS) IV revealed that though 97% of girls aged 15 to 19 years surveyed knew at least one method of contraception and where to get it; only 22% among those who were sexually active reported using at least one method of contraception (CSO, 2009). In Botswana, while the proportion of girls aged 15 to 19 years who have had a pregnancy shows reduction from 30% in 2006 to 10% in 2010 (MOH, 2010), the consequences of teenage pregnancy still exert their influence. Among teenagers, the average age at first pregnancy is 16 years (WHO, 2009).

World-wide, one in five pregnancies (20%) ends in abortion, and one in ten pregnancies ends in unsafe abortion. In Africa, about one-quarter of unsafe abortions are among teenagers 15 to 19 years, a higher proportion than in any region of the world. Women in developed and developing regions of the world turn to abortion at similar rates: annually, 29 abortions are performed per 1 000 women in developing countries, compared to with 26 per 1 000 in developed countries (Mesce, 2011). However, data on unsafe abortion is not yet available in Botswana. Procured termination of pregnancy is viewed as a sensitive issue as it is not supported by the legislation, unless medically justified and performed by a medical professional. Consequently, young girls who do choose to terminate their pregnancy often do so in unsafe conditions, where they are not provided the necessary care, and which are often harmful to female adolescents (MOH, 2010).

The National AIDS Coordinating Agency (NACA, 2008) reports on adolescent sexual and reproductive behaviour. Female adolescents aged 15 to 19 years in Botswana are about three times more likely to be infected with HIV than their male counterparts. HIV prevalence for those aged 15 to 24 years is estimated at 15% for females and 5.1% for males. The HIV prevalence rate amongst pregnant girls aged 15 to 17 years is estimated at 18%.

An assessment conducted to evaluate ASRH services in Botswana revealed that 86% of adolescents were willing to test for HIV (MOH, 2010). However, adolescents reported that hindrances to testing included a fear of positive results and lack of consent for testing from parents (MOH, 2010). The report further states that, of the sexually active adolescents who had not used any modern contraception method, 71% reported an intention to use modern contraceptives in future (MOH, 2010). This therefore indicates that increased utilization of SRH services can help reduce the prevalence of HIV and teenage pregnancy amongst adolescents. The Ministry of Health is therefore challenged to understand the factors contributing to low utilization of SRH services by adolescents and hence come up with better strategies to address the identified factors in order to meet adolescents RH needs and reduce the burden of disease in their later lives.

1.3 Research Questions

The following research questions guided the study:

1. Which sexual and reproductive health services are utilized by male and female adolescents attending secondary schools in Gaborone in 2012?
2. What are factors associated with male and female adolescent utilization of SRH services in the district?
3. What are the barriers and facilitators to utilization of available SRH services by male and female adolescents?

1.4 Research Aims and Objectives

1.4.1 Study aim

The aim of this study was to determine patterns of utilization of sexual and reproductive health services by male and female adolescents attending secondary schools in Gaborone in 2012.

1.4.2 Objectives of the study

The specific objectives of the study were to:

- i. Identify SRH services utilized by male and female adolescents in the district.
- ii. Identify factors associated with male and female adolescent utilization of SRH services in the district.
- iii. Determine barriers and facilitators to utilization of available SRH services by male and female adolescents.

1.5 Relevance of the study

The study has applied relevance. Identifying the patterns of utilization of SRH services by adolescents, and understanding the factors associated with the use of particularly youth friendly services, can help strengthen the implementation of programmes at facility, district and country levels. The Ministry of Health can re-orientate, or develop new health initiatives that will assist adolescents to fully utilize the available services.

1.6 Overview of the research report

The first chapter of this dissertation introduces the problem being studied within the context of Botswana with information on the country background. It further highlights the problem statement, research questions, and aims and objectives that under-pinned this study. The next chapter draws on the literature of studies conducted in various countries. The adapted Anderson conceptual framework (Anderson, 1973), which was used in the current study to guide data

collection and analysis of the findings, will also be presented. The methodology chapter describes the study type, study design, and describes the target population and sampling for data collection. It further describes the methods used to gather information and the methods of data analysis. The chapter on results outlines the findings from the study also in line with conceptual framework as per the identified study objectives. The subsequent chapter discusses the study findings in the light of existing literature, to see if this study is consistent with findings from other research. The concluding chapter is composed of recommendations drawn from the study findings.

CHAPTER 2

2.1 Literature Review

The literature review is organized such that firstly, the literature search strategy is explained. Secondly, the conceptual framework adopted for this study is introduced. Thirdly, service utilization by adolescents is discussed in line with the adapted conceptual framework, covering the socio-demographic dimension, the social-psychological factors and the provider and user health service characteristics. Results of studies reporting on adolescent health service utilization, and the facilitators and barriers to adolescent service utilization based on the adapted conceptual framework are shared. Lastly, also presented in the chapter, are research methodologies used to study adolescent SRH utilization.

2.2 Search Strategy

An electronic search was conducted to identify relevant literature. The electronic search engine EbscoHost was used to search the following databases: CINAHL, MEDLINE, Africa-Wide Information, PubMed and WHO. The main search terms were: -youth friendly health services, -adolescent health and -adolescent sexual and reproductive health. The limiters were: articles published in English between 2000 and 2013.

2.3 Conceptual Frameworks

2.3.1 Anderson Health Services Utilization Framework

The paper -Health Services Utilization: Framework and Review by Anderson (1973) on utilization of health services was used in this study. Anderson's framework has suitable dimensions of health service utilization applicable to adolescents. Five different approaches that have been used to study the utilization of health services are reviewed: the socio-cultural, socio-demographic, social-psychological, organizational and social systems.

The socio-cultural approach views health services as part of a cultural complex and, as such, related to other social institutions in a society or sub-culture. Assumptions that exist in societies about causes of diseases are probably the most important determinant of the way health facilities are organized (Anderson, 1973). Studies conducted from a socio-demographic perspective have demonstrated that variations in health utilization behaviour can be related to age, sex, education, occupation, ethnicity, socioeconomic status and income of the users. However, the relationship between some socio-demographic factors to utilization has remained stable while others have changed significantly over time: differences in use of health services among different income groups persist only among children and adults who experience the most severe levels of disability while race and educational level however continue to be strongly associated with use of health services (Anderson, 1973).

Zyaambo *et al.*, (2012) in a study on health status and socio-economic factors associated with health utilization in rural and urban areas in Zambia found that educational status and wealth index were significantly associated with health care utilization. Furthermore, respondents in rural areas, who were in the highest wealth quartile, were three times more likely to utilize health services than those in the lowest quartile. Moreover, the same study found that sex and age were significantly associated with health care use in urban areas, as females were more likely to utilize the health care services than males, while compared to respondents aged 15 to 19 years, respondents in the age group 25 to 29 years and those aged 30 to 39 years were two times more likely to utilize health services.

The social-psychological approach addresses itself more directly to how persons come to realize that they are ill and how they decide on a source of care. The approach outlines three major factors in patients' decision to seek care: his/her knowledge, beliefs and attitudes concerning his/her symptoms; his attitudes and expectations regarding health services in general; and his/her definition of sickness and determination of the necessity for professional care (Anderson, 1973). Furthermore, Anderson (1973) distinguishes three types of behaviour: (1) actions on the part of the healthy person to stay well; (2) illness behaviour by which a person who is sick defines his/her condition seeks a remedy; and (3) actions by an ill person to get well.

The organizational approach examines the structure of the health care delivery system in order to account for differential health and illness behaviour. There are various factors associated with this approach, i.e. rapidly rising expenditures for health services due to increased demand and rapidly increasing costs, shortages of certain personnel and facilities as well as misdistribution of health services (Anderson, 1973).

Finally the social systems approach has also emerged as a way of understanding utilization behaviour, viewing the health service system as consisting of interrelated components such as physicians and facilities that interact with one another and with the population that they serve (Anderson, 1973).

2.4 Socio-demographic factors associated with SRH utilization

Since the 1994 ICPD in Cairo, Egypt, youth friendly services have been recognized as an appropriate and effective strategy to address the SRH needs of adolescents. However, the needs of adolescents remain poorly understood or under-served in much of the world (Kamau, 2006). World-wide, the burden of disability and pre-mature deaths due to SRH problems is enormous and growing. Despite spectacular increases in access to contraceptives globally, more than 120 million couples have unmet need for modern contraception and an estimated 80 million women have unintended or unwanted pregnancies, with 45 million ending in abortions annually (Glasier & Gulmezoglu, 2006). Although adolescents share many characteristics with adults, their health related problems and needs are different. Adolescent sexuality remains a global challenge particularly in developing countries and despite the fact that most adolescents become sexually active before the age of 20, the sexual contacts are generally unprotected. Moreover, globally, 60 out of every 1 000 adolescent girls give birth each year, and many of the pregnancies are unwanted, and a further 4.4 million girls aged 15 to 19 years undergo unsafe abortions (Kamau, 2006). Various studies have demonstrated that utilization of health services by adolescents can be related to among other things socio-demographic profile like age, sex, level of education, living arrangement and socio-economic status.

2.4.1 Age

People under the age of 25 represent nearly half of the world's population, which means they have a powerful role to play in the world reproductive health. At least 80% of sub-Saharan Africa's youth are sexually experienced and the statistics on having had intercourse by the age of 20 are: 73% of Liberian women aged 15-19 years; 15% of Nigerian women; 49% of Ugandan women; and 32% of Botswana women (Lesedi *et al.*, 2011). Many young people in sub-Saharan Africa face the risk of HIV, STIs and unintended pregnancies, and sub-Saharan Africa remains the region with the highest percentage of people living with HIV (63%). In 2005 an estimated 4.3% of 15 to 24 year old females and 1.5% males in the region were HIV positive (Biddlecom *et al.*, 2007). A study on factors influencing access to utilization of preventive reproductive health services by adolescents in Kenya reports that global estimates indicate that about 3 million adolescents are infected with an STI, and that the highest rates of Chlamydia are among 15 to 19 year olds, mainly females. The study further found that in many developing countries, more than half all new HIV infections are among adolescents aged 15 and above (Kamau, 2006).

Another study found that in Malaysia, of adolescents aged 13 to 19 years, 40% of respondents had begun dating from the age of 13 years and 18.4% had their first sexual contact between 15 and 18 years (Ngomi, 2008). In most countries, sexual activity begins at ages 15 to 19 years, with earlier onset for males and later for females. Sexual activity among young single people tends to be sporadic, but it is more common in industrialized countries than in developing. In sub-Saharan Africa, 70% of young women become sexually active during adolescence and more than 20% have their first child by age 18 years (Glasier & Gulmezoglu, 2006). As mentioned early, Botswana has one of the highest HIV infection rates in the world, and adolescents are at the highest risk of STIs and HIV infection, unwanted pregnancies and abortion. HIV infection rates are highest in the age group 15 to 29 years and the average age at first intercourse is 17.5 years and first birth at 18.6 years (MOH, 2010).

2.4.2 Sex

A study on utilization of SRH services by adolescents found that females utilized services more than their male counterparts. Clinic reviews were conducted in eight ASRH clinics, and Non-

Governmental Organization (NGO) clinics showed that more females utilized SRH services than their male counterparts, while in the government clinics records revealed similar utilization by males and females. The study further showed that more clients, predominantly females attended family planning clinics and STI services than their male counterparts in Vanuatu health facilities (Kalo, 2007). A study on knowledge of STIs and barriers to seeking health services among High School adolescents in Ethiopia found that knowledge of symptoms of STIs were better among males compared to females; and among adolescents who have mothers with some formal education compared to those who have illiterate mothers (Cherie & Berhane, 2012).

2.4.3 Level of Education

A baseline survey on ASRH in the operational area of ten Association of Church- Based Development NGOs-members' primary health care programmes in Northern and Upper East regions in Ghana found that the highest level of education for most (40.7%) respondents was Junior High School, 30.8% being primary education and 9% being Senior High School. And these findings reflect the relatively high level (82%) of education amongst adolescents aged 15 to 19 years (Kudolo *et al.*, 2008). Another study revealed that about four- fifth of the adolescents (81.1%) reported to have never attended formal education of which 47.7% and 52.3% were elementary and secondary schools respectively, while more than two-third 68.9% of the adolescents were in school (Abajobir & Seme, 2012). Finally, a study conducted in Botswana on youth's perception towards SRH at Family Welfare Association Centres found that over half (55%) of the participants had secondary education, most (59%) of which were females, as compared to 39% and 9% who had tertiary and primary education respectively. Of these adolescents, the findings further reveal that more females utilized services than males (Lesedi *et al.*, 2011).

2.4.4 Relationship Status

A study on reproductive health and knowledge and services utilization among rural adolescents in Ethiopia found that most of the respondents (85.1%) were single and the rest (14.9%) were never married. Of these adolescents, about a third reported to have ever used SRH services and about 20% reported to have visited in the last 6 months (Abajobir & Seme, 2012). Furthermore, another study by Motuma (2012) on youth-friendly health services utilization and factors also

revealed that majority (81.6%) of the respondents were single while 16.3% were married. A majority of these respondents had had used YFS at least ones in the last five years and had positive attitudes towards YFS. Data from the ASRH Implementation Strategy Evaluation report of Botswana indicates that 95% of sexually active adolescents started sex before marriage. Males, younger and in school adolescents seemed more likely to have experienced first before marriage and most (86%) of adolescents reported to have had first sex with friends, classmates or relatives. However data indicates low access to most SRH services due to lack of information about SRH (MOH, 2010).

2.4.5 Socio-economic Status

Poverty is one factor that is regarded as fuelling the practice of unsafe or unprotected sexual contact in sub-Saharan Africa, and due to the extreme levels of poverty in Africa, some parents persuade their female adolescents to engage in sex for money so that they can contribute to the family income (Mwinga, 2012). Adolescents are particularly at risk of unprotected sex, STIs and HIV infection. A large number of adolescents in Africa are from poor and unstable family environment and are likely to have sexual experience at an early age. Research show that young women sometimes enter into relationships with older men called "sugar-daddies" in sub-Saharan Africa, who pay their school fees, buy them gifts and offer other inducement to entice them (Olukunle, 2007).

