

ACCESS BARRIERS TO CAMPUS HEALTH SERVICES AMONG UNIVERSITY OF VENDA STUDENTS

BY

OLUMIDE OLADIMEJI SANYAOLU (M. B; B. S)

Student Number: 15012829

A mini dissertation submitted in partial fulfillment of the requirements for the
degree of Masters in Public Health at the University of Venda


SUPERVISOR: DR. K. A. KYEI

CO-SUPERVISOR: DR. J. T. MABUNDA

February, 2017

DECLARATION

I, Sanyaolu O. O., Student Number: 15012829 hereby declare that the dissertation for the Masters of Public Health degree at the University of Venda, submitted by me, has not been submitted previously for a degree at this or any other university; that it is my own work in design and in execution, and that all reference material contained therein has been duly acknowledged.

Signature.....

Date..20/04/2017.....

DEDICATION

I dedicate this work to my loving family: my father (Rev. M. A. Sanyaolu), my mother (Mrs. B. A.Sanyaolu) and my siblings (Modupe, Olurotimi, Olajumoke, Oluwatosin and Olubukola Sanyaolu).

ACKNOWLEDGEMENT

All thanks and adoration to God for the successful completion of this work.

My sincere appreciation goes to my supervisors; Dr. K. Kyei and Dr. J. T. Mabunda for their support and guidance.

I want to specially thank my friends (Dr. Chima Anyanwu, Dr. Akeem Adedolapo and Dr. Gbeminiyi Olamiti) for their immense encouragement and support.

My gratitude also goes to all the students who participated in this study and to the University of Venda for funding this project.

To all the members of the MPH 2015 class, thank you for being a part of this success story.

Abstract

South African youth, like many young people the world over, experience obstacles related to accessing age-specific health care services. School-based health centres, therefore, represent a mode of delivery of youth-friendly services tailored to meeting the healthcare needs of young people, such as university students. The aim of the study was to investigate the barriers faced by University of Venda (UNIVEN) students in accessing the institution's health services. The objectives of the study were to assess the level of awareness of the respondents regarding the UNIVEN campus health services and to determine the availability and acceptability barriers experienced by students in accessing the campus health services. The study is quantitative using a self-administered questionnaire, informed by literature review, to collect data from the respondents. The study population consisted of all the students who were resident on campus. The sample size were five hundred and thirty four (534) respondents drawn from all the residences on the university campus and comprising of students from all the schools and levels. Questionnaires were administered face-to-face to respondents in the respondents' rooms. The validity and reliability of the study were ensured. Ethical considerations, such as informed consent, right to privacy, and no-harm to participants, were observed and addressed in this study. Data was entered and analysed using Statistical Package for Social Sciences 23. For continuous variables such as age, descriptive variable was calculated. For categorical variables, frequencies and percentages are presented. The results indicated that the average age of the study population was 21.85 years with almost all of the respondents (95%) being aware of the existence of a health clinic on the Univen campus. However, only 63% had gone for consultation at the clinic. Awareness of the clinic's services appears to be poor, with HIV Counselling & Testing being the most known service, while minor illnesses' management was the most utilised service (48%). Barriers experienced by the respondents were related to waiting times and opening hours of the clinic, with only 33% and 39% respectively, describing them as ideal. The study provides evidence that although university health services may be provided at no cost students still experience barriers in accessing them. Effective measures are needed to increase students' awareness of the clinic's services and to shorten waiting times and improve clinic opening hours.

Keywords: Access, Barrier, Student, Campus health services

Table of Contents

Declaration.....	ii
Dedication.....	iii
Acknowledgement.....	iv
Abstract.....	v
Table of Contents.....	vii
List of Abbreviations.....	x
List of Figures.....	xi
List of Tables	xiii
Abstract.....	ix
1.0 INTRODUCTION.....	1
1.1 Background to the study.....	1
1.2 Statement of the problem.....	4
1.3 Rationale of the study.....	4
1.4 Significance of the study.....	4
1.5 Aim.....	5
1.6 Objectives.....	5
1.7 Conceptual and operational definition of terms.....	5
2.0 LITERATURE REVIEW.....	6
2.1 Introduction.....	6
2.2 Data based literature.....	6
2.2.1 Global Burden of Disease on Young People.....	6
2.2.2 Burden of Disease on Young People in Africa.....	6
2.2.3 Burden of Disease on Young People in South Africa.....	6
2.2.4 WHO Guidelines for Youth Friendly services	7
2.2.5 Modes of delivery of Youth Friendly services.....	8
2.2.6 Characteristics of Ideal Youth Friendly services.....	8
2.2.7 Barriers to Accessing health services.....	9

2.2.7.1 Awareness barriers to campus health services.....	9
2.2.7.2 Availability barriers to campus health services.....	11
2.2.7.3 Acceptability barriers to campus health services.....	14
2.3 Conceptual based literature.....	17
2.3.1 Definitions of Access.....	18
2.3.2 Dimensions of Access.....	18
2.3.2.1 Availability.....	19
2.3.2.2 Acceptability.....	20
2.3.2.3 Affordability.....	21
3.0 RESEARCH METHODOLOGY.....	22
3.1 Introduction.....	22
3.2 Study design.....	22
3.3 Study setting.....	22
3.4 Study population and sampling.....	23
3.4.1 Target population.....	23
3.4.2 Sampling.....	23
3.4.2.1 Sampling size.....	23
3.4.2.2 Sampling of rooms.....	23
3.4.2.3 Inclusion and Exclusion Criteria.....	24
3.5 Measurement Instrument.....	24
3.6 Pre-test.....	25
3.7 Data Collection.....	25
3.8 Data Analysis.....	25
3.9 Validity and Reliability of the study.....	26
3.9.1 Validity.....	26
3.9.2 Reliability.....	26
3.10 Ethical consideration.....	26
3.10.1 Permission to conduct the study.....	26

3.10.2 Informed consent.....	26
3.10.3 Confidentiality and Anonymity.....	27
3.11 Dissemination of results.....	27
4.0 PRESENTATION OF STUDY FINDINGS.....	28
4.1 Introduction.....	28
4.2 Section 1: Socio-demographic characteristics.....	28
4.3 Section 2: Level of awareness of respondents.....	29
4.4 Section 3: Availability barriers to campus health services.....	35
4.5 Section 4: Acceptability barriers to campus health services.....	38
4.6 Respondents' suggestions to improve services.....	45
4.7 Association between selected variables.....	45
4.7.1 Association between gender and use of services.....	46
4.7.2 Association between having medical insurance and use of services.....	46
4.7.3 Association between gender and not receiving care when needed.....	46
4.7.4 Association between gender and availability barriers at the clinic.....	47
4.7.5 Association between gender and acceptability barriers at the clinic.....	48
4.8 Modelling.....	48
4.8.1 Relationship between POCHS and independent variables.....	48
4.8.2 Model presentation.....	50
5.0 DISCUSSION.....	52
5.1 Introduction.....	52
5.2 Socio-demographic characteristics.....	52
5.3 Awareness barriers to campus health services.....	52
5.4 Availability barriers to campus health services.....	54
5.5 Acceptability barriers to campus health services.....	56
5.6 Predictors of preferences for off-campus health services.....	58
5.7 Conclusions.....	59
6.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	60

6.1 Introduction.....	60
6.2 Summary.....	60
6.3 Limitations of the study.....	61
6.4 Conclusions.....	61
6.5 Recommendations.....	62
6.6 Suggestions for further research.....	63
7. REFERENCES.....	64
APPENDICES.....	79
APPENDIX 1: MEASUREMENT INSTRUMENT.....	79
APPENDIX 2: INFORMATION SHEET.....	84
APPENDIX 3: CONSENT FORM.....	85
APPENDIX 4: ETHICAL CLEARANCE LETTER.....	86
APPENDIX 5: PERMISSION TO CONDUCT STUDY.....	87
APPENDIX 6: EDITOR'S LETTER.....	88

List of Abbreviations

AIDS: Acquired Immune Deficiency Syndrome

HCT: HIV Counselling and Testing

HIV: Human Immuno-deficiency Virus

HPV: Human Papilloma Virus

ILO: International Labour Organisation

LGBT: Lesbian, Gay, Bisexual and Transsexual

POCHS: Preference for Off-Campus Health Services

SPSS: Statistical Package for Social Sciences

STI: Sexually Transmitted Infections

UK: United Kingdom

UN: United Nations

UNAIDS: Joint United Nations' Programme on HIV/AIDS

UNFPA: United Nations' Population Fund

UNICEF: United Nations' Children's Fund

UNIVEN: University of Venda

US: United States

WHO: World Health Organisation

List of Figures

Figure 2.1 Access Evaluation Framework.....	19
Figure 4.1: Percentage of respondents aware of campus health clinic.....	30
Figure 4.2: Sources of information about the clinic.....	31
Figure 4.3: Previous use of the UNIVEN campus health centre.....	31
Figure 4.4: Gender differences in previous use of the campus clinic.....	32
Figure 4.5: Percentage of non-users who experience difficulty using UNIVEN health centre....	32
Figure 4.6: Factors hindering use of clinic services by non-users.....	33
Figure 4.7: Frequency of clinic consultations.....	34
Figure 4.8: Percentage of respondents utilising specific clinic services.....	34
Figure 4.9: Percentage of respondents who are aware of specific clinic services.....	35
Figure 4.10: Previous history of forgoing clinic services.....	36
Figure 4.11: Perception regarding convenience of the campus clinic's location.....	36
Figure 4.12: Perception regarding convenience of clinic opening hours.....	37
Figure 4.13: Respondents' perception of the waiting time at the clinic.....	37
Figure 4.14: Respondents' perception of providers' skill.....	38
Figure 4.15: Respondents' preference for off-campus health services.....	39
Figure 4.16: Agreement or disagreement about being able to talk to the health provider in private.....	39
Figure 4.17: Agreement or disagreement that providers do not treat patients respectfully.....	40
Figure 4.18: Agreement or disagreement that health providers fully explain treatment plans to patients.....	40
Figure 4.19: Agreement or disagreement that providers respect patients' confidentiality.....	41
Figure 4.20: Agreement or disagreement that providers can not be trusted with sensitive information.....	41

Figure 4.21: Agreement or disagreement that respondents have a language barrier in communicating with providers.....	42.
Figure 4.22: Agreement or disagreement that respondents find it easy to communicate reservations to providers about service received.....	42
Figure 4.23: Agreement or disagreement that providers seem too busy to listen to respondents' complaints.....	43
Figure 4.24: Agreement or disagreement that respondents' information are kept confidential in the clinic.....	43
Figure 4.25: Agreement or disagreement that the clinic is dirty.....	44
Figure 4.26: Agreement or disagreement with preference for gender of the provider.....	44
Figure 4.27: Respondents' rating of the quality of service delivery at the clinic.....	45
Figure 4.28: Suggestions of respondents to improve quality of clinic services.....	46

List of Tables

Table 3.1: Sampling Frame and Sample.....	24
Table 4.1: Socio-demographic characteristics of respondents.....	29
Table 4.2: Gender and use of campus health services.....	46
Table 4.3: Association between having medical insurance and use of services.....	46
Table 4.4: Association between gender and not receiving care when needed.....	47
Table 4.5: Association between gender and availability barriers to clinic services.....	47
Table 4.6: Association between gender and acceptability barriers to clinic services.....	48
Table 4.7: Omnibus Test.....	49
Table 4.8: Tests of Model Effects.....	49
Table 4.9: Parameter Estimates.....	50

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The present generation of 1.8 billion young people aged between 10 and 24 is the largest in the history of mankind (United Nations Population Fund, 2014). This number is more than double the population of 721 million young people who were alive in 1950 (United Nations' Department of Economic & Social Affairs, 2014). The burden of disease on youths, the world over, is equally enormous (Venkat-Narayan, Ali & Koplan, 2010). A young person aged 10 to 24 dies every hour of the day in the United States (US) as a result of unintentional injury, largely due to behavioural factors (National Center for Injury Prevention and Control, 2006). The World Health Organisation (WHO) affirmed that 43% of all homicides globally occur among youth between the ages of 10 and 29 (WHO, 2015) and 620,000 young people between the ages of 15 to 24 became newly-infected with Human Immunodeficiency Virus (HIV) in 2014 (UNICEF, 2015).