Additionally, it has been observed that economic barriers and poor performance in school are associated with young people dropping out of school early, predisposing them to increased risk of early pregnancy (Mwinga, 2012). Furthermore, a study conducted in Botswana by Fako (2006) reported that students with a higher socio-economic status, as measured by the type of job parents did, were significantly more willing to test for HIV than those of a lower socio-economic status. Another study by McFarland (2003) in a study on cervical cancer and Pap smear screening in Botswana also found that knowledge and use of cervical cancer and Pap smear screening services was related to young women's socio-economic status; knowledge and use was limited among women with a lower socio-economic status.

2.4.6 Living arrangements

Living arrangements of adolescents with regard to utilization of SRH services is an important variable to measure. A study done in Northwest Ethiopia on reproductive health knowledge and utilization by adolescents found that 60.6% of adolescents were living with both parents while 26.4% were living with single parents, of which 66.1% were aged 15 to 19 years (Abajobir & Seme, 2012). Another study by Aninanya *et al.*, (2011) explored the association between provision of an SRH intervention and adolescent health utilization and reported that 53.3% were living with both parents as compared to 46.7% who were not living with both parents utilized the services.

2.5 Social-psychological factors associated with SRH Utilization

2.5.1 Adolescent knowledge of SRH

A study on reproductive health and knowledge and services utilization among rural adolescents in Ethiopia found that more than four-fifth of the rural adolescents knew ways of avoiding unwanted pregnancy and majority (78.2%) mentioned oral contraceptive pills, followed by condoms (18%) and injectable contraceptives (12.8%)(Abajobir & Seme, 2012). A study on utilization of SRH services in Mochudi, Botswana found that over four-fifths of the adolescents who participated in the study (83.3%) indicated having knowledge of organizations that provided SRH services, while the remaining respondents (16.7%) indicated no knowledge of such services (Ngomi, 2008). Younger single females aged 15-19 years, did not utilize services because they did not know about the services (Havea, 2007).

2.5.2 Practices

Sexual practices are those activities related to sexual expression that are performed habitually or repeatedly. Adolescence is a stage of exploration, and one of the highest concerns of adolescents is whether or not they are normal. Sexual practices between consenting adults and adolescents can include a wide variety of behaviours and are mostly dependent on the individuals' behaviour, culture and practices (Kudolo *et al.*, 2008). A situation analysis of ASRH and HIV in the Caribbean reports a number of ASRH risks and protective factors. The risk factors include

alcohol and drug abuse, and sexual violence, among others, while the protective factors include family or school connectedness, religion and individual values (Allen, 2013).

World-wide there are an estimated 15 million adolescents aged 15 to 19 years who give birth, approximately for up to one-fifth of all births each year. Furthermore, each year 1 million to 4.4 million adolescents in developing countries undergo abortion, and most of these procedures are performed under unsafe conditions (Naravage, 2004). The Caribbean report also revealed that rates of abortion were correspondingly high, ranging from 6% in the British Islands and St. Maarten to 14% in St. Eustatius; these are consistent with data showing that the abortion rate in the Caribbean is high: 39 per thousand women aged 15 and above, as compared with the 29 in developing countries and 24 in developed countries. The unsafe abortion rate per thousand women aged 15 years and above was estimated at 18 in 2008 in the Caribbean, as compared with 16 in the developing countries as a whole, 1 in developed countries and 31 in sub-Saharan Africa (Allen, 2013).

Abortion became legal in Botswana in 1991, but it must be conducted by a medical doctor, and another doctor must also provide consent under one of the three conditions: in cases of rape or incest, if childbearing poses a risk to the woman's physical or mental health, or if there is, or is a risk of foetal impairment. However, 16% of maternal deaths in Botswana in 2007 were caused by septic abortion (Mills, 2011). Furthermore, a study conducted in Kenya reported issues of sexual abuse of young girls by relatives, and other girls who reported that they had started sexual intercourse, reported they had sex either in exchange for money or food (Mbeba *et al.*, 2012).

2.5.3 Attitudes and Beliefs

There are factors which determine utilization of SRH services by adolescents, which include the adolescents' attitudes and beliefs about YFS, their attitude and behaviour towards the reproductive health issues. Most of the norms and values that were held in high esteem such as a way of dressing and communication skills are now fading away and these are supporting factors for some of the risky behaviours adolescent take (Olunkule, 2007). Furthermore there is a growing recognition world-wide that YFS are needed to ensure effective SRH, and the services must be able to attract and retain young people for continuing care and influence their behaviour

change among them. And a study by Motuma (2012) on youth-friendly health services utilization and factors in Ethiopia also revealed that more than half of the respondents (69.2%) had positive attitudes towards YFS, and a majority of them (63.8%) had used YFS at least once in the last five years.

To support these findings another study done in Botswana on perception of youth towards SRH services found that the overall perception of adolescents regarding use of SRH was positive (86%), (Lesedi *et al.*, 2011). However health provider attitudes and behaviour, including being unfriendly, and lack of privacy can also largely impact on how adolescents access and perceive the YFS, and are some of the reasons adolescents give for not utilizing the services hence the need to ensure provider skills on provision of YFS (Mngadi *et al.*, 2008). A study conducted in Malawi reports that boys and girls are exposed to cultural practices when they become adolescents under which the initiates are instructed to cleanse themselves by engaging in unprotected sex with experienced persons of the opposite sex. Moreover, in Botswana, the Kalanga ethnic group practice *Nkazana*, a cultural practice in which a new husband is authorized to ask for sexual favours from one of his wife's younger sisters, of which the sister may be a teenager (Mwinga, 2012).

2.6 Organizational factors associated with utilization of SRH services

2.6.1 Provider-related factors

Providers who are trained to work competently and sensitively with adolescents are often considered the single most important condition for establishing YFS (AYA, 2003). In order for the YFS concept to be fully implemented, there is need to formulate clear principles defining what is expected of a youth friendly facility, or to develop a standard that will guide the implementation. The MOH (2008b) Chart has defined a minimum YFS package for youth friendly facilities which comprise information and counselling, testing, management as well as referral and linkage services. Additionally, the facility should also fulfil a standard set of characteristics, in terms of the facility and physical environment, provider and staff preparedness, provision of packages of care, availability of policies and protocols, community outreach activities and publicity for client recruitment, and referral and support services.

2.6.1.1 Availability

Adolescents need to be treated in a special way because they are regarded as an at-risk population group. Adolescents need a range of quality services offered by skilled personnel at the right place and time, and in an appropriate manner. However, adolescents are usually faced with barriers to accessing available SRH services. Barriers are mostly related to service availability: the range of services available for adolescents is often times limited, or commodities needed by adolescents are limited (AYA, 2003).

Some young people prefer to learn about sensitive issues on their own using written or audio-visual materials because their discomfort level can be too great to retain information during a face-to-face session. Such material can be used while clients are waiting to be seen, however some of these materials should be available for clients to take home for later review (AYA, 2003).

2.6.1.2 Accessibility

The MOH (2008b) defines youth friendly services as programmes and services that are provided to young people in a comfortable and appropriate setting, free of barriers that will limit their access to information and care, ensure privacy and confidentiality and be able to retain them for follow-up. Moreover, Maro (2012) describes YFS as services that are accessible, acceptable and appropriate for adolescents, with services in the right place, the right price (quality of the services) and delivered in the right style to be acceptable to young people. YFS meet the individual needs of young people who return when they need to, and recommend these services to friends.

An evaluation of the ASRH Implementation strategy in Botswana further found that despite knowledge of SRH services by adolescents, few used the services. Access of SRH services was low, as evidenced by 34% of respondents who used guidance and counselling and condom education services; 20% who accessed sexuality education; only 6% who obtained information or services on male circumcision; and 4% accessed drug abuse rehabilitation services (MOH, 2010). The proportion of adolescents who use a facility can be attributed to the type of service delivery, and whether the facility is a government or private institution. A study on strengthening

existing reproductive health services for young people in Tonga revealed that there were more young people, less than 25 years, who accessed services from government clinics as compared to private clinics. This could mean that services were less attractive in private settings than government (Havea, 2007). Service accessibility can be another barrier to utilization of services by adolescents; e.g. the distance and location of the health facility can be a hindrance to use of SRH services as well as the hours of service delivery.

2.6.1.3 Acceptability

Available SRH services should be acceptable to adolescents, so the type and quality of the service is critical. Moreover, equity or fairness in the provision of the services to all adolescents is crucial, such that all individuals will equally use and benefit from available services. According to a research conducted in Kenya and Zimbabwe, there are some characteristics which are important for adolescents to utilize SRH services. These include confidentiality, friendly staff and a short waiting time (Erulkar *et al.*, 2005).

2.6.1.4 Quality of Care

Presence of skilled service providers at YFS is important; however supply of equipment required for enabling the provision of these services is another vital requirement which enables providers to deliver quality services. This was amongst the challenges revealed by a study on barriers to SRH services and rights among young people in Tanzania; whereby facilities lack privacy, confidentiality, record keeping and waiting benches (Mbeba *et al.*, 2012). Therefore clear guidelines on YFS can be used to complement interventions in the health system such as behaviour change and advocacy programmes, services for the prevention of HIV in young people, and information and counselling and treatment of STIs.

2.6.2 User-related factors

Moreover, factors associated with adolescents' use of health services may include their knowledge of services offered, restrictive laws and policies, lack of convenience of facilities (location, hours of operation) or lack of publicity and visibility of the health facility in some health settings and these might prevent adolescents to fully utilize the services. Creating separate space or special times for adolescents appears more important, therefore to increase access to

SRH services, facilities must be opened at times convenient for adolescents to attend. Adequate space is necessary for privacy and to assure that counselling and examinations can take place out of sight and sound of people, interruptions during the adolescents' visits should be kept minimal to improve utilization of services by users (AYA, 2003).

2.7 The adapted Health Services Utilization conceptual framework

Factors related to utilization of SRH by adolescents as reported in the literature have contributed to an adaptation of the Anderson's Health Services Utilization Framework, to capture the possible factors associated with utilization of SRH by adolescents in Gaborone. The adapted conceptual framework includes socio- demographic, socio- psychological, as well as the organizational dimensions. All these factors can act as barriers or facilitators to adolescents' access, acceptance or use of SRH services within their district.

The socio-demographic profiles of individuals help create a clear description of each person. As indicated earlier, different adolescents' SRH utilization behaviours can be related to socio-demographic factors. Several studies conducted on utilization of health services by adolescents clearly outline this. Abajobir & Seme (2013) in a study on reproductive health knowledge and service utilization among rural adolescents in Northwest Ethiopia, report that respondents' sex, age, educational status, living arrangement and family income were found to have statistically significant association with SRH knowledge.

The social-psychological dimension mainly explains the way individuals think, feel and do things depending on the situations they are faced with more especially with regard to decision making to seek medical help. During adolescence young people undergo physiological and biological changes, which pose a major challenge to them with regard to making decisions about their health and their health seeking behaviours. A study on youth-friendly health service utilization and factors in Ethiopia found that a majority of respondents had information about YFS, and believed that YFS was necessary for proper care. The major source of information on YFS was school teachers followed by radio broadcasts. Moreover, more than half of the respondents had positive attitudes towards YFS use and a majority had had used YFS at least once in the last five years (Motuma, 2012).

Organizational factors in this study will refer to structures or facilities for provision of SRH services to adolescents. Variables like location of the facility, the hours of operation and the actual physical structure can affect the way adolescent utilize SRH services. Furthermore, availability of resources like human and finances can also be influential. Finally availability of services for adolescents and the manner in which the facilities run, including follow-up mechanisms, behaviour and attitudes of staff and confidentiality and privacy to clients is also crucial in all organizations (AYA, 2003). Erulkar *et al.*, (2005) in a study on YFS amongst youth in Kenya and Zimbabwe found that the rating for youth-friendly characteristics was similar for Kenyan and Zimbabwean adolescents. Friendly staff, low cost of services, short waiting time and ability to obtain all services at one site merged as the most important issues for adolescents (AYA, 2003).

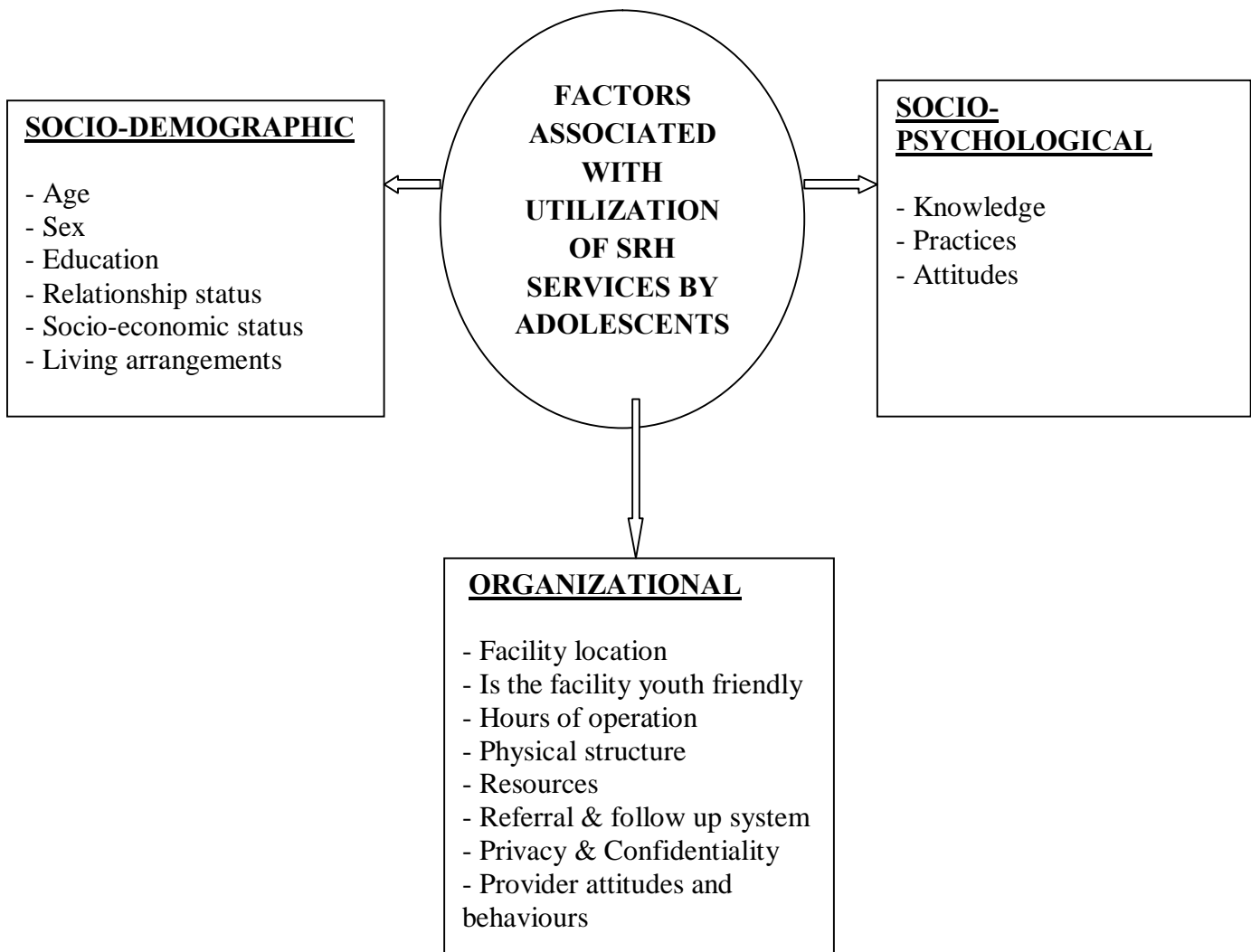


Figure 2.1: The conceptual framework of factors associated with utilization of SRH services by adolescents adapted from Anderson's Health Services Utilization Framework (1973)

2.8 Methodologies to study adolescent SRH service utilization

Studies on factors associated with adolescent utilization of SRH services have employed both qualitative and quantitative methodology. Qualitative studies employed largely focus group discussions exploring perceived reproductive health problems, adolescents' behaviour, knowledge and attitudes related to SRH issues and barriers in accessing SRH services. The studies identified various factors associated with adolescent SRH service utilization. Quantitative studies employed self-administered questionnaires exploring patterns of health care services utilization and factors associated with SRH utilization. The tools used were validated by pilot tests and can be easily adopted to explore similar issues in different settings. The quantitative studies determine to what extent the factors may be generalized to a representative adolescent population, however other studies used mixed method approach (Fako, 2006; Agampoli *et al.*, 2008; Mngadi *et al.*, 2008, Erulkar *et al.*, 2005). Various studies have been conducted; the following are two examples of implemented studies (Table 2.1):

Table 2.1: Examples of studies implemented to study adolescent SRH service utilization

Study Title	Study Objectives	Study Designs	Data Collection Methods	Analytic Methods used
<p>An exploration of adolescents' knowledge, perceptions and behaviours regarding sexual reproduction and SRH services in Botswana</p> <p>Author: Dingi, (2009)</p>	<ul style="list-style-type: none"> - Assess the level of knowledge of adolescents regarding sexual reproduction and SRH services - Assess the level of utilization of the SRH services among adolescents - Identify the enabling and limiting factors to effective utilization of the existing SRH services in Botswana 	<ul style="list-style-type: none"> - A non-experimental descriptive exploratory design using both quantitative and qualitative methods 	<p>Quantitative</p> <ul style="list-style-type: none"> - Self-administered questionnaire <p>Qualitative</p> <ul style="list-style-type: none"> - Focus Group Discussions 	<p>Quantitative</p> <ul style="list-style-type: none"> - Frequency distributions, means and Standard Deviations - Mann-Whitney U tests <p>Qualitative</p> <ul style="list-style-type: none"> - Thematic analysis (Qualitative data)
<p>An assessment of the capacity of facility-based youth friendly reproductive health services to promote SRH among unmarried adolescents: evidence from rural Malawi</p> <p>Author: Jimmy-Gama (2009)</p>	<ul style="list-style-type: none"> - To determine the level of adoption of safe sex practices among unmarried adolescents and examine the extent to which such adoption is associated with facility-based YFS in Malawi - To determine the theoretical utility and limitations of YFS strategy in the promotion of SRH among unmarried adolescents 	<ul style="list-style-type: none"> - A comparative study design - A sequential exploratory design using quantitative and qualitative methods 	<p>Quantitative</p> <ul style="list-style-type: none"> - Semi-structured Interviews - Client Exit Interviews - Observations - Surveys - Service utilization data <p>Qualitative</p> <ul style="list-style-type: none"> - In-depth interviews - Focus Group Discussions 	<p>Quantitative</p> <ul style="list-style-type: none"> - Chi-square test - Binary logistic regression <p>Qualitative</p> <ul style="list-style-type: none"> - Exploratory Thematic analysis

2.9 Conclusion

The literature review has highlighted the main factors in relation to the utilization of SRH services by adolescents, as adapted from the Health Services Utilization Framework by Anderson (1973). The dimensions in the conceptual framework mainly focus on the importance of providing relevant services to adolescents, encompassing all health approaches with more emphasis on the social aspect of individuals. The socio-demographic factor has covered all the demographics associated with use of SRH services by adolescents and based on the shared studies revealed the importance of considering all the variables to improve access and use of services by adolescents. Study findings have shown the need to ensure adolescents' knowledge of SRH services; realization of behaviour, practices and attitudes towards use as well as availing all the necessary resources to better implementation of the existing initiatives. Findings on adolescents' studies implemented by other countries can also assist to improve available YFS initiatives in Botswana so that the needs of adolescents are met.

CHAPTER 3

3.1 Research Methodology

This chapter introduces the methodology used in this study on patterns of utilization of youth friendly SRH services by secondary school-going adolescents in Gaborone, Botswana. In the chapter are described the study location, design, the study population and sampling strategy and size, the methods of data collection, as well as the data management and data analysis processes.

3.2 Study Location

The study was conducted in Gaborone, which is located in the southern part of the country. Gaborone is the capital city of Botswana, with a population of about 300 000 people. Gaborone is the seat of government, as well as the country's commercial and administrative centre. Gaborone is accessible to most of the major tribes and therefore not associated with any particular tribe in Botswana. It is strategically located and its proximity to the railway line further improves its access to all.

3.3 Type of Research

This study can be classified as health systems research.

3.4 Study Design

This was an observational study, with both descriptive and analytic components.

3.5 Study Population

The study population comprised adolescents in the Gaborone. Specifically, the study targeted adolescents aged 15 to 19 years attending in the three (3) day-schooling senior secondary schools in Gaborone. Senior schools in Botswana enrol adolescents for form 4 and form 5 academic classes. The Southern and Eastern African Consortium for Monitoring Education Quality (SACMEQ) (2010) states the secondary school enrolment for Botswana is 78% for females and 74% for males, giving an overall enrolment of 76%. It was therefore considered acceptable to

sample school-going adolescents to determine patterns of adolescents' utilization of SRH services and factors associated with service utilization. Thus out-of school adolescents were not included in the study, even though it is acknowledged that they may be at a higher risk. A separate study may need to be implemented to ascertain the similarities and differences between school-going and non-school going adolescents.

3.5.1 Inclusion criteria

Eligible to be included in the study were adolescents attending secondary schools, in form 4 and form 5, males and females, aged 15 to 19 years inclusive, residing in Gaborone and surrounding areas. Only those whose parents or guardians gave consent for them to participate in the study and who themselves assented to participate in the study were included.

3.5.2 Exclusion criteria

All those who were aged less than 15 years, and those aged 20 years and above were not included in the study.

3.6 Sampling

3.6.1 Strategy

A multi-stage sampling strategy was employed. There are three (3) senior secondary schools in Gaborone; and all were included in the study. Within each senior secondary school, quota sampling non-probability strategy was followed. In quota sampling of individuals, the interviewer has a description of the type of people to interview and the number of respondents needed. The selection of individuals is left to the interviewer and there is no attempt at randomness (Joubert & Ehrlich, 2007). In implementing the quota sampling strategy, a meeting was held in each school with the school management, and the Guidance and Counselling teacher, to inform them of the number of respondents required from each school, and the age range within which respondents should fall. The teachers then identified the students that would be recruited for the study.

The researcher met with the selected students to discuss the study process and to provide respondents with informed consent forms to give to their parents. Teachers assisted in collecting the signed consent forms, after which a schedule for data collection was drawn. Not all adolescents received parental consent to participate in the study. However, since there was a positive response it was easy to get the required number of respondents. The final selection was mainly dependent on availability of the respondents during the data collection phase. Adolescents for whom parents had not given consent to participate in the study were skipped, and the next respondent with signed parental consent was selected. Two adolescents whose parents gave consent for their participation in the study, stated that they did not want to participate, even though they showed interest initially.

3.6.2 Size

The final sample drawn from each school was derived through probability proportional to size, to accommodate the differing annual enrolment at each school and to ensure the smaller schools were not over-represented. The overall number of students in the three schools is 5062. The sample size to be derived was calculated at a 1% precision level as SRH (2008) reports that only 2.3% of adolescents utilized SRH services in 2008. The formula applicable was then derived from Lemeshow *et al.* (1990):

$$n = [Z^2_{1-\alpha/2} * P(1-P)*N] / [d^2 * (N-1) + Z^2_{1-\alpha/2} P*(1-P)]$$

n: sample size

α : level of statistical significance set at 0.05

$Z^2_{1-\alpha/2}$: the value from a normal distribution associated with confidence interval equivalent to 1.96 for 95% confidence level

P: proportion of people under study (utilizing the services)

N: total population

d: margin of error for population being estimated,

Therefore,

$$Z^2_{1-\alpha/2} = 1.96$$

$$P = 2.3$$

$$N = 5\ 062$$

$$d=1\%$$

Hence the formula becomes:

$$n = [Z^2_{1-\alpha/2} * P(1-P)*N] / [d^2 * (N-1) + Z^2_{1-\alpha/2} P*(1-P)]$$

$$[(1.96)^2 * 2.3 * (1-2.3) * 5062]$$

$$(0.01)^2 * (5062) + (1.96)^2 * (2.3 * (1-2.3))$$

$$n = \mathbf{508}$$

Table 3.1 presents the total number of students in each school, the proportion that each school contributed to the sample, and the actual number of students drawn from each school.

Table 3.1: Adolescents sampled from the 3 senior schools in Gaborone, in 2012

Name of Senior School	Total no. of students	% of sample	No. sampled
Gaborone	2049	40	203
Naledi	1715	34	173
Ledumang	1298	26	132
Total	5062	100	508

3.7 Data Collection

Data for the study was collected through a self-administered questionnaire. This section details the variables for which data was collected, the data collection tools and the data collection process.

The Guidance and Counselling teachers assisted the researcher to identify a space or a school hall to gather the adolescents together where the researcher was left with adolescents to address the adolescents about the study to be conducted. Adolescents were given a chance to ask questions about the research to be conducted as well as about SRH in general.

Meetings were convened in each school for adolescents per academic class through the assistance of the Guidance and Counselling teachers to identify eligible adolescents. A sampling frame was drawn in numbers, representing individuals in the population. Random numbers were then allocated to students then a relevant sample size selected. The selected students were then given letters for consent and information sheets for their parents and guardians, and for them to assent. Teachers assisted in collecting signed consent forms and the researcher came on the scheduled dates for data collection. Adolescents whose parents had consented for them to participate in the study, and who had themselves assented to participate, were gathered in the school hall to complete the designed self-administered questionnaire. Two adolescents, from different schools, whose parents had consented for their participation in the study, stated that they did not want to participate, despite having shown interest initially.

3.7.1 Variables

The following variables guided the data collection (see Table 3.2 below):

Table 3.2: Variables which guided data collection drawn from the Conceptual Framework

Component in conceptual framework	Numerical variables	Categorical variables
Socio-demographic	Age, number of children born to the adolescent	Academic class, gender, socio-economic status, relationship status
Socio- psychological	-	YFS knowledge
Organizational	Number of visits to facility, YFS distance from home	Referral system, follow-up systems, services available in facility

3.7.2 Data collection/ instruments and process

A self-administered questionnaire (Appendix 1) was the only tool used for data collection in the study. The questionnaire was in English, which is the official language of Botswana. The questionnaire was divided into four different sections. The first section covered the demographic information of respondents: sex, age, relationship status, academic class, living arrangements and their socio-economic status.

A section on utilization of general health services respondents if they had visited any health facility in the last 12 months. In addition, respondents were asked the kind of health facility they visited (there were more than one option for this question), and the number of times that they visited the mentioned facility. Respondents were asked the reason for their preference. The section on utilization of sexual and reproductive health services started by asking which SRH service the respondents knew of, followed by which SRH service they had used in the last 12 months. The respondents were also asked the type SRH service utilized, whether government, private, pharmacy/chemist or any other (respondents could select more than one option).

Respondents were also asked if they knew of youth friendly services. If ÷yesö they were asked to state where they got their information on YFS and the number of times that they have visited YFS in the last 12 months. Those who had visited YFS were asked reasons why they visited the facility (more than one option could be selected for this question). Respondents who reported having visited YFS were further asked if they have had any problems accessing these services. If ÷yesö, they were asked to identify the kind of problem or difficulty they encountered in accessing YFS. Respondents who had never visited the YFS were asked the reasons why they have never visited the health facilities.

The last section covered information on sexual information of the respondents: whether they had had sexual intercourse, the age of their first encounter, the age of the person with whom they had sex for the first time. They were asked the SRH service that they have utilized before or after their first sexual encounter. Respondents were asked the number of children they had and what age they had their first child. Female respondents were then asked if they had had any previous pregnancy terminated, if ÷yesö, they were asked where the termination was done in-country in a government or private facility, out-of country or by a traditional healer or self inflicted. They were also asked the number of pregnancy terminations that they had, the reasons for terminating the pregnancies and any problems encountered afterwards.