The health challenges of young people in Africa are by no means less than those of their peers in other parts of the world. About 85% of the world's 2.1 million HIV-positive adolescents are found in Sub-Saharan Africa (Idele, Gillespie, Porth, Suzuki, Mahy, Kassedde & Luo, 2012). In addition, 1 in 3 of the 14.3 million deliveries among adolescent girls occurring Sub-Saharan Africa (Singh, Darroch, Ashford & Vlassoff, 2009) and the literacy level (closely linked to earning potential and health status) in the region, is the lowest in the world (United Nations' Population Fund, 2014).

South African youth are not immune to many of these health challenges. Approximately 600,000 young persons between the ages of 15 – 24 are currently infected with HIV (Statistics South Africa, 2015); nearly 1 in 5 female adolescents become pregnant before the age of 20 (Mchunu, Peltzer, Tutshana and Seutlwadi, 2012) with 66% of these pregnancies being unwanted (Panday, Makiwane, Ranchod & Letsoalo, 2009) and about 1 in 3 adolescents has a problem of alcohol abuse (Madu & Matla, 2003).

Youth and particularly adolescence is associated with physical, psychological, social and emotional changes which can have long-term health implications (Sawyer, Afifi, Bearinger, Blakemore, Dick & Ezeh, 2012). Adolescence is also a period of transition and novel experiences such as sexual debut (Kaestle, Halpern, Miller & Ford, 2005) and onset of mental

ill-health (Oakley-Browne, Wells, Scott & McGee 2006; Patton & Viner 2007; Gore, Bloem, Patton, Ferguson, Joseph, Coffrey, Sawyer & Mathers, 2011).

University students, most of whom fall in the late adolescence and early adulthood age range (18-24 years) (Woosely,2003),are in a period of onset of independent decision-making about their health (Meilman, 2001). In addition to problems faced by the adolescent age group, university students have been known to experience physiological and psychological health needs, typically arising from the transition from high school to the rigours of coping with university life (Ruberman, 2014). Some have been reported to develop their first episode of mental ill-health while at college (Gore et al., 2011). Increased sexual activity and behavioural problems in adolescence also account for increased demand for sexual and mental health services in this age group (Blum, 2009; Boltena, Khan, Asamoah & Agardh, 2012).

University-Based Health Centers (UBHC) or campus health services represent an appropriate means of providing young persons with health interventions which are tailored to their needs (Fletcher, Bryden, Schneider, Dawson & Vandermeer, 2007). However, despite the presence of these facilities on campuses,university students have been known to experience barriers in accessing the services (McIntyre, 2002). These have been described by some researchers as structural barriers, such as the absence of qualified providers and poor facilities, and nonstructural barriers, such as confidentiality issues and provider attitude to their needs (Irwin, Burg & Cart, 2002).

It is therefore crucial to understand the obstacles that university students encounter in accessing campus health services,so as to plan appropriate interventions to address these barriers (Hussain, Guppy, Robertson & Temple, 2013).It is also important to assess their level of awareness of the existence of such facilities where they exist. Studies amongst student populations in the US revealed that male undergraduates were particularly more likely not to be aware of campus primary care and counsellingservices (Davies, McCrae, Frank, Dochnahl, Pickering, Harrison, Zakrzewski & Wilson, 2000; Buzi & Smith, 2014). Similarly, as many as twenty percent of the students in a US college were ignorant of campus mental health services. Russell, Thomson and Rosenthal (2008) reported that about half of the international students in an Australian college did not access campus counselling services due to ignorance of these services. A study conducted among students of tertiary institutions in Durban, South Africa revealed that the students expressed a low knowledge of available contraceptive services on their campuses (Roberts, Moodley & Esterhuizen, 2004).

Studies in the US show a high prevalence of nonfinancial barriers to health care access among young adults such as university students (Kullgren, McLaughlin, Mitra & Armstrong, 2012; Delaney-Moretlwe, Cowan, Busza, Bolton-Moore, Kelley & Fairlie, 2015). In a study to assess the health needs and barriers to help-seeking by male college students, Davies et al., (2000) showed the barriers to seeking campus health services to include the need to conceal vulnerability, lack of information about services, lack of time to seek healthcare and lack of credibility of health providers. A study to explore the healthcare utilization and health service expectations among young Taiwanese students found that doubts about provider competence and provider patience in dealing with students represented barriers to access of campus health services (Tsai, Lin, Chou & Lin, 2014). Female undergraduates in Lesotho identified barriers to access of campus contraceptive services to include location of the health center, inconvenient opening hours and judgmental attitude of providers (Akintade, Pengpid & Peltzer, 2011). These have been described as acceptability and availability barriers (McIntyre, Thiede & Birch, 2009).

A study of university students in Malaysia by Gharafi, Shamsuddin and Amiri (2014) identified barriers to utilization of campus health services as time constraints, inconvenient clinic opening hours, lengthy waiting times, study commitments, transportation/distance challenges, negative attitudes of health care workers, lack of privacy and uncomfortable waiting area. Studies in Africa, though limited, tend to reveal largely similar patterns. Boltana et al. (2012) reported that about 70% of the students in a Ugandan university experienced acceptability barriers while about 15% experienced availability barriers in accessing campus medical and sexual health services. In a study conducted in Ethiopia, the main barriers for youth seeking health care access included the gender of the service provider, youth friendliness of the health services and judgmental attitude of providers (Mollaab, Berhaned & Lindtjoma, 2009). Geary, Gomez-Olive, Kahn, Tollman and Norris (2014), in a study conducted in South Africa, identified lack of skilled providers, unfriendly health facilities, and confidentiality breaches, as the major barriers to provision of youth-friendly services in health facilities.

Health care policy and research has, in the recent past, attempted to improve health care systems by focusing on certain aspects of the system, such as equitable distribution of health resources or affordability of services. However, not much attention has been paid to the degree of use and the factors that account for non-usage of available health services. Access to health care, despite being a goal of health care policy, also continues to be poorly understood (McIntyre et al., 2009).

1.2 Statement of the Problem

The present researcher, who resides on campus, has through interactions with other University of Venda (UNIVEN) students, found out that students experience barriers in accessing the UNIVEN campus health services. These barriers have been noted to range from students having to wait for long hours before receiving health care at the clinic to the clinic not being open at periods when students are free to access the services. Some students have also reported experiencing barriers related to provider attitude while seeking sexual health services at the clinic. This may have contributed to cases of fetuses being found in dustbins in the student residential areas despite the availability of preventive services at the UNIVEN health center.

Barriers to access of campus health services tend to make students forgo seeking needed health services and may impart negatively on their health and consequently, on their studies. It is in the light of this background that the researcher wants to assess the barriers that students face in accessing the UNIVEN campus health services.

1.3 Rationale of the Study

The importance of university students as potential leaders in the society cannot be overemphasized. Health is an important resource because the productivity of students/youth depends on good health. A situation whereby students cannot utilize the available health services in the campus may affect their studies. It is therefore important to examine the possible access barriers to campus health services at UNIVEN since no previous study has focused on the problem.

1.4 Significance of the Study

The findings of this study will facilitate the understanding of the barriers experienced by UNIVEN students in accessing the university's health services. In addition, health care planners at UNIVEN may utilize information generated from this study to improve health service delivery in the institution and possibly other tertiary institutions. Finally, the results of this study will also contribute to the existing body of knowledge on factors that affect availability and utilization of health services with reference to tertiary institutions.

1.5 Aim

The aim of this study is to investigate the barriers faced by students of UNIVEN in accessing the institution's health services.

1.6 Objectives

The objectives of the study are:

1. To assess the level of awareness of the students regarding the different services available at the UNIVEN Health Centre.
2. To determine the availability barriers to utilization of campus health services by UNIVEN students.
3. To identify the acceptability barriers to utilization of campus health services by UNIVEN students.

1.7 Conceptual and Operational Definition of Study Terms

a. **Access:** Access can be defined as the 'timely use of service according to need' (Peters,Garg& Bloom, 2008). Access, in this study, refers to a situation whereby the health services available in the campus are within easy reach of all the students at all times.

b. **Barrier:** A barrier to care is any factor that prevents or limits people from receiving adequate health care (American Student Dental Association, 2015). Barriers experienced in seeking medical care refer to reasons given by students who failed to obtain medical care when they needed it and these have been grouped in to availability and acceptability barriers in this study.

c. **Student:** an individual either male or female who has registered and is studying at UNIVEN in 2015. In the present study, a student will be a registered student of UNIVEN, irrespective of age or sex who is resident on campus.

d. **Campus Health Services:** In this study, Campus Health Services will refer to the services provided by the UNIVEN Health Centre.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter deals with the review of literature relevant to the study. This chapter presents a review of the data-based and conceptual-based literature associated with the concept of access. The data-based literature reviewed literature on the level of students' awareness of health services, availability barriers to health services and acceptability barriers to health services. Access is conceptualized into three dimensions namely availability, acceptability and affordability by McIntyre et al. (2009). This conceptualization will be used for this study.

2.2 Data-based literature

2.2.1 Global Burden of Disease on Young People

With 2400 being newly-infected every day and young people aged 15 to 24 accounting for 40% of all new adult HIV infections, the United Nations concedes that young people are inextricably impacted by the HIV epidemic (United Nations, 2012). Approximately 39,000 girls below the age of 18 years become child brides daily with resultant consequences for their reproductive health (United Nations' Population Fund, 2012). In addition, 73.4 million or 36% of the world's unemployed are young people between the ages of 15 and 24 years, with associated lower quality of life and access to quality health care (International Labour Organisation, 2013) and 1 in 3 adolescents who enroll in a HIV care programme drops out (Philbin, 2014).

2.2.2 Burden of Disease on Young People in Africa

Young people aged between 10 and 24 years account for more than a third of the population of Sub-Saharan Africa. These young Africans however face significant health challenges (United Nations' Population Fund, 2014). Approximately 4 in 5 adolescents living with HIV are found in Sub-Saharan Africa (Joint United Nations' Programme on HIV/AIDS, 2015). Also, 2 in 3 of the estimated 1.2 million deaths among 10 to 19 year olds in 2012 occurred in Sub-Saharan Africa and Southeast Asia (Patton, Coffrey, Sawyer, Viner, Haller, Bose & Vos, 2009) and a third of the world's 14.3 million deliveries among adolescent girls occur in Africa (Singh et al., 2009).

2.2.3 Burden of Disease on Young People in South Africa

A population of 15.6 million comprising young people aged 10 to 24 years constitutes roughly 30% of the total population of South Africa (Statistics South Africa, 2015). Although access to

health care is a fundamental right of every South African youth (Constitution of the Republic of South Africa, 2003), a high burden of disease still exists for this age-group (United Nations' Population Fund, 2014). Statistics South Africa reports that about a quarter of all deaths among South African youth in 2012 were due to preventable diseases such as Tuberculosis and HIV (Statistics South Africa, 2013). Less than 1 in 7 young South African has medical aid coverage (Statistics South Africa, 2013) and about 600,000 young persons are currently HIV-positive (Statistics South Africa, 2015).

2.2.4 WHO guidelines for providing youth-friendly services

The provision of health services to the youth has been of some interest in the recent past. Adolescence, puberty and young adulthood are associated with biological, cognitive and psychosocial transitional events. This developmental stage and behavioural reasons have been implicated in the causation of most of the health concerns of young people (Tylee et al., 2007). However the health burden of young people, including Sexually-Transmitted Infections (STI), substance abuse and mental disorders, are largely preventable if appropriate interventions are instituted (Erulkar, Onoka & Phiri, 2005).

In spite of this, young people may be unwilling or unable to access health services due to various reasons, ranging from lack of awareness of services, cost of care, inconvenient opening hours, long waiting times or confidentiality concerns. The need for age-specific interventions and the presence of documented barriers to access of needed health services have led to a WHO-engineered call for the creation of youth-friendly health services the world over (WHO, 2002).

In recognition of the importance of ensuring that services are youth-friendly, so as to improve health care access for young people, the WHO introduced some guidelines for delivering this age-specific service. It incorporates the principles of equity, accessibility and acceptability. An equitable point of delivery of youth-friendly services is described as one in which all patients are treated with equal care and respect by health providers. An accessible point of delivery will be one with convenient working hours and location; complete information on the available range of services that utilize outreach services to access young people in the community. Lastly, an acceptable point of delivery of youth-friendly services should ensure that health care providers are motivated, non-judgmental and always act in the best interest of their patients (Tylee et al., 2007).

2.2.5 Modes of delivery of Youth-friendly services

The various contexts, through which health services can be tailored specifically to reach young people, include providing these services in places such as specialized youth centres, within a hospital, during outreach programmes or by means of a school or university-based health centre (Tylee et al., 2007). UBHCs are known to have addressed the lack of health care access by disadvantaged uninsured students and increased health care utilization among students of ethnic minority origin (Guo, Wade, Pan & Keller, 2010). This is important, considering that previous studies on access to adolescent-specific services and utilization of health care services have revealed that higher family income was linked to having access to needed health services (Simpson, Owens, Zodet, Chevarley, Dougherty, Elixhauser & McCormick, 2005; Newacheck, McManus, Fox, Hung & Halfon, 2000).

A UBHC eliminates many identified adolescent-specific health access barriers by providing relatively free health services and care largely suited to this age-group (Tylee et al., 2007). These centers can provide services which are more responsive to the needs of adolescents and help to increase health care use and may have direct impact on academic performance by increasing the time a student is available for academic activity (Van Cura, 2010).

2.2.6 Characteristics of Ideal Youth-Friendly Services

The characteristics of youth-friendly health services are said to consist of provider factors, facility factors and components of programme design (WHO, 1999, as cited in Erulkar et al., 2005). These characteristics have been summarized as follows:

- ❖ Staff that have special training for providing services for young people.
- ❖ Staff that respects the privacy and confidentiality of the services rendered.
- ❖ Staff that spend adequate time attending to the young clients.
- ❖ Clinics with peer educators available to attend to young clients.
- ❖ Dedicated space and time for young people.
- ❖ Convenient clinic opening hours for young people.
- ❖ Convenient clinic locations for young people.
- ❖ Short waiting times.
- ❖ Youth involvement in health services.
- ❖ Availability of a wide range of services with little need for referral.
- ❖ Services that are affordable or free.

2.2.7 Barriers to Accessing health services

Despite the lofty efforts of international organisations like WHO and the United Nations (UN) in advocating for youth-friendly services for improving health delivery to young people, evidence suggests that barriers to healthcare exist for the youth (McIntyre et al., 2009; UNFPA, 2014). These include lack of awareness about available services, availability and acceptability barriers.

2.2.7.1 Awareness barriers to campus health services

Studies have shown that there are gender differences in the level of awareness of students about campus health services. Although primary care and counselling services may be present at convenient locations on college campuses in the US, students (particularly males) are usually ignorant of their existence or of the services being offered (Davies et al., 2000; Buzi & Smith, 2014) and may often become aware through peers and girlfriends. The low level of male awareness of health services was equally reported in a Sri Lankan study by Agampodi, Agampodi and Ukd (2008). This supports previous studies that suggest that verbal messages were the best advertisement for young men's health (Armstrong, 2003; Hancock, 2004).

A study among student populations in both rural and urban areas in Canada reported that male students, particularly were not aware of the presence of a public health nurse at school and the existence of sexual health services in the community. Females, on the other hand, were more aware of these services and had used them in some cases. Both sexes, however, had low awareness of the scope of services available at these facilities and ways of accessing them (DiCenso, Borthwick, Busca, Creatura, Holmes, Kalagian & Partington, 2001). High school students in Australia were equally more likely not to be aware of the range of health services and the skills health providers have that might be beneficial to them (Booth, Bernard, Quine, Kang, Usherwood, Alperstein & Bennett, 2004).

In a study to assess the foregone mental health care and self-reported access barriers among school-going adolescents in the US, Samargia, Saewyr and Elliot (2006), reported that as many as 20% of the students stated that they did not seek campus mental health care because they were ignorant of available services. On the other hand, youth in Jordan knew the location of health services but not the range or type being offered. They also expressed cultural barriers limiting their access of reproductive health services (Khalaf, Abu-Moghli & Froelicher, 2010).

Inability to receive satisfactory health information from health care providers was a major barrier for female university students in the uptake of human papilloma virus (HPV) vaccine at a

campus health center in Hong-Kong. Despite a large proportion of the students rating themselves as being of low risk for developing cervical cancer, accurate health knowledge was lacking in many of these students (Siu, 2013). The provision of HIV awareness and prevention information, especially through the campus health centre, was advocated by Mabunda, Lebeso, Maputle and Chauke (2015) as a means of combating the high prevalence of teenage pregnancy among University of Venda students in South Africa.

In a study to assess the facilitators and barriers to HIV Counselling and Testing (HCT) in a student population in the Kwazulu-Natal Province of South Africa, Strauss, Rhodes and George (2015) reported that inadequate knowledge about HIV was responsible for the low uptake of HCT by adolescent learners in the province. It was noted that comprehensive counseling and education about HIV was available to only those who agreed to test, thus further alienating those who did not test (Strauss et al., 2015).

There is an association between literacy levels and knowledge of health issues and services (Mallehappa, Krishna & Shashikumar, 2012) in the general population. In a study to assess the awareness and attitude of young men and women in rural Southern India towards Acquired Immune Deficiency Syndrome (AIDS), Mallehappa et al. (2012) found that as many as 1 in 5 of the young women interviewed were ignorant of HIV/AIDS and were mostly illiterate. This relationship is better highlighted when compared with findings from a study carried out amongst college graduates in Nigeria on their awareness about a health issue (Premarital Genetic Counseling). The Nigerian study revealed an awareness of 90.5% (Oluwole, Elison, & Olateju, 2010).

Young people have also been found to be inclined to believe that certain services were only for other age groups. In a study done in Northern Ireland, the young respondents were not only unaware of the location and range of services available but also erroneously believed that sexual health services were only meant for older, married women (Donnelly, 2000). A study to assess the perspectives of young people on youth-friendly reproductive health services in Jordan reported that many of the respondents had a low level of awareness about reproductive services available to them. The young Jordanian women erroneously believed that Maternal and Child centres only catered for pregnant women and children (Khalaf et al., 2010). This was similar to findings of studies carried out in rural Pakistan (Ali, Bhatti & Ushijima, 2004) and in an urban township in South Africa (Schriver, Meagley, Norris, Geary & Stein, 2014). A study to assess the barriers to utilization of such services among postsecondary school youth in urban

Malaysia by Gharafi et al. (2014) reported that low knowledge of health information and health care services presented a barrier for these young people in accessing needed health care.

Adolescents and young people are likely to forgo needed health care due to lack of awareness or knowledge of the right health information. In the US, adolescents have been noted not to seek care as a result of ignorance of existing facilities, coupled with their need for confidentiality. Findings from the UK revealed that about nineteen percent of young men and twelve percent of young women who had delayed seeking sexual health services until after their first sexual experience had done so because they were unaware of such services. Eleven percent of the men and fourteen percent of the women did not know the location of available services (Stone & Ingham, 2003).

A study carried out in the Democratic Republic of Congo identified lack of knowledge of surgical contraception as the cause of low utilization of such services by young people. A positive finding in this study was the awareness of the few respondents who had used surgical contraception of its associated complications (Paluku, Mabuza, Maduna & Ndimande, 2010). Chacko, Kipp, Laing and Kabamge (2007) identified a low level of knowledge of contraceptive methods as a factor causing high rates of unprotected sexual activity amongst students in Uganda.

Paucity of knowledge on specialized health topics and services amongst health professionals has been noted as a major barrier to recognition and intervention with young women exposed to sexualized violence (Ronnberg & Hammarstrom, 2000). Physicians particularly feel their medical education did not prepare them adequately for this task. Misinformation by youth peers, parents and health care providers about the susceptibility of lesbians in the US to HPV has also been identified as a barrier to the acceptance of vaccination in this group (Agenor, Peitzmeier, Gordon, Haneuse, Potter & Austin, 2015). In a United Kingdom (UK)-based study, the medical students interviewed expressed inadequate knowledge on eliciting sexual history from lesbian, gay and bisexual clients and recommended specific training for general practitioners and students on Lesbian, Gay, Bisexual and Transsexual (LGBT) sexual health (Scott, 2013).