Students who had parental consent and those who had assented to participate in the study were gathered together in one place at school, at the same time, were given verbal instructions and were requested to fill in the questionnaires.

3.7.3 Pilot study

Prior to the study, the developed questionnaire was pilot tested with 25 adolescents attending in Mogoditshane Senior School in the neighbouring Kweneng District Council. The researcher planned to pilot test the questionnaire in a school where a similar setting of adolescents' reproductive health services are, to ensure clarity of questions and consistence in methods of questioning and data collection procedures. Similarly, a meeting was convened with the school management and the researcher worked with the Guidance and Counselling teacher to assist in randomly selecting 35 adolescents from different classes within the specified age group. The

researcher met with adolescents and addressed them about the study to be piloted. Letters and consent forms were given to the students to give to parents. The researcher came for data collection on the scheduled day. Twenty-five adolescents brought back signed consent letters from parents and guardians and the adolescents also assented for themselves.

A pilot study helps to ensure feasibility and clarifies questions, words and sentences that may be found to be unclear or requiring explanations. Furthermore it allows the researcher to determine whether the intended data analysis can be carried out, and whether the data collected will help achieve the research objectives. However, there were no questions from the participants after addressing the questionnaire, the researcher went on to capture the data using SPSS in order to determine whether the intended data analysis can be carried out and whether the research objectives were achieved from the collected data.

3.8 Ensuring Validity and Reliability

The study was conducted in Gaborone, in Botswana. The results obtained from the study may therefore not be representative of other districts, especially in remote areas of Botswana. However, the fact that the senior secondary schools in Gaborone also admit students from neighbouring villages may enable transferability of results to other areas. Furthermore, for the purposes of this study out-of school adolescents and those aged below 15 years were omitted from the study, which was yet another anticipated limitation.

Furthermore, selection bias may have resulted in excluding of adolescents who were absent from school during the time of the study. Additionally, some adolescents may have not been comfortable sharing their sexual health issues which might have resulted in response bias, which is dependent on the type of questions asked. Recall bias may also be encountered in questions seeking the number of visits to YFS facilities as well as the services that were required. Some respondents may have felt uncomfortable to respond freely to some questions because of the sensitivity of the subject, especially information on sexual issues.

3.9 Data Management and Storage

3.9.1 Data quality

In order to ensure data quality, a double entry system was used to capture the data after the data collection process. Before the raw information can be analysed quantitatively it must be prepared for analysis through a process called coding, a process by which information is converted into numbers or categories (Joubert & Ehrlich, 2007). Data was captured using SPSS 16.0, the researcher coded all into the software, and the information from the questionnaires was captured per the developed codes in SPSS. The second entry was done by a different person, the statistician, who assisted to enter the same data separately and the two sets of data were compared and no discrepancies were found.

3.9.2 Data safety and storage

Completed questionnaires were sealed in envelopes and stored in lockable cabinets to ensure safety and security. No person had access to the data except the researcher. To remain anonymous, no names were marked on questionnaires. Instead the questionnaires were coded to clearly identify participants per school. Both names and codes appeared in consent forms mainly for verification reasons in case there was need to follow-up participants. However, the names of the participants will not be mentioned in the research study findings to ensure both anonymity and confidentiality.

3.10 Data Analysis Processes

Descriptive statistics of data was implemented to summarize data and analytic statistics were used to measure associations between variables.

3.10.1 Descriptive Statistics

Categorical data was summarized using frequency distributions represented in tables and graphs. Numerical variables were summarized with appropriate measures of central location and

variability, depending on the symmetry of the data. Symmetry of the data was detected through box plots and frequency polygons.

3.10.2 Analytic Statistics

Statistical Product and Service Solutions (SPSS) version 16 was used to analyse the data. A p-value <0.05 was considered as statistically significant. Factors associated with YFS utilization were tested using the two-sided hypothesis Pearson's chi-square test. Logistic regression analysis was used for evaluating the relationship between a group of predictor variables and the probability for individual factors associated with YFS utilization controlling for other variables in the model. A step-wise regression model was implemented, and the model that gave the best estimate for predicting the relationship between the outcome variable and covariate was chosen (Horber, 2013). The logistic regression method was used because it provides an interpretable linear model for a categorical dependent variable. It also allowed for the significance of a given predictor to be tested, while controlling for all other predictors in the model.

3.11 Ethical Considerations

Permission to conduct the study was provided by the Postgraduate Education Committee at the University of KwaZulu-Natal (Appendix 5- REF 11/10_SN 210545313), from the Biomedical Research and Ethics Committee of the University of KwaZulu-Natal (Appendix 6-REF BE135/11) as well as the Botswana Ministry of Health Ethics Committee (Appendix 7- REF PPME 13/18/1 PS V(208)) and Ministry of Education and Skills Development Ethics Committee (Appendix 8- REF E 1/20/2 XII (39)).

Letters requesting permission (Appendix 2) to conduct the study were written to school headmasters. Once permission was granted, meetings were convened with the school management committees to determine ways to obtain parents/guardians' consent. Signed informed consent was obtained from parents/guardians (Appendix 4a and 4b) and signed assent (Appendix 4c) to participate in the study was obtained from students. The study ensured that all ethical principles were honoured: each participant's choice regarding participation in the study was respected, to ensure autonomy. Information about the nature of study was sent to parents

(Appendix 3a and 3b). All participants received full disclosure of the nature of the study as well as the potential risks and benefits of taking part. Participants knew that participation was voluntary and were further informed that they could withdraw from the study at any time without any negative consequences (See Appendix 3c).

The principle of beneficence was emphasized as participants were informed of the potential benefits of participating in the study to themselves and the Botswana nation at large. Any possible risks to all individuals were minimised. Finally, the principle of justice was ensured as all students stood an equal chance to participate. The researcher ensured that teachers were not present during the information and selection processes so that students had the freedom to participate or object to participate, so that, if they choose to refuse to participate, they would not feel vulnerable.

3.12 Conclusion

In conclusion, this chapter describes a health system research employing an observational study design with both descriptive and analytic components. The study population comprised adolescents attending at the three (3) senior secondary schools in Gaborone, who were sampled through a simple random sampling strategy in each school. A self-administered questionnaire was designed to collect data after obtaining parental consent and assent from participants. The questionnaire was pilot tested prior to the study. Categorical data was summarized using frequency distributions while numerical variables were summarized with appropriate measures of central location and variability. Data was coded and captured using SPSS version 16, which was then used to analyse the data using both multivariate analysis and multivariate logistic regression, and a p -value <0.05 was considered as statistically significant. Ethical procedures were observed throughout the study process.

CHAPTER 4

4.1 Study Findings

This chapter outlines the research results that were obtained through the processes described in the methodology chapter. The findings are presented by sections, either in narrative or tabular format, conforming to the adapted conceptual framework.

4.2 Sample Realization

The study intended to sample 508 respondents from the three secondary schools in Gaborone, 203, 173 and 132 from Gaborone Secondary School, Naledi Secondary School and Ledumang Secondary School respectively. However, a total number of 506 respondents participated; 203, 172 and 131 from Gaborone Secondary School, Naledi Secondary School and Ledumang Secondary School respectively.

4.3 Socio-demographic Characteristics

This section presents respondents' socio-demographic characteristics by sex, age, relationship status, academic class and living arrangements. The mean age of respondents was 17.25 years with a standard deviation of 0.94 and 95% confidence interval of 17.17-17.34 years.

Table 4.1 below outlines that there were more (54.7%) females. A majority of respondents were aged 17 years (39.9%), and single (53.6%). A greater proportion of girls (28.9%) reported having a boyfriend compared to boys (17.6%) who reported having a girlfriend. With regard to the academic class, majority of respondents (51.4%) were doing Form 5. In terms of living arrangements, most (43.9%) respondents reported staying with both parents.

Table 4.1: Socio-demographic characteristics of respondents (N=506)

Variable	Frequency (%)
Sex	
Male	229(45.3)
Female	277(54.7)
Age	
15	14(2.8)
16	89(17.6)
17	202(39.9)
18	156(30.8)
19	45(8.9)
Academic Class	
Form 4	246(48.6)
Form 5	260(51.4)
Relationship Status	
Single	271(53.6)
Married	0(0)
Have a boyfriend	146(28.9)
Have a girlfriend	89 (17.6)
Living arrangements	
With single parent	193(37.4)
With both parents	222(43.9)
Living on own	3(0.6)
With wife/husband	0(0)
With girlfriend/boyfriend	2(0.4)
With brothers/sisters	37(7.3)
With grandparents	19(3.8)
With uncle	20(4.0)
With extended family	10(2.0)
Missing data	2(0.4)

Ever used any health service in the last 12months

Government Facility	185(36.6)
Private Health Facility	135(26.7)
Pharmacy/ Chemist	31(6.1)
Traditional Doctor	1(0.2)
Other	0(0)

4.4 Socio-psychological Characteristics**4.4.1 Knowledge of SRH services**

Table 4.2 gives information on the type of SRH services respondents knew about. A majority (60.1%) reported that they knew about HIV/AIDS services, most (57.4%) being females Figure 4.1). The results further show that more females know individual SRH services than their male counterparts.

Table 4.2: SRH services that adolescents know about (N= 506)

SRH services	Frequency (%)
Adolescent Sexual and Reproductive Health	155(30.6)
Family Planning	255(50.4)
Pregnancy	256(50.6)
Maternal and Child Health	174(34.4)
Sexually Transmitted Infections	273(54.0)
HIV/AIDS	304(60.1)
Condom Provision	279(55.1)
Pap Smear	84(16.6)
None	26(5.1)

Note: There was more than one option for respondents

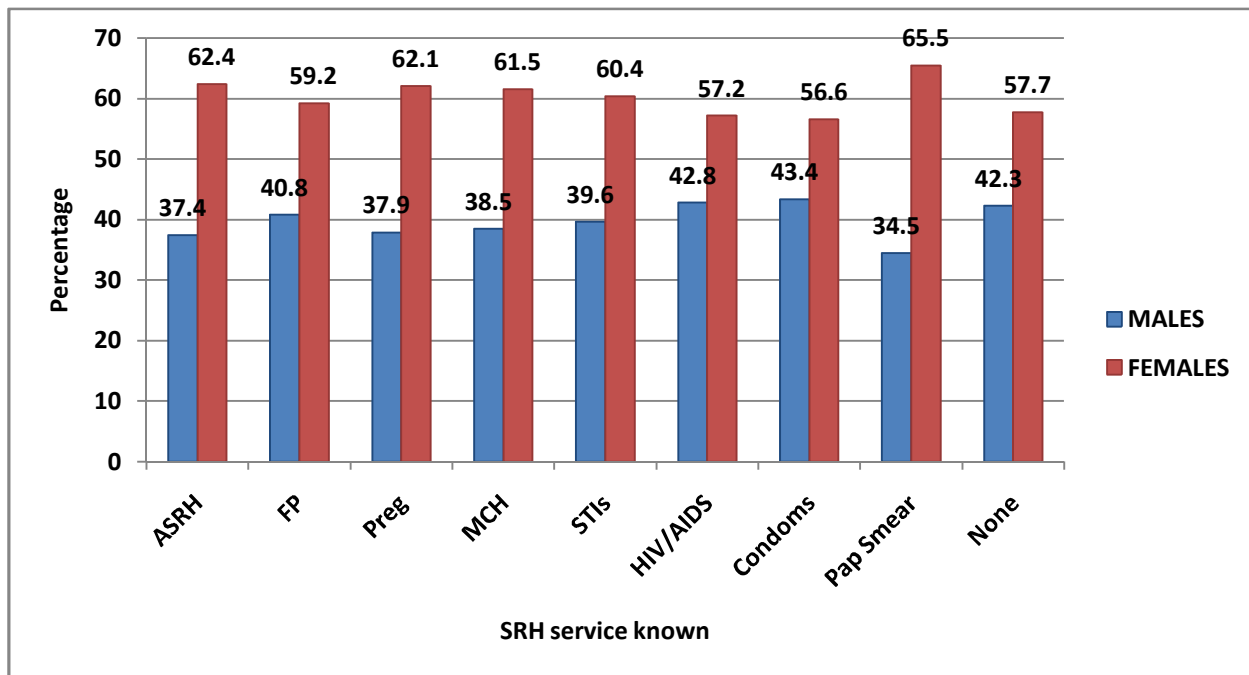


Figure 4.1: SRH services that respondents know about, by sex

4.4.2 Source of information about YFS

Table 4.3 shows the source of information about YFS among respondents. Of the respondents that knew about YFS (N=212), a majority (48.1%) reported to have obtained the information through media, with a similar 43.4% reporting the school as the source of information. Of those reporting to have obtained their information through the media and at school, a majority were females (47.1% and 52.1% respectively).

Table 4.3: Source of information about YFS, by sex (N=212)

Variable	Frequency (%)		
	Male	Female	Total
Health Facility	25 (27.5)	25 (20.7)	50(23.6)
School	35 (38.5)	57 (47.1)	92(43.4)
Friends	10(11.0)	11(9.10)	21(9.9)
Parents	5(5.50)	7 (5.8)	12(5.7)
Relatives	3 (3.30)	8 (6.6)	11(5.2)
Media	39(42.9)	63 (52.1)	102(48.1)
Church	2(2.20)	4(3.3)	6(2.8)

Note: There was more than one option for respondents

4.4.3 SRH service utilization (Practices)

Table 4.4 below shows SRH services that the respondents have utilized in the last 12 months. A majority (60.5%) had used none.

Table 4.4: SRH services used by respondents (N= 506) in the last 12 months

Variable	Frequency (%)
Adolescent Sexual and Reproductive Health	23(4.5)
Family Planning	13(2.6)
Pregnancy	3(0.6)
Maternal and Child Health	4(0.8)
Sexually Transmitted Infections	21(4.2)
HIV/AIDS	54(10.7)
Pap smear	3(0.6)
Condom Provision	88(17.4)
Gynaecological services	1(0.2)
None	306(60.5)

Note: There was more than one option for respondents

A total of 80 (28.9%) female adolescents reported using SRH services in the last 12 months compared to 120 (52.4%) males. The services most used by both males and females were condom provision and HIV/AIDS services, with 57.5% of males reporting the use of condoms compared to 23.8% females, and 27.5% males using HIV/AIDS services compared to 26.3% females (Figure 4.2).

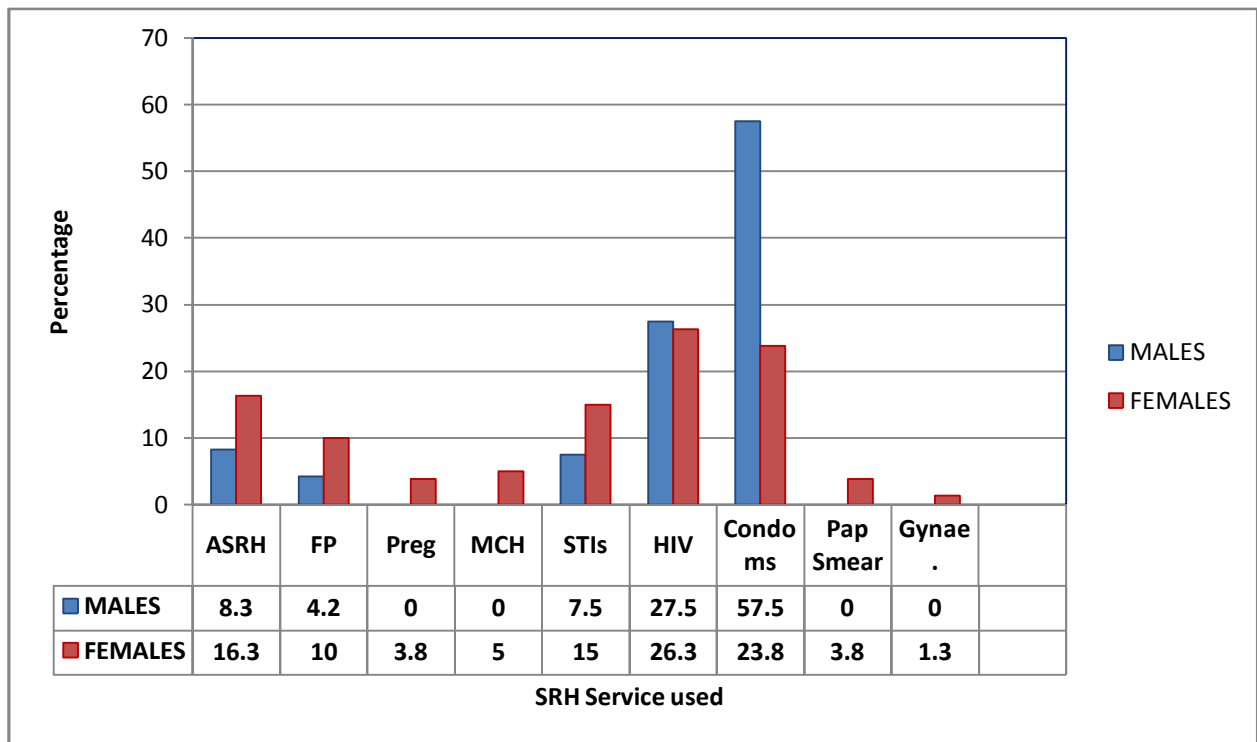


Figure 4.2: SRH services used by respondents in the last 12 months, by sex (n= 200)

Of the adolescents that reported ever using a SRH service in the last 12 months, the majority (60.2%) reported using governmental services (Figure 4.3).

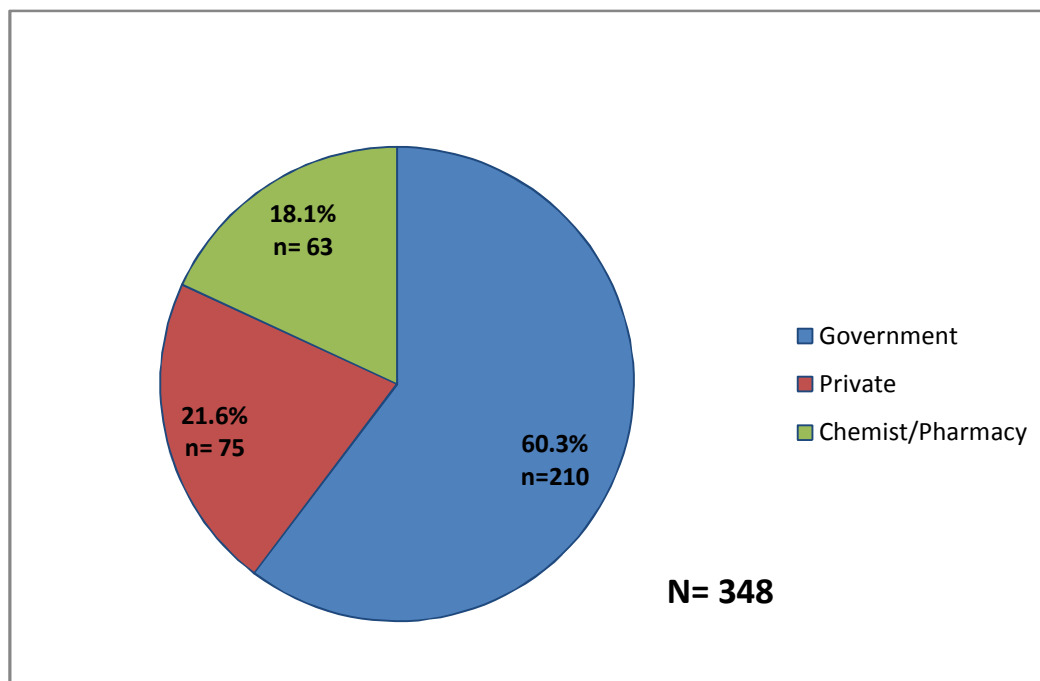


Figure 4.3: Ever utilized a health facility for SRH services

Respondents were further asked if they knew of, and visited Youth Friendly Services (YFS) in the last 12 months. Of the respondents that knew about YFS (N=212), 32.5% (n=69) reported ever having used YFS. Of those that have ever used YFS, 91.3% (n=63), reported using YFS in the last 12 months. Of those who reported using YFS in the last 12 months, a majority (55.6%) reported to have visited the YFS only once, and most (54.3%) were females.

Table 4.5: Number of visits to YFS in the last 12 months by sex (n=63)

Variable	Frequency (%)		
	Male	Female	Total
Once	16(45.7)	19(54.3)	35(55.5)
Twice	9(50.0)	9(50.0)	18(28.6)
3 or more	3(30.0)	7(70.0)	10(15.9)
Total	28(44.4)	35(55.6)	63(100)

4.5 Organizational Characteristics

4.5.1 Facilitating factors to YFS use

Of the respondents that reported ever using YFS (N=69), various reasons were given for visiting YFS. A majority of respondents (44.9%) reported that they visited YFS facilities because it was the preference of parents. Good staff attitudes and behaviours at the health facility were reported by 40.6% of respondents as a reason for visiting YFS. Of those that ever utilized YFS because it was the preference of their parents, a majority (51.6%) were males. Of those that ever utilized because of good staff attitudes and behaviours, a majority (60.7%) were females.

Table 4.6: Reasons given by respondents for visiting YFS, by sex (n= 69)

Variable	Frequency (%)		
	Males	Females	Total (%)
Quality service delivery	10(50.0)	10(50.0)	20(29.0)
Location of the facility	5(35.7)	9(64.3)	14(20.3)
Preferred by parents	16(51.6)	15(48.4)	31(44.9)
Convenient hours of operation	3(42.9)	4(57.1)	7(10.1)
Less waiting hours	3(60.0)	2(40.0)	5(7.2)
Good staff skills	13(48.1)	14(51.9)	27(39.1)
Good staff attitudes and behaviours	11(39.3)	17(60.7)	28(40.6)

Note: There was more than one option for respondents

4.5.2 Challenges experienced by YFS users in accessing SRH services

Adolescents that ever used YFS were asked the challenges that they experienced in accessing SRH services. One-third (n=23), reported that they experienced problems or difficulties using SRH services, 69.6% being females. Table 4.7 outlines the challenges reported with 26.1% of the respondents reporting lack of privacy and confidentiality, with all of those reporting this as the major challenge being females.

Table 4.7: Challenges experienced by YFS users in accessing SRH services, by sex (n=23)

Variable	Frequency (%)		
	Male	Female	Total
Unavailability of equipment/supplies	1(25.0)	3(75.0)	4(17.3)
Location of the facility	2(40)	3(60)	5(21.7)
Inconvenient hours of operation	1(100)	0(0)	1(4.3)
Lack of privacy and confidentiality	0(0)	6(100)	6(26.1)
Staff attitudes and behaviours	2(100)	0(0)	2(8.7)
Community attitudes towards services	0(0)	1(100)	1(4.3)
Embarrassment associated with SRH service use	2(66.7)	1(33.3)	3(13.0)
Poor follow up system	0(0)	1(100)	1(4.3)
Poor referral system	0(0)	1(100)	1(4.3)

Note: There was more than one option for respondents

4.5.3 Reasons why adolescents did not visit YFS

Participants who reported never having visited YFS (N=437) were asked reasons why they have never visited the facilities. A high proportion (67.1%, n= 291) reported that they did not know about YFS, the majority (52.9%, n=154) of these being females. In Table 4.8 are presented the reasons given by respondents who did know YFS (N= 146), for never having used YFS. The majority (40.4%) reported that the challenge was in the location of the facility, and 21.2% reported that they had no interest in YFS.

Table 4.8: Reasons why some adolescents have never visited YFS in the last 12 months by sex (n=146)

Variable	Frequency (%)		
	Male	Female	Total
Unavailability of equipment/supplies	6(54.5)	5(45.5)	11(2.5)
Poor quality of services	3(60.0)	2(40.0)	5(1.2)
Location of facility	17(28.8)	42(71.2)	59(13.6)
Inconvenient hours of operation	3(50.0)	3(50.0)	6(1.40)
Long waiting hours	2(40.0)	3(60.0)	5(1.20)
Lack of privacy and confidentiality	6(54.5)	5(45.5)	11(2.50)
Staff attitudes and behaviours	4(44.4)	5(55.6)	9(2.10)
Poor facility structures	0(0)	1(100)	1(0.20)
Service use against my values and beliefs	4(80.0)	1(20.0)	5(1.20)
No interest in YFS	13(41.9)	18(58.1)	31(7.10)

Note: There was more than one option for respondents

4.6 Socio-demographic factors associated with adolescents knowledge of SRH services

For the bivariate analysis a chi-square test was done to test which socio-demographic variables had statistical significance. In the bivariate analysis, age and the academic class of respondents showed statistical significance as shown in Table 4.9.

Table 4.9: Socio-demographic factors associated with knowledge of SRH by adolescents (bivariate analysis)

Characteristics	Knew about SRH n (%)	Did not know about SRH n (%)	p-value
Sex			0.841
Male	217(95.2)	11(4.8)	
Female	262(94.6)	15(5.4)	
Age			0.957
15	13(92.9)	1(7.1)	
16	83(94.3)	5(5.7)	
17	192(95.1)	10(4.9)	
18	148(94.9)	5(5.1)	
19	43(95.6)	2(4.4)	
Academic Class			0.014**
Form 4	227(92.3)	19(7.7)	
Form 5	252(97.3)	7(2.7)	
Relationship Status			0.217
Single	260(96.3)	10(3.7)	
Married	0(0)	0(0)	
Have boyfriend	137(93.8)	9(6.2)	
Have girlfriend	82(92.1)	7(7.9)	
Living Arrangements			0.593
With single parent	181(93.8)	12(6.2)	
With both parents	212(95.9)	9(4.1)	
Living on own	3(100)	0(0)	
With boy/girlfriend	2(100)	0(0)	
With wife/husband	0(0)	0(0)	
With brothers/sisters	36(97.3)	1(2.7)	
With grandparents	17(89.5)	2(10.5)	
With uncle	19(95.0)	1(5.0)	
With extended family	9(90.0)	19(10)	
Socio-economic status			0.840
< P1000	50(96.2)	2(3.8)	
P1000-P2000	68(97.1)	2(2.9)	
P2000-P3000	55(96.5)	2(3.5)	
P3000-P5000	76(93.8)	5(6.2)	
>P5000	230(93.9)	15(6.1)	

Notes:

The group with 1.00 is the reference category.

** Significant at $p < 0.05$.

For the multivariate analysis, a logistic regression analysis was performed. In the logistic academic class was the only statistically significant predictor of whether an adolescent would have knowledge of SRH services. The other variables did not retain statistical significance. Furthermore, the results show that a majority of adolescents knew about SRH services.

Table 4.10: Socio-demographic factors associated with knowledge of SRH services by adolescents (multivariate analysis)

Variables	Odds Ratio	95 % Confidence Interval	
		Lower	Upper
Age			
15	2.72	0.70	10.51
16	2.18	0.98	4.89
17	1.99**	1.01	3.93
18	1.79	0.91	3.52
19	1.00	-	-
Academic Class			
Form 4	1.48	0.996	2.29
Form 5	1.00	-	-

Notes:

The group with 1.00 is the reference category.

*** Significant at $p < 0.05$.*

4.7 Socio-demographic factors associated with adolescent utilization of SRH services

A multivariate logistic regression was used to measure the association between various socio-demographic variables and utilization of YFS by adolescents. Adolescents aged 16, 17 and 18 were more likely to use SRH services than adolescents aged 19 years. However, age 17 years was the only variable that was statistically significant. Adolescents aged 17 years were three times more likely to utilize YFS compared to those aged 19 years. Other variables like sex, living arrangements and socio-economic status of adolescents did not show statistical significance. Academic class and the relationship status of the respondents were not included in the analytical model, as they reduced the significance of all the variables in the analysis (Table 4.11).