2.2.7.2 Availability barriers to campus health services

A study to determine barriers to the use of mental health services by depressed medical students of the University of California in the US, found that approximately half of the students who had not sought mental health care reported inconvenient opening hours of the health facilities as an obstacle to accessing care (Givens & Tjia, 2002). A study to assess the desirable

qualities of a youth sexual health clinic amongst students in the UK found that most respondents preferred after-school hours and weekends for consultation, making the existing clinic opening hours in their location highly inadequate (Nwokolo, McOwan, Hennebry, Chislett & Mandalia, 2002).

In a study assessing the awareness and use of family planning services at a campus health center in Lesotho, Akintade et al., (2012) reported that about 23% of the students experienced availability barriers of inconvenient opening hours and another 23% reported barriers associated with distance of the university health centre from their residences. Students at the University of KwaZulu-Natal, South Africa, reported that inconvenient opening and closing hours of the school's health facility was a major deterrent to utilization of its health services. This was because the facility was usually only open during lecture hours, when the students would be busy (Alli, Maharaj & Vawda, 2013).

Uncertainty about the quality of campus health services and competence of campus health providers have been cited as a barrier to access of health services provided via this means. In a study to assess the mental health and utilization of campus mental health services by college students in the US, Yorgason, Leville and Zilmann (2008) reported low utilization of this facility due to perceptions of incompetence of the providers by the students. An Australian study seeking to describe the barriers preventing international students from using the university health services reported that about 30% of the students alluded to having doubts about the competence of the campus health providers in providing needed help (Russell, Thomson & Rosenthal, 2008). A study to explore the healthcare utilization and health service expectations among young Taiwanese students found that while the males placed a high emphasis on provider competence, the females valued provider patience as their most important quality in a health service provider (Tsai et al., 2014; Alli et al., 2012).

Long waiting times at health facilities make services unavailable at the appropriate time for young patients. A study carried out in the US revealed that young people were dissatisfied with long waiting times before being attended to. Particularly displeasing was the lack of diversions such as magazines, games and television while waiting to be seen (Tivorsak, Britto, Klostermann, Nebrig & Slap, 2004). In the UK, wait times of as long as five hours were reported as a barrier to clients seeking sexual health services at genitourinary medicine facilities. This prompted the opening of specialized Sexually Transmitted Infection (STI) centres which improved client satisfaction and service utilization (Evans & Cross, 2007). About 41.7% of the respondents in a similar study carried out in Ireland also reported their waiting times as

unacceptable (Fry, Ryan, Salter, Murrin & Kelleher, 2007). In Australia, long wait time was identified by parents of young people seeking mental health services as an impediment to access of needed care (Iskra, Deane, Wahlin & Davis, 2015).

Long wait times preventing anonymity and privacy for adolescent abortion-seeking clients in Vietnam was also reported as a major barrier to access of reproductive health care (Klingberg-Allvin, Nga, Ransjo-Arvidson & Johansson, 2006). Young Pakistanis were more likely to associate long waiting times at clinics during work hours with loss of wages. This was reported as a negative influence on their health-seeking behaviour (Ali & De Muynck, 2005). In Africa, a study rating the youth-friendly characteristics of reproductive health services in Kenya by Erulkar et al. (2005) concluded that short waiting time was the most important quality for a high service rating by Kenyan youths.

The availability dimension of access such as the quality of services is an important determinant of young people's health-seeking behaviour. The WHO rates the quality of health services as being low if the providers are poorly-trained or motivated and if medicines and supplies are inadequate (WHO, 2002). Young people are not likely to access needed health care if they feel that skilled personnel are not sufficient or available at health facilities (Khalaf et al., 2010). A study in the US shows that majority of healthcare providers interviewed said they do not regularly discuss sexual orientation or gender identity while taking a sexual history from a sexually active youth and more importantly, do not feel they are adequately skilled to address adolescent sexual health issues (Kitts, 2010).

Studies in Africa reveal similar findings in relation to health providers being sufficiently skilled in providing youth-centred services. Health providers in a rural area of Uganda admitted to being inadequately empowered to provide sexual and reproductively health services to young patients (Kiapi-Iwa & Hart, 2004). In a study in a rural community in South Africa, Geary et al. (2014) found that shortage of staff skilled in provision of youth-friendly services represented a major access barrier for the youth. The willingness of health providers to explain the treatment plan to and involve young people in their own care has been associated with improving health-seeking behaviour amongst youth (Lee, Rand, Ellen & Agwu, 2014).

Young people are also likely not to have control over their time and may encounter access barriers related to inconvenient opening hours of health facilities (Davies et al., 2000; Khalaf et al., 2010). In the US, young people preferred clinics to be open in the evenings and during the weekends, which was not usually the case. This was identified as a barrier to access to sexual

health services for the youth (Tilson, Sanchez, Ford, Smurzynski, Leone, Fox, Irwin & Miller, 2004). The same finding was reported in a study carried out amongst Australian youth, which showed that inconvenient clinic opening hours represented a structural barrier, preventing access to services for many young people (Booth et al., 2004). A Malaysian study also indicated that young people prefer facilities close to their homes with convenient opening hours and youth-friendly staff (Gharafi et al., 2014).

The young persons interviewed in a study conducted in Zimbabwe suggested that having clinic opening hours which consider youth attending school or working was vital for improving access to healthcare for young patients (Mashamba & Robson, 2002). Erulkar et al. (2005) also identified inconvenient opening hours as a barrier for Kenyan youths when seeking needed health services.

2.2.7.3 Acceptability barriers to campus health services in the general population

A review of the literature reveals that student populations regard issues of confidentiality and privacy as significant acceptability barriers to access of campus health services. Male college students' need to portray an alpha image and conceal their vulnerability and identity were identified as significant barriers to access of campus health services (Davies et al., 2000; Buzi & Smith, 2014). Similarly, confidentiality concerns associated with rape were reported as barriers to access of campus sexual health services by US college students (Sable, Danis, Mauzy & Gallagher, 2006) and adolescent mental health patients in the UK (Plaistow, Masson, Koch, Wilson, Stark, Jones & Lennox, 2014). Confidentiality concerns were also reported to be a cause of lower campus health services' utilization among LGBT students (Williams & Chapman, 2011).

Stigma has also been reported to be a common barrier to students in accessing available campus health services. Asian students were reported to forgo mental health services as a result of the perceived social stigma of being associated with mental illness (Gilbert, Bhundia, Mitra, McEwan, Irons & Sanghera, 2007). Zidourek, King, Nabors and Mericinos (2014) revealed the stigma of being labelled "crazy" by their peers prevented many college students in the US from seeking available campus mental health services.

Students from historically black colleges and universities in the US identified the nonjudgmental attitude of campus health provider as an important facilitator of on-campus HIV testing and this determined whether the testing was done at the campus health centre or through community

health services (Chng, Carlon & Toynes, 2006). A South African study to determine the barriers to access of HIV Post Exposure Prophylaxis services amongst medical students at Stellenbosch University reported that students preferred to seek these services from a private provider even when they were available within the campus community due to fear of stigmatization by peers, friends and health providers (Ncube, Meintjes & Chola, 2014).

In a study to identify how interpersonal relations between health providers and students of the University of KwaZulu-Natal limit the access of sexual health services, Alli et al.(2013) reported that:

- Judgmental attitude of health providers towards young people was a barrier to utilization of sexual and reproductive health services.
- Cultural and communication factors presented barriers to service provision. The age difference between the health facility staff and students presented some obstacles for young clients in accessing needed healthcare services.
- Rude and unfriendly attitude of the staff prevented clients (especially female students) from volunteering personal information and receiving much-sought health education.
- Heavy patient loads resulted in limited contact time between students and staff, leading to dissatisfaction with service use by about 37% of the respondents.

A youth-friendly health care provider is described as someone with up-to-date health information, who is respectful and supportive, honest, trustworthy and friendly (Ambresin, Bennett, Patton, Sanci & Sawyer, 2012). Respect by the health provider is particularly closely associated with adolescent rating of quality care (Ensign, 2004; Viner, 2007) while trust was usually reported by youth as a prerequisite for sharing sensitive personal issues (Ensign, 2004; Farrant & Watson, 2004). Similarly, young people tended to describe a friendly provider as someone who treats them like a friend, is interested in nonmedical areas of their lives and who shares personal information with them (Britto et al., 2007; Peterson, Sword, Charles & DiCenso, 2007; Shaw, Southwood & McDonagh, 2006).

Youths consider being respected by the health care provider as an important indicator of having received quality care. In the US, lack of respect from health providers was cited as a barrier to access of reproductive health care by homeless young women (Ensign & Panke, 2002). Lack of respect for young patients was also reported by Khalaf et al. (2010), prompting young people in this study to express a preference for 'youth-only' facilities for their reproductive health services. However, a similar study assessing preferences for youth-friendly reproductive health services

among young people in Kenya and Zimbabwe revealed that although being respected by the health provider was considered important, these respondents were not in favour of establishing dedicated facilities for the provision of their reproductive health services (Erulkar et al., 2007).

Young people's need for trustworthiness as a trait in their health care providers is also regarded as important. This was associated with a 'feeling of being safe' with the provider (Byczkowski, Linda & Maria, 2010). A study conducted among young chronically-ill patients in the United Kingdom found that trust was considered crucial to the perception of satisfactory care. However, trust was often broken when there was no continuity of care with a particular provider or when third-parties were present as seen in a tertiary hospital setting (Shaw et al., 2006). In another study of young people with chronic diseases in New Zealand, about 25% of the respondents expressed a lack of trust of their current providers. This barrier, unfortunately, led to non-disclosure of important health information and consequently, an overall lower service satisfaction rating (Farrant & Watson, 2004). In South Africa, a lack of trust in health providers has been identified as a barrier in HIV-positive patients initiating antiretroviral therapy (Bogart, Chetty, Giddy, Sypek, Sticklor, Walensky, Losina, Katzj & Bassett, 2013).

Expectations that health care providers will listen to their complaints, communicate diagnoses and discuss treatment alternatives effectively with them, represent an important aspect of the acceptability dimension of access for young people (McIntyre et al., 2009). This was highlighted in a study in Australia which revealed that the expectation of being reassured and listened to (42%) was second only to the expectation of being treated (50%) for young people attending primary care (Haller et al., 2007). A provider's listening skills were also regarded as very crucial to an assessment of satisfactory care by both parents and adolescents attending an outpatient facility in Ohio, USA (Byczkowski et al., 2010). Similarly, in another study in the US, differences were reported in the importance placed on communication between the patients and providers. While young patients perceive explanation of their medical condition and a friendly disposition by the health provider as crucial, interviewed providers did not rate this as such (Britto et al., 2006).

Gender preference of health provider has been reported in different studies (Gharafi et al., 2014; Davies et al., 2010). Regmi, Teijlingen, Simkhada and Acharya (2010) reported that young people in a study in Nepal preferred health provider, particularly physicians to be of the same sex and preferably of young age. This was a similar finding in studies on a young population by Delany-Moretlwe et al., (2015). The preference for a health provider or physician of the same sex was however not the case in a study by Davies et al., (2010) on male US

college students' health needs. The young students opined that they preferred a female physician to prevent a male physician nursing homophobic thoughts towards them. A lack of male doctors was found to be a limiting factor in the use of reproductive health services by young male patients in Egypt. This resulted in consultations being done with pharmacists with limited capacity for health risk assessment and reduction and consequent negative impact on the patients' well-being (Oraby, 2013).

Acceptability barrier associated with confidentiality plays a role in young people not getting the needed health care. Findings from a study of the barriers to care faced by homeless female adolescents in the US revealed that though the respondents wanted trust, respect and a non-judgmental attitude from the care givers, there was mutual distrust and resentment of the providers by a majority of the young women. They also reported not being involved in their own care through overbearing attitudes of the health workers (Ensign & Parker, 2002). A Vietnamese study similarly identified confidentiality and privacy breaches as barriers for adolescents seeking abortion services in public hospitals in Vietnam (Klingberg-Allivin et al., 2006). Lack of confidentiality and privacy was also reported by young people in a study focused on improving youth access to reproductive health services in Zimbabwe. Some of the young respondents reportedly contracted STIs because health providers discriminated against them due to their age and denied them access to reproductive health care (Langhaug, Cowan, Nyamurera & Power, 2003).

Provider attitudes and perceptions about young people feature prominently in literature on access barriers to health care for the youth (Langhaug et al., 2003; Kitts, 2010) with younger patients forgoing needed care due to discriminatory and judgmental attitudes of caregivers (Gharafi et al., 2014). Adolescent mothers were likely to forgo vital postpartum care if they perceived the provider nurse to be judgmental or to be treating them in a different way to older mothers as revealed by a Canadian study (Peterson et al., 2007). Studies revealed that provider attitudes and perceptions towards young people seeking sexual health services deter such patients from obtaining crucial health information and care (Rushing, Watts & Rushing, 2005; Scorgie et al., 2013).

2.3 Conceptual based literature

Access to health care, despite being a goal of health care policy, has remained poorly understood (McIntyre et al., 2009). Some studies have substituted utilization for access (Waters,

2000; Gulliford, 2002) while others have attempted to conceptualise and measure access as a separate entity (McIntyre et al., 2009).

2.3.1 Definitions of Access

This section examines the definitions of access by different authors. A literature search reveals that different authors have attempted to define access in different ways. Some researchers have defined access in terms of the ability of individuals to procure or pay for health services; that is, as a demand concept (Falkingham, 2004; White, 2002). They argue that individuals with the means to pay for health services should be regarded as having access. However, being in possession of resources to access care has been found to be insufficient, as seen with patients with HIV, who may not seek care as a result of stigma and confidentiality concerns.

A different group of authors believe access is a supply-concept, encompassing the availability of services at the level of the health care system (Guagliardo, 2004; Goddard & Smith, 2001). They opined that the availability of appropriate and needed services within the health system represents access. This definition, however does not take into account, individuals without the means of accessing healthcare such as medical aid.

Access therefore can be seen as the interplay of factors between individuals and the health system. It has been described as the 'degree of fit' between individuals and the health system (McIntyre et al., 2009). Access can also be regarded as the enablement of an individual to use health care services. For example, a good location of a facility, ideal waiting times, qualified and adequate staff and acceptable health providers' attitude are all important and necessary in ensuring access (McIntyre et al., 2009). Ensor and Cooper (2004) also argue that both demand and supply factors of access must be present in order to achieve access.

2.3.2 Dimensions of Access

The concept of access has been conceptualized by McIntyre et al. (2009) into three dimensions; namely, availability, acceptability and affordability (Figure 2.1).

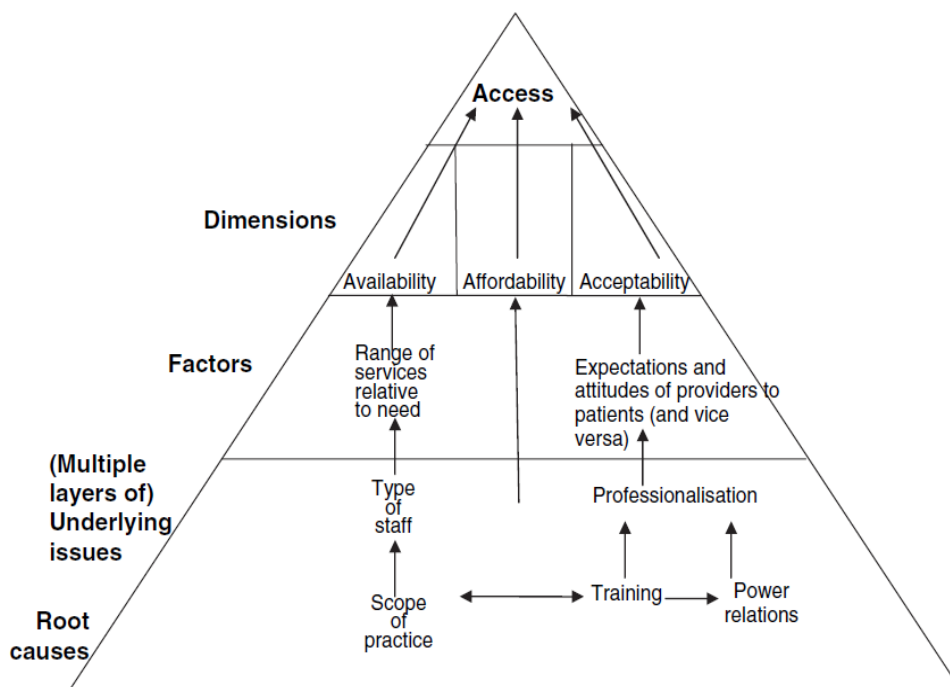


Figure 2.1: Access Evaluation Framework (McIntyre, 2009).

2.3.2.1 Availability

This relates to having appropriate ‘quantity and quality’ (supply) of services to meet the needs of individuals (demand). It involves the interaction between individual factors such as specific needs and the type, quantity and quality of services being offered by service providers.

Availability relates to location of health care services and the location of service users for example, the location of the UNIVEN Health Centre between the classrooms and the hostels; the opening hours of the facility and convenient times for students to access care and the range of services on offer, such as availability of mental health counselling for students experiencing stress, in addition to treatment of common ailments. It can be summarized as follows:

- The relationship between location of health care facilities (system factors) and the location of those who need the services (individual factors) is crucial. For example, is the clinic located where it can easily be accessible by students irrespective of where they live on campus?
- The ability and readiness of healthcare providers to serve the community in accordance with the type and severity of their condition. For example, are the services at the clinic tailored to the specific needs of the student population?

- The interaction between the hours of service of the health facilities (system factors) and the times that individuals want services to be available (individual factors). For example, the limited hours of service of the clinic may present a barrier for students receiving lectures during the clinic opening hours.
- The relationship between the quality and quantity of services available and the nature and extent of the health needs of the individuals being served. For example, students may require more of the services of a nurse skilled in sexual and reproductive health service provision than a neurosurgeon.

2.3.2.2 Acceptability

This relates to the interaction between the provider and patient attitudes in respect of expectations from each other. Patients' characteristics, such as age (in the case of students), gender, ethnicity, language influence a provider's attitudes, for instance a service provider may be hostile to young people seeking sexual health services and provider's characteristics (for example, age, gender, ethnicity, language) may also influence a patient's attitude. An example is young persons' preference of a provider of a particular age or gender. Differing expectations of patients and providers is an important aspect of acceptability as dimension of access. These can be summarized as follows:

- Patients' expectations that providers treat them respectfully, listen to their complaints, undertake a comprehensive examination, explain their illness and explain treatment modalities/alternatives.
- Providers' expectations that patients respect their professional competence and comply with their prescribed treatment.
- Patients' expectation of an efficient health delivery system that minimizes hardship on users, respect individuals' privacy and avoid stigmatization.
- Patients' belief systems about effectiveness of alternative health interventions for different illnesses and provider competence.

The acceptability dimension of access is critical in ensuring utilization of services which individual are aware of and which they can afford. It is also of significance in maintaining compliance with treatment regimens.

2.3.2.3 Affordability

This refers to the relationship between the total costs of using a health service and the individual's ability to pay. It involves the effect of the costs of seeking health care on the individual's other competing needs and budget. Affordability is important considering the impoverishing effects that sometimes result from health care expenditure in individuals without health insurance (Russell, 2004).

The interaction of the dimensions described above determines access. Improving on one dimension only may not necessarily increase access or the use of health service. Services may be available and affordable but may not be used by young people if health care providers are hostile and judgmental to young sexual health service-seeking patients. On the other hand, user fees may be non-existent and providers may ensure youth-friendly services but limited hours of services may constitute a barrier to access. The framework allows for a clear conceptualization of access and aids in planning policies targeted at facilitating access. It also allows for better understanding of the root causes of deficiencies in access. For example, in Figure 2.1, improving the limited range of services may only require providing advanced training for the current providers and not necessarily employing additional categories of staff.

This study will focus on the availability and acceptability dimensions of access as respondents in this study are resident on campus and do not incur transport costs when accessing the health services. Also, fees are not charged for most of the services provided by the health centre.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explained the methodology of the study which includes the study design, study setting, population and sampling, instrument to be used for data collection, measures to ensure validity and reliability of the study, data collection and analysis as well as the ethical consideration.

3.2 Study design

This study adopted a quantitative approach, using a cross-sectional design. Babbie (2010) describes a cross-sectional design as observations of a sample, or cross-section of a population or phenomenon that are made at one point in time. This design was chosen as it is believed to be more scientific and the findings can be generalised to similar populations.

3.3 Study setting

This study was conducted at UNIVEN. UNIVEN is a comprehensive, rural-based academic institution located in Thohoyandou in the Vhembe District in the northern region of Limpopo Province, South Africa. The institution had a total number of 13693 enrolled students for the 2015 academic year. The student population is diverse and comprises of students from Botswana, Ghana, Malawi, Nigeria, Swaziland and Zimbabwe. South African students represent the majority and the commonly-spoken languages include Venda, Tsonga, Sotho/Pedi and SiSwati.

There are nine students' halls of residence in the UNIVEN (namely Bernard Ncube, Carousel, F3, F4, F5, Lost City, Mango Groove, Prefabs and Riverside). Six of these accommodate either male or female students while the other three accommodate both male and female students. There are a total of 2215 bed spaces with 1176 (53%) of these allocated to females and 1039 (47%) bed spaces allocated to males (Student Affairs Department, UNIVEN 2014).