Table 4.11: Socio-demographic factors associated with utilization of SRH services by adolescents (multivariate logistic regression)

Variables	Odds Ratio	95 % Confidence Interval	
		Lower	Upper
Sex			
Male	0.09	0.49	1.68
Female	1.00	-	-
Age			
15	0.38	0.03	4.42
16	2.60	0.81	8.39
17	2.84***	1.07	7.56
18	2.55	0.96	6.76
19	1.00	-	-
Living arrangements			
With single parents	0.70	0.07	8.04
With both parents	0.60	0.06	6.20
Living on own	4.78	0.00	-
With girlfriend/boyfriend	1.33	0.09	18.7
With brothers/sisters	0.66	0.05	9.14
With grandparents	2.66	0.11	62.9
With extended family	1.00	-	-
Socio-economic status			
Less than P1000	1.09	0.36	3.35
P1000- P2000	0.66	0.23	1.87
P2000-P3000	0.64	0.24	1.71
P3000-P5000	0.89	0.39	2.04
More than P5000	1.00	-	-

Notes:

The group with 1.00 is the reference category.

*** Significant at $p < 0.05$

4.8 Summary of the findings

The findings of this study revealed overall knowledge about SRH services by adolescents was low, as was the overall level of utilization. The findings further reveal that utilization of SRH was higher among the female adolescents compared to their male counterparts. The study found that with regard to the socio-demographic factors of adolescents, the mean age of respondents was 17.25 years, with a standard deviation of 0.94 and 95% confidence interval of 17.17-17.34 years. The majority of respondents were aged 17 years and were single. More females reported having boyfriends compared to males who reported having girlfriends. Most of the respondents were doing form 5 and a majority of the respondents reported staying with both parents. Furthermore, age and academic class of respondents showed statistical significance in the bivariate analysis and for the multivariate analysis age 17 years was the only statistical significant predictor of whether an adolescent would have knowledge of SRH services. Moreover, the same age (17 years) was the only variable that was statistically significant as adolescent aged 17 years were three times more likely to utilize YFS compared to those aged 19 years.

Despite the low knowledge about SRH services, with regard to the socio- psychological factors a majority of adolescents reported knowledge of HIV/AIDS and condom provision services, most of which were females. A few respondents also reported knowledge of YFS and ever having used YFS. However, with regard to use, most respondents acknowledged not to have used any SRH services in the last 12 months. Of those who reported to have used such services in the last 12 months, a majority, both males and females, reported to have use HIV/AIDS and condom provision services, a majority of which used government facilities. Furthermore, respondents who reported YFS knowledge, reported having used YFS in the last 12 months, and a majority reported to have visited YFS only once, and most were females.

The study identified organizational factors which hinder adolescents' utilization of SRH services. Of the respondents that reported YFS knowledge, a majority reported media and school as the main source of information and most of them were females. Most respondents, who reported to have visited YFS in the last 12 months, reported that they visited because it was the preference of

their parents, while others reported good staff attitudes and behaviours as a reason for visiting. Adolescents that ever visited YFS were asked if they had any challenges in accessing SRH services, and most females reported that they were challenged by lack of privacy and confidentiality. Participants who reported that they had never visited YFS were asked reasons why they had never visited. They reported that did not know about YFS, a high proportion of these being females. A good number also reported that they were challenged by the location of the YFS facilities while others had no interest in YFS.

CHAPTER 5

5.1 Discussion of Findings

This chapter discusses the main findings of the study, addressing the research questions and objectives. This study aimed to determine patterns of utilization of SRH service by secondary school-going adolescents in Gaborone, in Botswana. The study findings reported in the previous chapter are discussed here in relation to the available literature on utilization of SRH services by adolescents, guided by the conceptual framework. Patterns of utilization of SRH services by adolescents has been shown to be determined by the socio-demographic profile of users, and by socio-psychological factors like age, sex and awareness of available services, as well as by organizational factors such as location of health facilities and staff attitudes and behaviours.

5.2 Factors associated with adolescent knowledge of SRH services

5.2.1 Socio-demographic factors

The findings of this study reveal that awareness of SRH was associated with socio-demographic factors such as sex, age and the academic class of the respondents. The mean age of respondents was 17.25 years and both the bivariate and multivariate analysis showed that age 17 years had a statistically significant association with whether an adolescent would have knowledge of SRH services. Respondents aged 17 years were found to be two times more likely to be knowledgeable about SRH services than those aged 19 years. An evaluation of the ASRH Implementation Strategy in Botswana also found out that 97% of adolescents aged 15 to 17 years reported that they knew about HIV/AIDS (MOH, 2010). A study by Nnorom & Bammeke (2008) on the extent of adolescents' knowledge of SRH and rights in Nigeria found that age at which adolescents heard about sex for the first time ranged from 5 to 20 years, and when disaggregated by sex, both sexes got to hear of sex when most of them were between the ages of 10 to 14 years. However, more male adolescents were empowered with sexuality information in their early years than their female counterparts.

In the current study, females were more knowledgeable about SRH services than their male counterparts. These findings are consistent with findings from a study by Albert (2007) in

Pohnpei State- an island in the western Pacific Ocean, in which the overall results found that female adolescents were more aware of YFS, and showed greater utilization of YFS clinics for FP, STI screening and treatment than males adolescents. Moreover, the findings on the ASRH Implementation Strategy Evaluation in Botswana also revealed that female adolescents seemed more likely to have known of HIV/AIDS/STIs, how they are spread and prevented than their male counterparts (MOH, 2010). Another study by Maro (2012) found that adolescents with higher education significantly were aware of SRH services than those who have never attended school. Contrary to the mentioned studies, Shaikh & Rahim (2006) in a study assessing knowledge and exploring needs of adolescents and young adults in Pakistan, reports that adolescents and young adults do have some knowledge of SRH issues. The study found that males were relatively more knowledgeable than females on various SRH issues.

5.2.2 Socio-psychological factors

The findings of this study reveal limited knowledge of general SRH by adolescents. However, two-thirds of respondents reported that they knew about HIV/AIDS services, as well as condom provision services. More than two-fifths of respondents also reported YFS knowledge with one-third reporting that they used YFS in the last 12 months. A baseline survey on knowledge, attitude, behaviour and practice on SRH, HIV and AIDS among adolescents in Tanzania found that awareness and knowledge on HIV and AIDS vary among respondents, the interview revealed low level of awareness and knowledge on issues related to HIV and STIs, as most respondents were unable to mention all four ways for HIV transmission correctly. Of the respondents who reported YFS knowledge, just under half reported that they had obtained information on YFS through media, with two-fifths reporting school as the source of information. A study by Motuma (2012) found that a majority of adolescents had information about SRH and the major source of information about YFS was school teachers and radio broadcasts.

On issues of attitudes, a majority of respondents would be willing to be nearby and corporate with their fellow students if tested and found positive, however they survey also found that some respondents thought that AIDS is curable (SATF, 2013). A study to explore knowledge, attitudes and behaviours of young people in Malaysia in relation to reproduction and premarital sexual

practices, in the section that assessed respondents' knowledge about reproduction and pregnancy, found that a minority of respondents believed that douching can prevent pregnancies, and more than half believed that a woman cannot get pregnant if a partner does not ejaculate. In the same study, for the attitudes towards premarital sex, a good number of respondents were opposing premarital sex, however currently dating individuals had significantly lower attitudes than individuals who have never dated (Wong, 2012).

5.2.3 Organizational factors

Intensifying awareness/demand creation of activities which would increase the utilization of YFS is also important in order to improve knowledge, utilization and attitudes towards SRH service use. Lebeso *et al.*, (2013), in a study on factors influencing the uptake of contraception services by Vatsonga adolescents in South Africa found that adolescents, especially those living in the villages, indicated that they do not have access to information. Poor health education by service providers was also cited by adolescents as another factor that contributes to poor uptake of family planning services. They reported that health service providers are always too busy to spend some quality time with adolescents. Most adolescents indicated that most of the available information is in written form hence most parents are illiterate and this contributes to the inability of parents to assist their children on SRH issues. A study by Biddlecom (2007) found that most common barrier by adolescents to obtain various SRH services was stigma, cost of services, provider characteristics and lack of knowledge about service sources.

A study by Kennedy *et al.*, (2013) states, on the opportunities to increase access to SRH services, that community support is an important predictor of adolescents' care seeking behaviour, and YFS may be more effective if linked with community interventions. And that adolescents, providers and policymakers agreed that there is need to increase awareness and address negative attitudes of community leaders and parents, in addition to increasing knowledge and demand among adolescents. The AYA report (2003) states that youth involvement in program design is crucial, they should be involved in the implementation and evaluation of their services in order to improve their knowledge, as well as ensuring that educational materials are available on the site for adolescents to take as some prefer to learn about sensitive issues on their own, using written or audiovisual materials.

5.3 Factors associated with adolescent utilization of SRH services

5.3.1 Socio-demographic factors

Age of adolescents in the current study was also associated with utilization of SRH, with adolescents aged 17 statistically significantly more likely to utilize SRH compared to adolescents aged 19 years. Adolescents who were aged 16 and 18 were also more likely to have utilized YFS, but the results were not statistically significant. Empirical evidence indicates that sexually active adolescents in Botswana experienced their first sexual encounter at the average age of 17 years (Mwinga, 2012). A study by Akinyi (2009) found that age influenced utilization of four main SRH services, whereby older youth tended to utilize YFS more, compared to younger ones. Age had significant association to utilization of family planning, VCT, counselling services and STI treatment. The results of this study are consistent with those reported by Osanyin (2010), who found that with regard to clinical services, contraception and voluntary counselling and testing were the most utilized services according to clients' age, of which about a third of clients were those aged 15 to 19 years. Furthermore, Ersheng *et al.* (2005) also stated that adolescents between 15 to 19 years of age accounted for majority of clients who utilized counselling services at YFS centres in Shanghai, with majority utilizing face-to-face counselling, followed by hotline then on-line counselling services.

The findings of this study show that more than half of males reported having used SRH services in the last 12 months while about one-third of females acknowledged use. Moreover, more than half of both males and females reported having used both HIV/AIDS and condom provision services. Findings by Osanyin (2010) in a report on assessment of facilities providing YFS in Nigeria are consistent with these findings, it was found that more males, more than half, utilized contraceptive services than females, probably because the most popular contraceptive for males is the male condom, the uptake of which could be very high because of regular and repeated use. The Botswana ASRH Implementation Evaluation report however revealed that adolescents, especially females, seemed more likely to have used HIV/AIDS, STIs, condom provision and contraceptive services than males (MOH, 2010). Additionally, Kalo (2007) in a study on utilization of SRH services by adolescents in Vanuatu- an island nation located in the South Pacific Ocean, reports that when adolescents' clinic records were reviewed, NGO Clinic records

showed that more females utilized YFS than males, while in government clinics, records revealed similar utilization by both males and females.

There was no statistical significance between the socio-economic status of adolescents and utilization of SRH services. This is not consistent with the findings reported by Fako (2006) that students with a higher socio-economic status, as measured by the type of job parents did, were significantly more willing to test for HIV than those of a lower socio-economic status. The findings of the present study are also inconsistent with the results of a study by McFarland (2003) on cervical cancer and Pap smear screening in Botswana, which showed that knowledge and use of cervical cancer and Pap smear screening services was related to young women's socio-economic status, with knowledge and use limited among women of lower socio-economic status.

5.3.2 Socio-psychological factors

In the current study a majority of participants reported that they have never visited YFS in the last 12 months, most of which reported that they did not visit because of the location of the facilities while others reported that they had no interest in using the facilities. With regard to using the services in the last 12 months, about two-thirds had used none of the services, while others reported using condom services and HIV/AIDS services and most of those who utilized the services preferred government facilities. Abajobir & Seme (2013) in a study on reproductive health knowledge and service utilization among rural adolescents in Ethiopia found that about a third reported ever using the services in the last 6 months and a majority preferred government health facilities. Effectiveness, proximity of the facilities and free of charge treatments were indicated as the reasons for visiting.

Mbeba *et al.*, (2012) reports that, in most developing countries, young people have inadequate access to appropriate SRH information contributing to unprotected sexual practices leading to unwanted pregnancies, HIV/AIDS and STIs. Hence the need to introduce SRH interventions focused on health education, which will contribute to changing attitudes towards adolescents when seeking ASRH services. A study by Motuma (2012) stated that more than half of the respondents reported to have visited YFS facility for STI/HIV/AIDS related services, contraceptives, IEC on SRH, pregnancy and post abortion care services. These results are

consistent with those reported on⁹ the ASRH Implementation Strategy Evaluation done in Botswana by the MOH (2010) which found that adolescent awareness and utilization of various SRH services was inadequate. The evaluation report shows that respondents who reported awareness also reported to have utilized HIV/AIDS, parent-to child communication services, immunization, Pap smear and male circumcision services (MOH, 2010).

5.3.3 Organizational factors

The results pertaining to the organizational characteristics show that utilization of services was affected by lack of awareness of SRH, location of the facility, no interest in YFS, staff attitudes and behaviours as well as inconvenient hours of operation, although no statistical significance was detected in this study. Probably the results show no statistical significance because of the low number of respondents who reported ever visiting YFS in the last 12 months. The results are consistent with findings by Matshediso (2008) who argues that limited access to the facility by the target group due to location, cost of reaching the facility, and attitudes of service providers were reported as obstacles to youth friendliness of a Youth Activity Centre. These findings are similar to those reported by Kalo (2007) who stated that perceived barriers to YFS use included that boys are not using services because they are shy, have less information about YFS and that service providers should be both males and females.