The UNIVEN Health Centre is located midway between the residence halls and the administrative blocks and lecture halls thus making it easily accessible to the students. It is situated between the Bernard Ncube Hostel and the Student Administrative block and opens from 8am to 5pm on weekdays. Emergency Medical Services provide ambulance services to convey sick students to the nearby district hospital (Tshilidzini Hospital) after clinic opening

hours and on weekends. Services provided at the centre include treatment of common ailments, emergency contraception, lifestyle and behavioural counselling and HIV Counselling and Testing. The center currently has eighteen staff consisting of six clinical, seven administrative and five maintenance personnel.

3.4 Study population and sampling

3.4.1 Target population

The population included all students at UNIVEN, who are resident on campus.

3.4.2 Sampling

3.3.2.1 Sampling size

The sample size was calculated using Slovin's formula (Guilford & Fruchter, 1973); where N is the total number of students resident on campus, n is the sample size and e is the accepted level of error. For this study, e is 0.05.

$$n = N / 1 + N (e)^2$$

$$n = 2215 / [1 + 2215 \times (0.05)^2]$$

$$n = 2215 / [1 + (2215 \times 0.0025)]$$

$$n = 2215 / (1 + 5.5375)$$

$$n = 2165 / 6.5375$$

$$n = 338.81$$

Sample size (n) = 339

Though the minimum sample size as can be seen is 339, It was decided that the sample size be increased to 534 in order to be more representative of the total population and to have more reliable results. Because the larger the sample size, the more reliable the results will be.

3.4.2.2 Sampling of rooms

The halls of residence were grouped into clusters. Each cluster (residence hall) constituted a proportion of the total population, depending on the number of bed spaces it possesses. Using the residential log sheets from the Office of the Hostel Superintendent, the number of rooms to be sampled in each cluster was drawn based on the proportion of that cluster in the total population in order to achieve a degree of representativeness.

Systematic sampling was used to select students' room numbers by dividing the total number of rooms by the sample size to find the interval (K) value. K value = $2165/338 = 6$. This derived value of 6 meant that every 6th room was selected for the study. The first room to start with in

each cluster was drawn randomly from a well-shaken envelope containing all the room numbers in that cluster. Systematic sampling, as highlighted above, was then used to select every 6th room. A respondent was chosen from each room that was sampled. For instance, F5 residence hall has a total of 129 bed spaces for females only and this forms 5.96% of the total number of bed spaces (sample population) in the school. Therefore, F5 residence comprises 5.96% of the sample size for the study and this gave a total of 26rooms and systematic sampling was used to select the exact rooms to pick the F5 respondents from. A similar procedure was used for all residences as shown in Table 3.1.

Table 3.1: Sampling Frame and Sample

Residence Cluster	Females		Males		Total Sampled
	Total	Sampled	Total	Sampled	
Bernard Ncube	58	12	-	-	12
Carousel	-	-	123	30	30
F3	-	-	419	94	94
F4	372	85	-	-	85
F5	129	33	-	-	33
Lost City	180	45	180	44	89
Mango Groove	124	27	-	-	27
Prefabs	185	52	189	52	104
Riverside	128	30	128	30	60
Total	1176	284	1039	250	534

3.4.2.3 Inclusion and Exclusion criteria

Inclusion criteria: The selected individual had to be a student of UNIVEN and be legally resident in the chosen room irrespective of level of study and age.

Exclusion criteria: Individuals who were not legal occupants of the room were not sampled irrespective of level of study and age.

3.5 Measurement Instrument

The measurement instrument used was a questionnaire (Appendix 1). The language of the questionnaire was English, as this is the official language used at the university. The questionnaire contained both semi-structured and closed-ended questions and was divided into four sections namely;

- Section A solicits the demographic profile of the respondents.

- Section B assesses the level of awareness of the students on the services provided by the University Health Centre.
- Section C focusses on the availability barriers experienced by the students in accessing institutional health services
- Section D contains information on the acceptability barriers experienced by the students in accessing institutional health services.

3.6 Pre-test

The instrument was pre-tested among forty-five (10% of the sample size) UNIVEN students who are resident on campus and chosen from the rooms which were not sampled for the study. These respondents did not form part of the main study. The pre-test helped in adjusting and making necessary corrections to the questionnaire, as the respondents were encouraged to make comments where necessary and if in doubt. The inputs from the pretest helped to correct the ambiguity with some of the questions and to shape the final questionnaire for data collection.

3.7 Data Collection

Data collected began on the 24th of August 2016 and lasted for 32 days. Although the calculated sample size was 339, the researcher and supervisors decided to increase the sample size to 534 in order to achieve more degree of representativeness of the total population. This was based on the understanding that the larger the sample size, the more reliable the results were likely to be (as stated earlier). Information letters stating the purpose and nature of the study were given to respondents. Questionnaires were only given to those who had signed the consent forms. The questionnaires, which were self-administered, took approximately twenty minutes to complete. Data collection was done in respondents' rooms after lecture hours and the researcher waited while the respondents were completing the questionnaires and collected after the respondents had completed all the sections of the questionnaire. A female Master's student who was trained on the procedure assisted with data collection in the female residences.

3.8 Data Analysis

The data was analysed using the Statistical Package for Social Sciences version 23. Chi square tests were used to compare the relationship between socio-demographic variables and others such as waiting times and confidentiality concerns. All statistical tests were two-tailed and a p-value of < 0.05 was considered statistically significant.

3.9 Validity and Reliability of the study

3.9.1 Validity

Validity is the ability of an instrument to measure what it purports to measure (Creswell, 2009). Babbie (2010) defines validity as the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration. The questionnaire for the study was designed after extensive literature search on the topic and after consultation with experts in the field of public health. The questionnaire was structured in simple English to avoid ambiguity and the participants were allowed time to go through the questionnaire while the researcher was still available to clarify any confusing areas. A statistician was also consulted to assist with the structure of the questions.

3.9.2 Reliability

Joppe (2000) defines reliability as the degree to which results are consistent over time. In this study, the reliability of the questionnaire was measured using the test-retest method of reliability testing. Thirty-five students were asked to complete the questionnaire on day 1, and the same set of students was asked to complete the same questionnaire after a four-day interval. The results of the first test were then compared with the second and the questionnaire modified accordingly.

3.10 Ethical considerations

3.10.1 Permission to conduct the study

The basic principles of ethics were duly observed and ethical clearance for the research was sought from the UNIVEN Health, Safety and Research Ethics Committee. The ethical clearance certificate was then used to seek permission from the Dean of Students of UNIVEN in order to access the respondents.

3.10.2 Informed consent

The need for the study and the processes involved was explained to the respondents (Appendix 2). They were also informed that their participation in the study was voluntary, and that they were free to make a choice whether to complete the questionnaire or not. Only those who agreed to participate after reading the information letter were given consent forms (Appendix 3) to sign.

3.10.3 Confidentiality and Anonymity

The respondents were assured that the information provided by them would be treated confidentially and that only the researcher and the supervisors would have access to the data; and that the questionnaires would be kept in a safe place where no one could reach them. They were also advised not to include their names on the questionnaire.

3.11 Dissemination of results

The results from this study and recommendations made would be kept at the UNIVEN library and a copy given to the Dean of Students. The findings from the study would also be published in peer-reviewed and accredited national and international journals as well as presented at seminars and conferences.

CHAPTER FOUR

PRESENTATION OF THE STUDY FINDINGS

4.1 INTRODUCTION

In this chapter, the main findings of the study are summarised and presented in tables and charts. The results are presented in the following order: socio-demographic characteristics of the respondents, level of awareness of the respondents regarding the services provided by the UNIVEN health clinic, the availability and acceptability barriers experienced by students in accessing the campus health services.

4.2 Section 1: Socio-demographic characteristics of the respondents

The total number of students who participated in this study were 534, with the mean age being 21.85 years (SD = 3.79) and ranging from 17 to 51 years. Table 4.1 shows that more than half were females (n = 282, 52.8%) and the majority were first-year students (n = 164, 30.7%). The Schools of Environmental and Management Sciences accounted for a larger percentage (n = 90, 16.9%) of the respondents, while the School of Health Sciences had the least number of respondents (n = 37, 6.9%). The majority of the respondents resided in the Prefabs hostel (n = 104, 19.5%) while Bernard Ncube had the least number of respondents (n = 12, 2.2%). With regards to having a medical aid, majority of the respondents did not have any medical insurance (n = 414, 79.5%).

Table 4.1 Socio-demographic characteristics of the respondents

CHARACTERISTICS	Frequency	%
GENDER		
Male	252	47.2
Female	282	52.8
Total	534	100
LEVEL OF STUDY		
First Year	164	30.7
Second Year	111	20.8
Third Year	134	25.1
Fourth Year	42	7.9
Honours	34	6.4
Master	30	5.6
PhD	17	3.2
Diploma	2	0.4
Total	534	100
SCHOOL		
Agriculture	38	7.1
Education	78	14.6
Environmental Sciences	90	16.9
Health Sciences	37	6.9
Human & Social Sciences	86	16.1
Law	48	9.0
Management sciences	90	16.9
Maths & Natural Sciences	67	12.5
Total	534	100
HOSTEL OF RESIDENCE		
Bernard Ncube	12	2.2
Carousel	30	5.6
F3	94	17.6
F4	85	15.9
F5	33	6.2
Lost City	89	16.7
Mango Grove	27	5.1
Prefabs	104	19.5
Riverside	60	11.2
Total	534	100
HAVE MEDICAL AID		
Yes	107	20.6
No	414	79.4
Total	521	100

4.3 Section 2: Level of Awareness regarding campus health services

The respondents' level of awareness about the clinic and its services were assessed using variables such as whether they were 'aware of the existence of the clinic', 'if they had visited the clinic in the past', the frequency of these visits and the services sought during these visits.

Respondents were also provided with a list of the services being provided at the clinic and asked to tick those that they were aware of.

Majority (508, 95%) of the respondents knew of the existence of the UNIVENcampus clinic (Figure 4.1).