The results are consistent with findings by Motuma (2012) who stated that barriers to using YFS among adolescents continue today, and they include inconvenient locations, limited hours of operation, unsupportive provider attitudes, and a lack of quality services, a lack of confidentiality and privacy as well as high costs of services. Among factors identified by adolescents that facilitated utilization of YFS, is that YFS facilities were preferred by their parents. This finding is crucial as parents are better sources to convey the right information to children than any other source. However, WHRAP (2011) states that information regarding puberty and sexual health, mostly gained from friends, mass media and religious teachers, is likely to be incomplete or obscured by religious and moral messages. As most parents still hold conservative norms, they feel uncomfortable about discussing sexual issues with their teenage children. These barriers

have been identified by previous studies as main barriers which hinder adolescents to utilize available SRH services.

5.4 Study Limitations

5.4.1 Representativeness of the sample

The findings of the study cannot be generalised to the whole country because the study was only done in Gaborone. Furthermore, the study cannot be generalized to all adolescents as it focused on school-going adolescents in the government senior secondary schools of Gaborone.

5.4.2 Probable selection biases

A non-probability quota sampling strategy was implemented. The selection of the class for the students to participate was done through the assistance of the Guidance and Counselling teachers in all schools. There could have been bias in the sense that the teachers selected classes with the most students in the age range 15-19 years. Moreover, teachers may have focused more on classes that they taught, and not all classes in general, or they might have suggested classes which they thought would cooperate with the researcher. Furthermore, the teachers may have also focused on the number of students in classes, in order to arrive at the required number of respondents. Moreover, school-going adolescents may be systematically different from non-school going adolescents.

5.4.3 Recall and response biases

The study asked questions about past behaviours. Some respondents may have had difficulty in recalling the events, or may have given answers that were socially desirable rather than their true-life experiences. These factors could have caused biases and affected generalisation of findings.

5.4.4 Information bias

For the operationalisation of the organizational characteristics, especially the quality of services obtained by respondents, it is crucial to note that these are the participants' perceptions of the

quality of services that they receive from the health facilities; no data was collected from the health facilities or from the services themselves hence possible information bias.

5.5 Conclusion

In conclusion, factors associated with the knowledge and utilization of SRH services by adolescents reveal that awareness and utilization were associated with adolescents' socio-demographic factors, with age being statistically significantly associated to knowledge and use. Socio-psychological factors reveal limited knowledge of general SRH and with regard to source of information adolescents reported media and schools as their main source of information about SRH. Adolescents reported having used SRH in the last 12 months; however a majority reported that they never visited SRH in the last 12 months because of the facility location and because of reported no interest. The results of this study show that the adapted Anderson Framework on utilization of services is very useful and essential in understanding patterns of utilization of SRH services by adolescents.

CHAPTER 6

6.1 The Study Conclusion and Recommendations

6.1.1 Conclusion

It is clear from the study findings that a majority of adolescents do not utilize SRH and/or YFS. The study has identified socio-demographic, socio-psychological and organizational factors that influence utilization of SRH. Amongst the socio-demographic factors, the most prominent are age, sex, socio-economic status and the living arrangements of adolescents. Generally more females than males utilize SRH services, and adolescents aged 17 years were more likely to use services than other age groups. It is important to educate adolescents and to address the identified knowledge deficit about available SRH services and the importance of utilizing such services. It is therefore important to note that barriers to adolescent utilization of SRH services persist. More research needs to occur in identifying what has already been done to deal with the barriers, and why they persist, in an endeavour to identify effective strategies to deal with the barriers that still prevent adolescents from accessing SRH and YFS services.

These results call for immediate actions more especially with regard to knowledge and utilization in order to help adolescents' well-being and to live a happier life. Nevertheless, there are obstacles that hinder adolescents to fully utilize SRH, e.g. location of health facility. It should be noted that these obstacles affect the utilization of SRH by adolescents and therefore should be addressed in order to improve SRH utilization by the adolescents. Overall research will be required to demonstrate on how to improve young people's use of services. Parents should be sensitized on SRH services as they have shown to play a role in SRH utilization by adolescents and it is also important to ensure education in schools about SRH. Health interventions should be established and provided through health services in schools.

6.1.2 Recommendations

As stated earlier, the findings of this study show that there is under-utilization of SRH services by secondary school-going adolescents in Gaborone. Adolescents also have made suggestions

concerning YFS utilization in their district, hence the need to come-up with recommendations geared to the Ministry of Education, Skills and Development and Ministry of Health. Most of these recommendations address the organizational dimensions at both ministries.

6.1.2.1 Parental Involvement and education about SRH

It is important for the two ministries to work in collaboration with communities so that parents are sensitized more about SRH use by adolescents. The social background of adolescents has shown to play a major role in the way adolescents utilize SRH services in Gaborone hence the need to have parental seminars or workshops to impart them with skills and knowledge on how they should deal with their children as they grow up.

6.1.2.2 Incorporation of the YFS concept in the Secondary Education Curricula

A majority of adolescents who knew about SRH and YFS reported that they got information from schools. It is therefore important to review the school curricula to ensure that all schools include the SRH concept in their curriculum and to ensure that the information that is provided in schools is accurate. This can be a good initiative to help address adolescents issues and concerns while still in school.

6.2.1. 3 Intensify media coverage on SRH use

According to the results of this study, most respondents who knew about SRH and YFS obtained the information from media. It is therefore vital to intensify media coverage on YFS and develop more IEC/BCC materials on ASRH. Media campaigns that use famous actors, athletes or musicians provide role models for young people. Such forums can be used to disseminate information among young people and good programming in the media can counter popular myths and misconceptions about sexuality issues. In order to be effective the media should involve adolescents at all stages to ensure that what is said is well understood by the target population. Different types of theatre and entertainment as well as internet can also be used to pass messages on SRH to adolescents.

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APPENDICES

Appendix 1: Self Administered Questionnaire

Date questionnaire is completed (dd/mm/yy) _____ / _____ / _____

Study Title: PATTERNS OF UTILIZATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES BY SECONDARY SCHOOL-GOING ADOLESCENTS IN GABORONE, BOTSWANA, 2012

QUESTIONNAIRE NO.: _____

Instructions to the Researcher:

1. Introduce yourself to the participants
2. Explain the purpose of the study to the participants

Instructions to the participant

1. Indicate your response by a tick (✓) in the boxes provided.
2. Fill the spaces provided with information where appropriate.
3. Make sure you fully understand the question before answering, if you do not understand or unsure about a question, kindly ask the researcher.

SECTION A: DEMOGRAPHIC INFORMATION

1. What is your sex?

a) Male

b) Female

2. What is your age?

a) 15 years

b) 16 years

c) 17 years

d) 18 years

e) 19 years

3. What is your relationship status?

a) Single

b) Married

c) Have a boyfriend

d) Have a girlfriend

e) Other _____

4. What is your Academic Class?

a) Form 4

b) Form 5

c) Other

5. What are your living arrangements?

- a) Living with a single parent
- b) Living with both parents
- c) Living on my own
- d) Living with a wife/husband
- e) Living with a girlfriend/boyfriend
- f) Living with brothers/sisters
- g) Living with grandparents
- h) Other, specify _____

6. How do you rate your family socio-economic status in terms of salary per month?

- a) Less than P1000
- b) P1000- P2000
- c) P2000-P3000
- d) P3000-P5000
- e) More than P5000

7. Do you have someone that you can freely confide in for any kind of health problem?

- a) Yes
- b) No

8. If yes, who is the person?

- a) Friend
- b) Mother
- c) Father
- d) Sibling (brother/ sister)
- e) Teacher

f) Health provider (Nurse/Doctor)

g) Other, please specify_____

SECTION B: UTILIZATION OF HEALTH SERVICES

1. Have you visited a health facility in the last 12 months?

- a) Yes
- b) No

If 'yes' continue with No. 2, if 'no' then go to Section C

2. What kind of health facility did you visit and how many times have you visited the mentioned facility in the last 12 months? *You can tick more than one option*

Kind of facility visited	Tick	Number of times you visited the facility		
Government health facility		Once <input type="checkbox"/>	Twice <input type="checkbox"/>	3 times or more <input type="checkbox"/>
Private health facility		Once <input type="checkbox"/>	Twice <input type="checkbox"/>	3 times or more <input type="checkbox"/>
Pharmacy/Chemist		Once <input type="checkbox"/>	Twice <input type="checkbox"/>	3 times or more <input type="checkbox"/>
Traditional Doctor		Once <input type="checkbox"/>	Twice <input type="checkbox"/>	3 times or more <input type="checkbox"/>
Other, specify _____		Once <input type="checkbox"/>	Twice <input type="checkbox"/>	3 times or more <input type="checkbox"/>

3. Why do you prefer to use the above mentioned facility?

- a) It has enough equipment and supplies
- b) It has quality services
- c) Convenient hours of operation
- d) Good staff attitudes and behaviours
- e) Location of the facility favours me
- f) Facility buildings in good condition
- g) The services are fast
- h) Other, specify _____

SECTION C: UTILIZATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES

1. Which sexual and reproductive health services do you know of?

- a) Adolescent sexual and reproductive health
- b) Family Planning
- c) Pregnancy
- d) Mother and child health
- e) Sexually Transmitted Infections
- f) HIV/AIDS
- g) Condom provision
- h) Pap smear (screening for cancer of the cervix)
- i) Other, specify _____

2. Which of the services have you used in the last 12 months?

- a) Adolescent sexual and reproductive health
- b) Family Planning
- c) Pregnancy
- d) Mother and child health
- e) Sexually Transmitted Infections
- f) HIV/AIDS services
- g) Pap smear (screening for cancer of the cervix)
- h) Condom provision
- i) Other, specify _____

3. Where did you get these services? *You can tick more than one option*

Facility	Yes	No
a) Government health facility		
b) Private health facility		
c) Pharmacy/Chemist		
d) Other, specify		

4. Do you know about Youth Friendly Services?

- a) Yes
- b) No

5. If 'yes' where did you get information about Youth Friendly Services?

- a) Health facility
- b) School
- c) Friends
- d) Parents
- e) Relatives
- f) Media (Radio, TV, magazines, newspapers)

6. Have you ever visited a Youth Friendly Service facility?

- a) Yes
- b) No

If 'yes' continue with no. 7, if 'no' go to no. 11

7. How many times have you visited the youth friendly service facility in the past 12 months?

- a) Never

b) Once

c) Twice

d) 3 and more

8. What are reasons for your visiting the Youth Friendly facility? *Tick all that apply.*

Reasons for preference	Yes	No
a) Quality service delivery		
b) Location of the facility		
c) Preferred by parents		
d) Convenient hours of operation		
e) Less waiting hours		
g) Good staff skills		
h) Good staff attitudes and behaviours		
i) Other _____		

9. Do you have any problems or difficulties in accessing Youth Friendly Services?

a) Yes

b) No

10. If ~~yes~~ what problems or difficulties do you experience? If ~~no~~ go to No. 11.

a) Unavailability of equipment and supplies

b) Poor quality of services

c) Location of the facility

d) Inconvenient hours of operation

e) Lack of privacy and confidentiality

f) Staff attitudes and behaviours

g) Community attitudes towards services

- h) Embarrassment associated with SRH service use
- i) Poor facility structures (buildings)
- j) Poor referral system
- k) Poor follow-up system
- l) Other _____

11. If you have never visited or used a Youth Friendly Service, why?

- a) Do not know about it
- b) Unavailability of equipment/supplies in YFS clinics
- c) Poor quality of services
- d) Location of the YFS facility
- e) Inconvenient hours of operation
- f) Long waiting hours
- g) Lack of privacy and confidentiality
- h) Staff attitudes and behaviours
- i) Poor facility (building) structures
- j) Use of services is against my values and beliefs
- k) Other _____

12. Any comments or suggestions with regard to use of Youth Friendly Services in your district

SECTION D: SEXUALITY INFORMATION

1. Have you ever had sexual intercourse? *If ‘Yes’, continue with the following questions. If ‘No’, you have finished the questionnaire.*

- a) Yes
- b) No

2. How old were you when you had sexual intercourse for the first time? _____ years

3. How old was the person with whom you had sex with for the first time?

- a) Approximately the same age as me (up to 2 years younger/older)
- b) Older than me (more than 3- 5 or more years older)
- c) Younger than me (more than 3- 5 or more years younger)
- d) Other _____

4. What sexual and reproductive services did you utilize before or after your first sexual intercourse?

Service utilized	Before sexual encounter	After sexual encounter
a) Youth Friendly Services		
b) Sexually Transmitted Infections		
c) HIV/ AIDS		
d) Contraceptive use		
e) Condom provision		
f) Pap smear (screening for cancer of the cervix)		
g) Pregnancy	Not Applicable	
h) Termination of pregnancy	Not Applicable	
i) Other		

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5. How many children do you have?

- a) 0
- b) 1
- c) 2
- d) 3 and above

6. At what age did you have your first child? _____years

The following questions apply to females only.

7. Have you ever had a pregnancy terminated?

- a) Yes
- b) No

8. If yes, where was the pregnancy terminated?

- a) In-country government health facility
- b) In-country private health facility
- c) Out-of country health facility
- d) Traditional healer
- e) Self inflicted

9. How many terminations have you had?

- a) 1
- b) 2 or more

10. What were the reasons for the terminations?

- a) I did not want the pregnancy
- b) Influence from husband/boyfriend
- c) Influence from parents

d) Influence from friends

e) Spontaneous or natural

f) Medical

11. Did you have any complications after the termination?

a) Yes

b) No

12. If yes please explain the complications you encountered?

Appendix 2: Letters Requesting Permission

28 Manor Drive
Manor Gardens
4001 Durban, South Africa

September, 2011

Chief Research Officer
Health Research Unit
Private Bag 0038
Gaborone, Botswana

Dear Sir

**RE: SUBMISSION OF THE RESEARCH PROPOSAL ON PATTERNS OF
UTILIZATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES BY
SECONDARY SCHOOL-GOING ADOLESCENTS IN GABORONE, 2012.**

The above subject matter refers.

I am a Masters in Public Health student at the University of KwaZulu Natal, Durban, South Africa. I would like to conduct the above mentioned research for academic reasons in a way to fulfil my award of Masters in Public Health, with specialization in Reproductive, Child and Adolescent Health. The study population is adolescents aged 15 to 19 years inclusive, attending at the three Senior Secondary Schools in Gaborone namely; Gaborone Senior School, Naledi Senior School and Ledumang Senior School.

Identification of patterns of utilization of Sexual and Reproductive Health services by secondary school-going adolescents in Gaborone can help strengthen health programmes at all levels of

programme implementation. The Ministry of Health can re-orientate, or develop new health initiatives that will assist adolescents to fully utilize the available services. Data collection is tentatively scheduled to start in 2012.

Attached please find copies of the Research Proposal, Parental and Participants consent forms and the filled Health Research Application form.

Thanking you in advance for your positive consideration.

Yours Faithfully

Tshegofatso Maotwe (Ms)

+27742369324(SA)

+26771684782(BW)

28 Manor Drive
Manor Gardens
4001 Durban, South Africa

September, 2011

Chief Education Officer
Division of Planning Statistics and Research
Private Bag 005
Gaborone, Botswana

Dear Sir

RE: SUBMISSION OF THE RESEARCH PROPOSAL ON PATTERNS OF UTILIZATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES BY SECONDARY SCHOOL-GOING ADOLESCENTS IN GABORONE, 2012.

The above subject matter refers.

I am a Masters in Public Health student at the University of KwaZulu Natal, Durban, South Africa. I would to like conduct the above mentioned research for academic reasons in a way to fulfil my award of Masters in Public Health, with specialization in Reproductive, Child and Adolescent Health. The study population is adolescents aged 15 to 19 years inclusive, attending at the three Senior Secondary Schools in Gaborone namely; Gaborone Senior School, Naledi Senior School and Ledumang Senior School.

Identification of patterns of utilization of Sexual and Reproductive Health services by secondary school-going adolescents in Gaborone can help strengthen health programmes at all levels of programme implementation. The Ministry of Health can re-orientate, or develop new health initiatives that will assist adolescents to fully utilize the available services. I would like to conduct the pilot test of the designed questionnaire at a different school, Mogoditshane Senior School prior to the actual study. Data collection is tentatively scheduled to start in 2012.

Attached please find copies of the Research Proposal, Parental and Participants consent forms.

Thanking you in advance for your positive consideration.

Yours Faithfully

Tshegofatso Maotwe (Ms)

+27742369324(SA)

+26771684782(BW)

Appendix 3: Study Documents for Participants and Parents

3a. Parent/ Guardian Information about the study (English)

Study title: Patterns of utilization of sexual and reproductive health services by secondary school-going adolescents in Gaborone, Botswana, in 2012

Introduction: Hello, my name is Tshegofatso Maotwe; I am doing a research on patterns of utilization of sexual and reproductive health services by secondary school-going adolescents in Gaborone, Botswana, in 2012. Research is just a process to learn the answer to a question. In this study we want to know ways in which adolescents use sexual and reproductive health services available in Botswana.

Invitation to participate: I am inviting you to allow your child to participate in this research study. After understanding the whole study process you should first give consent to your child on whether they can participate or not. Once you have granted them permission they also have the right to decide whether they would like to participate or not.

Background of the study: Adolescents in Botswana, especially women, face many sexual and reproductive health challenges including high maternal mortality, sexually transmitted infections including HIV and unintended pregnancies, despite available SRH services. The youth friendly service concept has been initiated and various strategies developed to address adolescents concerns, however barriers to accessing services still exist and the services remain underutilized.

What is involved in the study: A questionnaire has been designed for participants to complete, with instructions on how to complete it. They will not be asked to write their name on the questionnaire. Their names will only appear in the consent form that they are going to sign, if they agree to participate. Those, whose parents have granted them permission to participate, and have agreed to participate, will gather in one place in the school to address the questionnaire. The consent form and the questionnaire will be collected separately, so that the two may not be matched. Their names will not be used anywhere, to ensure anonymity and confidentiality.

Risks of being involved in the study: There are no risks associated with participating in this study. However, some questions may be sensitive and may make participants feel uncomfortable. In such instances, provision will be made to refer the participants to the school Guidance and Counselling teacher, only if the participant is comfortable to under-go the counselling session.

Potential Benefits of being in the study: Answering honestly by participants will assist us to identify problems with current service provision and will help us to plan improved services for adolescents in and around Gaborone.

Participation is entirely voluntary, and if the participant refuses to participate there will be no penalty. They are also free to discontinue participation at any time without any penalty or punishment. Every effort will be made to keep personal information confidential. The results for this study maybe published, but as earlier stated, names of participants will not appear in the findings.

3b. Parent/ Guardian Information (Setswana)

Dintlha ka patlisiso go motsadi kgotsa motlhokomedi wa ngwana

Setlhogo sa patlisiso: Bokao jwa tiriso ya ditlamelo tsa botsogo jwa tsa tsholo le

tlhakanelo dikobo ya banana ba ba tsenang dikolo tse dikgolwane mo Gaborone, ka ngwaga wa 2012.

Tshimologo: Dumelang, leina lame ke Tshegofatso Maotwe; ke dira patlisiso ka bokao jwa tiriso ya ditlamelo tsa botsogo jwa tsa tsholo le tlhakanelo dikobo ya banana ba ba tsenang dikolo tse dikgolwane mo Gaborone, ka ngwaga wa 2012. Patlisiso ke tsela ya go batla karabo ya potso nngwe. Mo patlisisong e, re rata go itse ka fo banana ba dirisang ditlamelo tse di leng teng tsa botsogo jwa tsa tsholo le tlhakanelo dikobo mo Botswana.

Taletso ya go tsaya karolo: Ke go laletsa gore o letlelele ngwana wa gago go tsaya karolo mo patlisisong e. Morago ga go tlhaloganya tsotlhe tse di tsileng go dirafala mo patlisisong e, o tshwanetse go fa tetla ya gore ngwana a tsenelele patlisiso kgotsa nnyaa. Fela ga o mo file tetla, le ene ona le tshwanelo ya go tsaya tshwetso ya gore a o rata go tsenelela patlisiso kgotsa nnyaa.

Dintlha tsa patlisiso: Banana mo Botswana, segolo bogolo banana ba bomme, ba kopana le dikgwetlho tse dintsi tsa botsogo jwa tsa tsholo le tlhakanelo dikobo, go akarediwa dipalo tse di kwa godimo tsa dintsho tse di bakiwang ke tsholo ya bana, malwetsi a tlhakanelo dikobo le mogare wa HIV, ga mmogo le boimana jo bosa ipaakanyediwang; le mororo ditlamelo di le teng. Goromente wa Botswana o dirile mananeo ale mmalwa aa lebaganyeng le banana, go netefatsa gore banana ba nna le tsela e ba ka amogelang ka yone ditirelo tse di teng tsa botsogo jwa tsa tsholo le tlhakanelo dikobo, mme fela dikgwetlho di santse di le teng ebile mananeo a ga a dirisiwe sentle.

Dintlha ka patlisiso: Gona le dipotso tse bana ba tsileng go di araba, mme batla fiwa ditaello gore ba kgone go di araba. Ga bane ba kopiwe go kwala maina a bone mo dipampiring. Maina a bone a tsile go tlhagelela fela mo pampiring ya tumalano ya go tsenelela patlisiso. Ba batsadi ba bone ba tla ba fang tetla, le bone ba dumetse go tsenelela patlisiso, ba tsile go kopanela mo lefelong le le lengwe mo sekolong go araba dipotso tsa patlisiso. Dipampiri tsa patlisiso le

dipampiri tsa tumalano, ga dine di tsewe ka nako ele nngwe, gore di seka tsa tloga tsa tshwantshangwa ka gope. Maina a bana ga ane a dirisiwe gope, go netefatsa sephiri mo maineng a ba ba tsenelelang patlisiso.

Diphatsa ka patlisiso: Ga gona diphatsa dipe tse bana ba ka kopanang le tsone mo patlisisong e. Le fa go ntse jalo, dipotso dingwe di ka dira gore bana ba seka ba kgona go phuthologa go di araba. Mo diemong tse di ntseng jalo, bana batla golagannngwa le Lephata la Itshidilo Maikutlo mo sekolong, fela fa ngwana a letla gore seo se dirafadiwe.

Mosola wa go tsenelela patlisiso: Fa bana ba ka kgona go araba dipotso tsotlhe ka boammaaruri go ka kgona go re thusa go bona mathata a bone le tiriso ya ditlamelo tsa botsogo. Ka jalo, ba lephata la botsogo ba ka kgona go tokafatsa ditlamelo tse di botoka tsa banana mo Gaborone le tikologo.

Patlisiso e e tsenelelwa ka boithaopo, ka jalo motsadi o tshwanetse go itse gape gore fa ngwana a tseneletse patlisiso e, o ka tlogela nako nngwe le nngwe e a batlang go tlogela, mme ga ane a botsoloswe gore o tlogeletseng kgotsa a otlhaiwe ka tsela epe fela. Mo godimo ga moo mmatlisisi o tla netefatsa gore tsotlhe tse di tsewang mo patlisisong e e tla nna sephiri, gone maina a ngwana ga ane a kwalwe gope. Maduo a patlisiso e a ka kgona go anamisiwa, mme fela jaaka go boletswe maina a ngwana ga ana go kwala gope.

3c. Information Document to Participants

Study title: Patterns of utilization of sexual and reproductive health services by secondary school-going adolescents in Gaborone, Botswana, in 2012

Introduction: Hello, my name is Tshegofatso Maotwe; I am doing research on patterns of utilization of sexual and reproductive health services by secondary school-going adolescents in Gaborone, Botswana, in 2012. Research is just a process to learn the answer to a question. In this study we want to know ways in which adolescents use sexual and reproductive health services available in Botswana.

Invitation to participate: I am inviting you to participate in this research study. You should first get consent from your parents or guardian on whether you can participate or not. Once the parent has granted you permission you also have the right to decide whether you would like to participate or not. Consent forms will be allocated to you to give to your parents or guardians to read and sign, after which you will be expected to return them.

What is involved in the study: A questionnaire has been designed for you to complete, with instructions on how to complete it. I will be available throughout in case you have any questions regarding the questionnaire. You will not be asked to write your name on the questionnaire. Your names will only appear in the consent form that you are going to sign, if you agree to participate. If any part of the questionnaire causes you distress and you wish to speak to a counsellor, you should feel free to come and speak to me so that I can refer you to the school Guidance and Counselling teacher. Those, whose parents have granted them permission to participate, and have agreed to participate, will gather in one place in the school to address the questionnaire. The consent form and the questionnaire will be collected separately, so that the two may not be matched. Your names will not be used anywhere, to ensure your anonymity and confidentiality.

Risks of being involved in the study: There are no risks associated with participating in this study. However, some questions may be sensitive and may make you feel uncomfortable. Please answer all questions to the best of your ability and as honestly as possible.

Potential Benefits of being in the study: Answering honestly will assist us to identify problems with current service provision and will help us to plan improved services for adolescents.

Participation is entirely voluntary, and if you refuse to participate there will be no penalty. You are also free to discontinue participation at any time without any penalty or punishment.

Confidentiality: Every effort will be made to keep your personal information confidential throughout the study period.

Appendix 4: Informed Consent Documents

4a. Parent/ Guardian Consent Form (English)

I confirm and agree that my child_____ can take part in the study on Patterns of secondary school-going adolescents' utilization of sexual and reproductive health services in Gaborone, 2012. I fully understood the information that has been provided by the researcher about the study and was given the opportunity to consider the information and ask questions about the study.

I fully understand that my child's participation in this study is voluntary, and s/he can withdraw from the study at any time, and will not be questioned why s/he no longer want to take part. I understand that the findings of this study can be published but my child's names will not be used.

I grant my child permission to participate in the study.

Name of Parent/ Guardian _____

Signature of the Parent/ Guardian _____

Date _____

4b. Parent/ Guardian Consent Form (Setswana)

Tumalano ya Motsadi/Motlhokomedi wa ngwana

Setlhogo sa patlisiso: Bokao jwa tiriso ya ditlamelo tsa botsogo jwa tsa tsholo le tlhakanelo dikobo ya banana ba ba tsenang dikolo tse dikgolwane mo Gaborone, ka ngwaga wa 2011.

Ke supa fa ke dumalana gore ngwanake _____ a tsenelele patlisiso ya ðBokao jwa tiriso ya ditlamelo tsa botsogo jwa tsa tsholo, le tlhakanelo dikobo ya banana ba ba tsenang dikolo tse dikgolwane mo Gaborone mo ngwageng wa 2012ö. Ke tlhaloganya ka botlalo molaetsa oo tswang go Mmatlisisi mabapi le patlisiso e.

Ke tlhaloganya gape ka botlalo gore fa ngwanake a tsaya karolo mo patlisisong e ka go ithaopa, ebile ona le bokgoni jwa go tlogela patlisiso nako nngwe le nngwe, mme ga ana go botsoloswa fa a sa batle go tsaya karolo. Ke tlhaloganya fa maduo a patlisiso aka anamiswa mme fela maina a ngwana ga ana go tlhagelela gope.

Ka jalo ke letlelela ngwanake go tsaya karolo.

Leina la Motsadi/Motlhokomedi wa ngwana _____

Seatla/Monwana wa Motsadi/Motlhokomedi wa ngwana _____

Letsatsi _____

4c. Participant Consent Form

Study Title: Patterns of utilization of sexual and reproductive health services by secondary school-going adolescents in Gaborone, 2012

I confirm that I agree to take part in the study on Patterns of secondary school-going adolescents' utilization of sexual and reproductive health services in Gaborone, 2012. The researcher has fully informed me about the study and was given the opportunity to consider the information and ask questions about the study.

I fully understand that my participation in this study is voluntary, and I can withdraw from the study at any time, and I will not be questioned why I no longer want to take part. I understand that the findings of this study can be published but my name will not be used.

I agree to participate in the study.

Name of Participant _____

Signature of the Participant _____

Date _____

Name of the Guidance and Counselling Teacher _____

Signature _____

Date _____