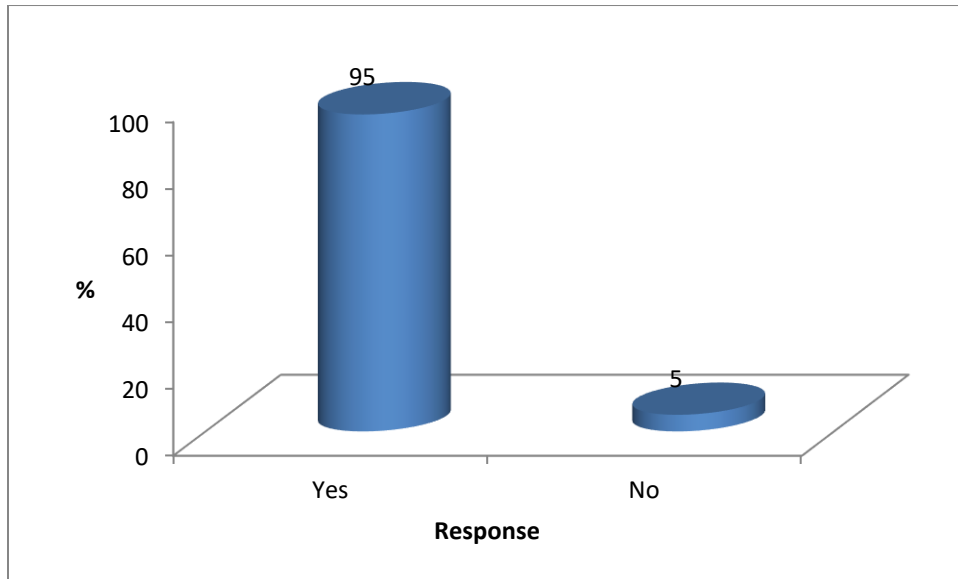


Figure 4.1: Percentage of respondents who are aware of the campus health centre (n = 532)

With regards to the source of information through which students became aware of the clinic, Figure 4.2 shows that majority (n = 252, 50.4%) first heard about it from their friends and colleagues. This was followed by self-discovery (n = 120, 24%); University staff (n = 118, 23.6%); others (n = 7, 1.4%) and family members (n = 3, 0.6%). Other sources of information reported by respondents were through information leaflets and the university website.

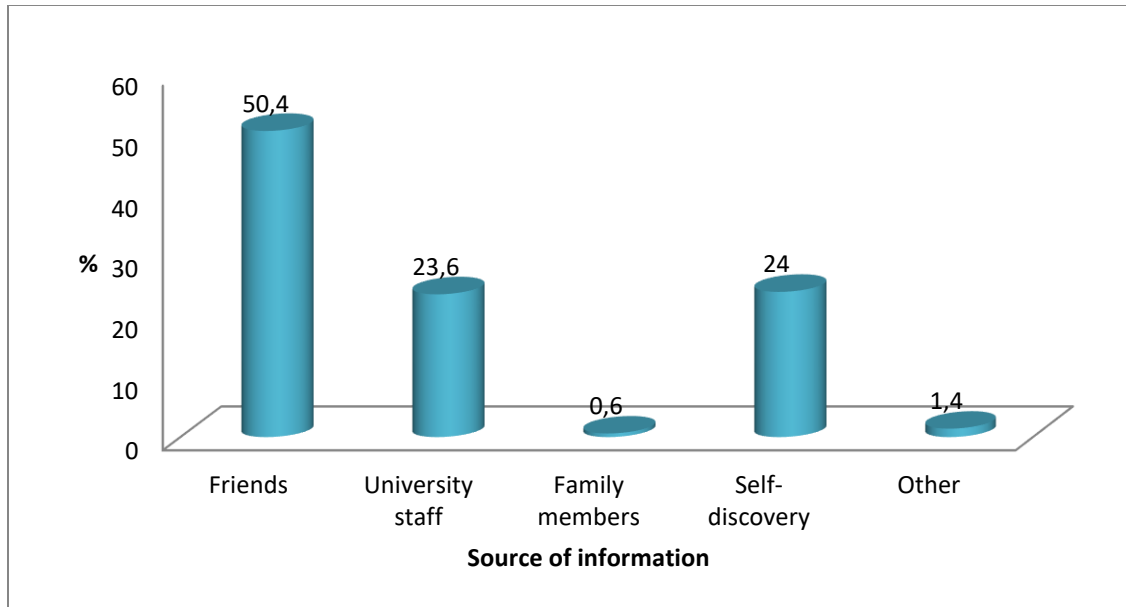


Figure 4.2: Sources of information about the clinic (n = 500)

Figure 4.3 shows that about two-thirds (n =314, 63%) of respondents had gone for consultation at the UNIVEN health centre previously while 37% had not sought the clinic’s services.

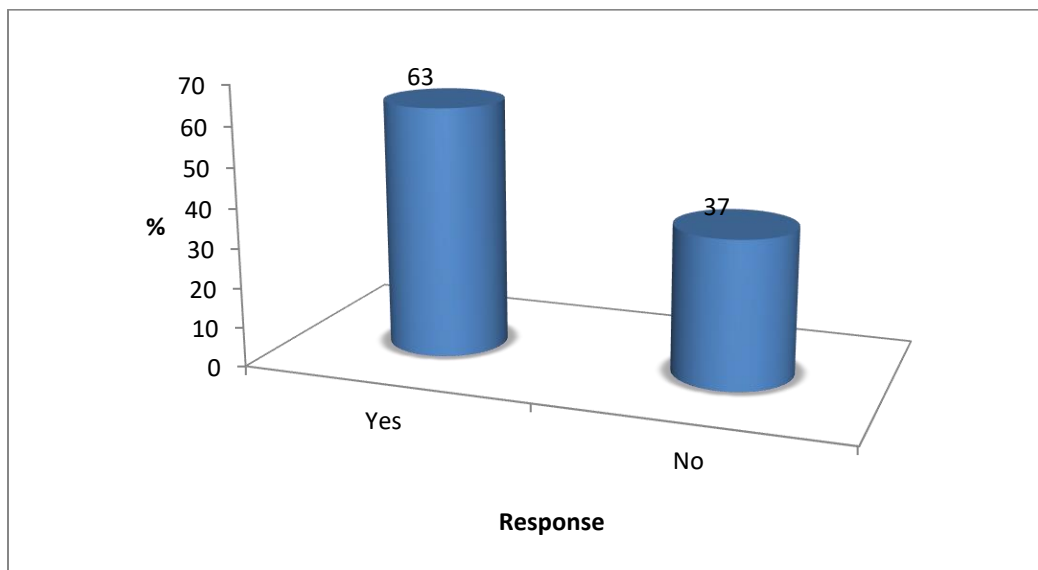


Figure 4.3: Previous use of the UNIVEN campus health centre (n = 499)

More females (61%) had used the clinic than males(39%) (Figure 4.4).

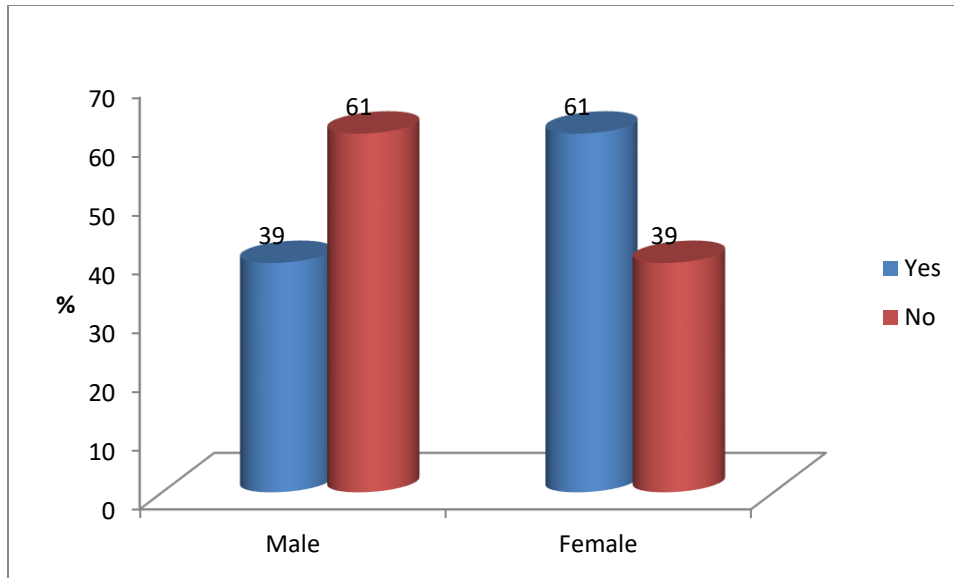


Figure 4.4: Gender differences in previous use of the campus clinic (n = 504)

Sixteen percent of the respondents who had not used the clinic services reported experiencing difficulties with accessing the campus clinic, while the majority (84%) did not experience any difficulty with accessing the clinic services (Figure 4.5)

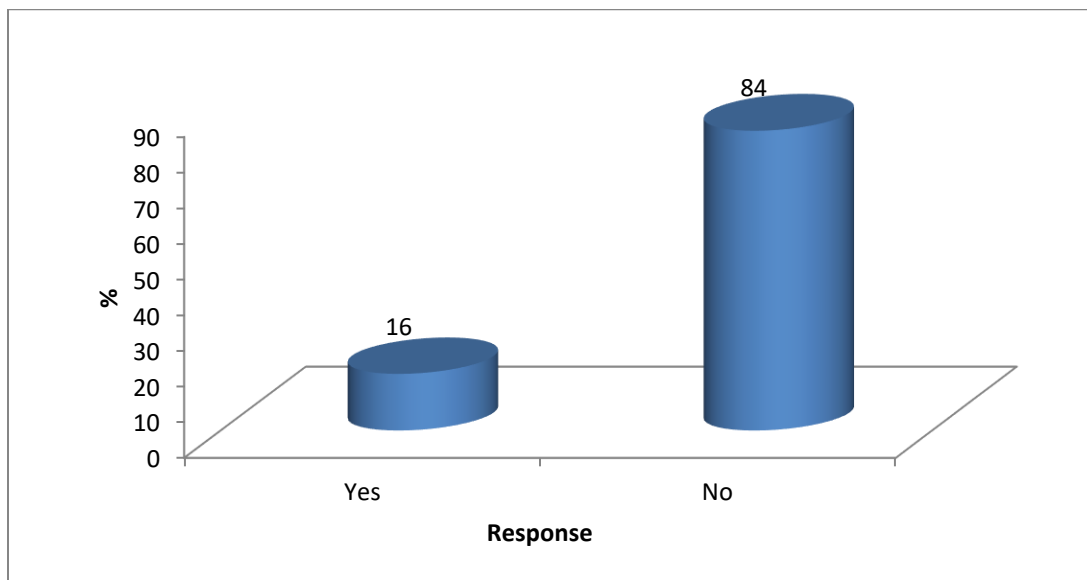


Figure 4.5: Percentage of non-users who experience difficulty with using UNIVEN health center

Figure 4.6 shows that factors which made it difficult for non-users to utilise clinic services include 'not being aware of available services' (26%), 'respondent's friends not using the clinic's

services' (1%), 'need for respondent to protect his/her privacy' (9%), unfavourable opening hours (24%) and long waiting time (18%). Other factors reported by respondents include 'being too busy' to seek services, 'no reason', 'thinking that fees were charged at the clinic' and having never been sick while on campus.

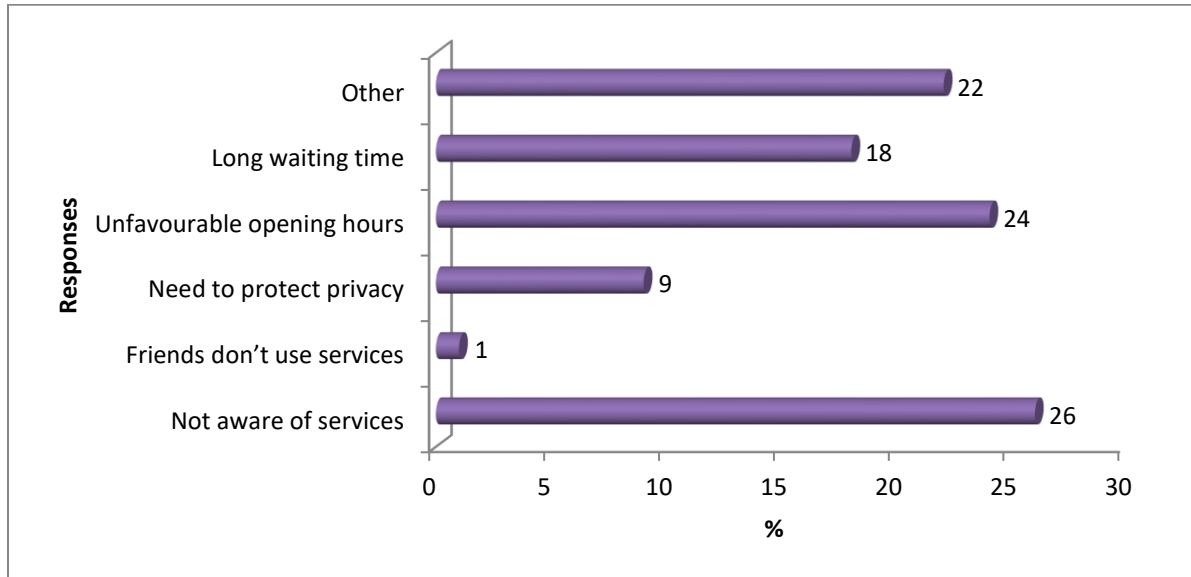


Figure 4.6: Factors hindering use of clinic services by non-users (n = 153)

The majority of the respondents (118, 38%) denoted as 'other' had visited the clinic infrequently, such as at 3-monthly, 6-monthly or yearly intervals (Figure 4.7). Next to these were 32% who had visited the clinic once in a 2-month period. A quarter (25%) had visited once a month while 2% had visited once fortnightly and weekly. Only 1% had visited the clinic more than once in a week.

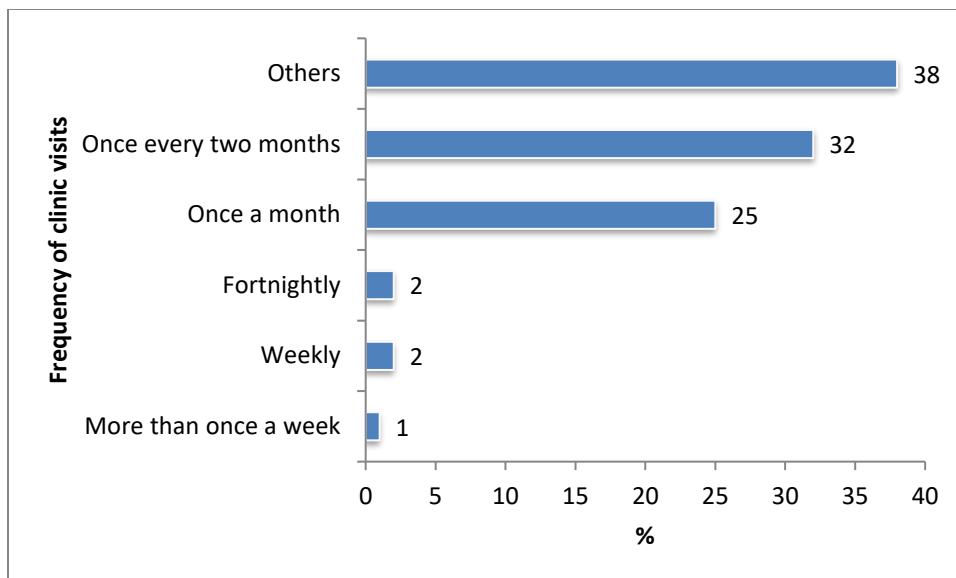


Figure 4.7: Frequency of clinic consultations (n = 311)

Figure 4.8 shows that treatment of minor ailments (such as flu, headache, body pain) was the most sought service by respondents (n = 203, 48%). This was followed by HIV Counselling and Testing (n = 78, 18%) with the least sought services being for behavioural counseling and treatment of Sexually Transmitted Infections (STI) (n = 13, 3%).

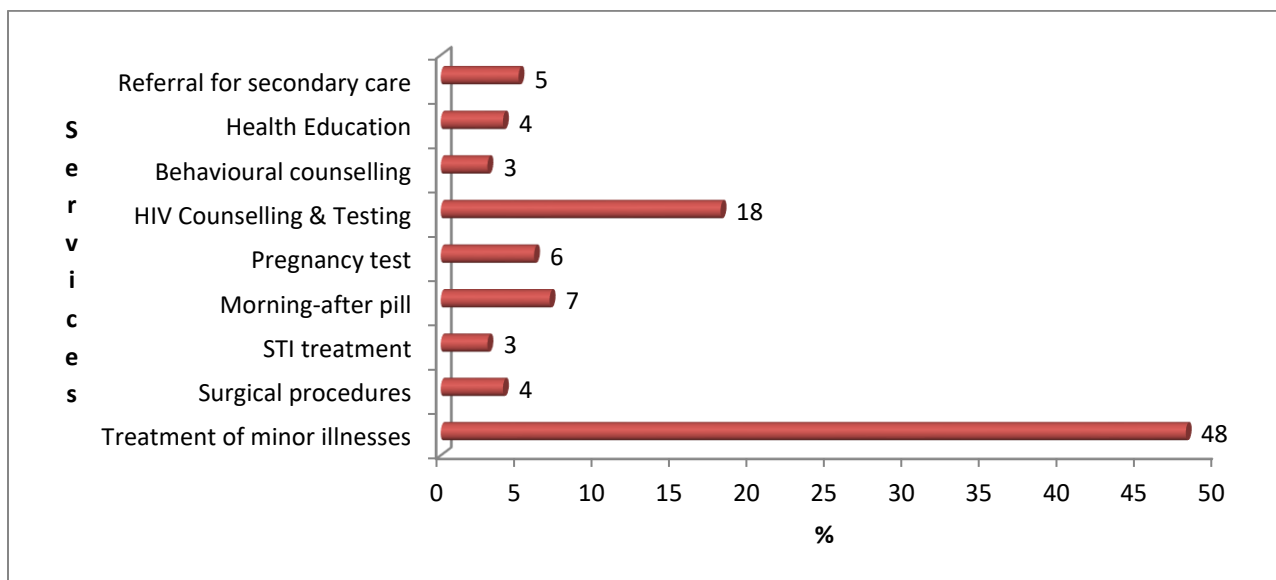


Figure 4.8: Percentage of respondents utilising specific clinic services (n = 422)

In assessing the awareness of respondents about the services available at the clinic, respondents were presented with a list of services and instructed to mark those they were

aware were being provided at the clinic. HIV Voluntary Counselling and Testing was the most known service (n = 295, 19.22%) while the least known service was behavioural change counselling (n = 42, 2.74%) (Figure 4.9).

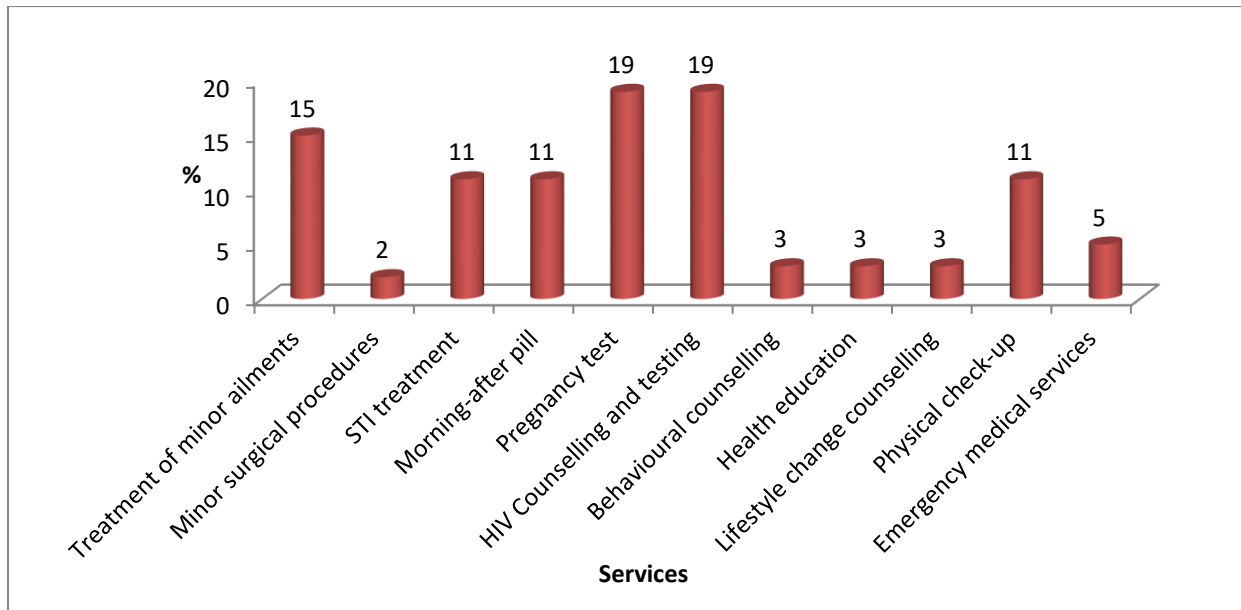


Figure 4.9: Percentage of respondents who are aware of specific clinic services

4.4 Section 3: Availability barriers to campus health services

The availability barriers to campus health services were assessed by asking respondents questions such as, 'have you needed the clinic's services and did not receive it?', 'Is the location of the clinic convenient for you?', 'are the opening hours convenient for you?' and 'what do you think of the waiting time before consultation at the clinic?'

The majority of the respondents (n = 441, 90%) answered that they had not needed the clinic's services while only 10% did need the services and didn't receive it (Figure 4.10). Some of the reasons given by the latter group included needing services not being provided by the clinic (such as optometry and dental services); needing services when the clinic was closed (for example female students needing emergency contraceptives during weekends); needing medications which were out-of-stock and ambulance services not being optimal especially during weekends. When asked what respondents did when they couldnot access needed health care on campus, many responded that they had resorted to borrowing money to procure medicines at off-campus pharmacies or to cover transport costs to other health facilities in town. However, a few respondents said they had to forgo health care altogether.

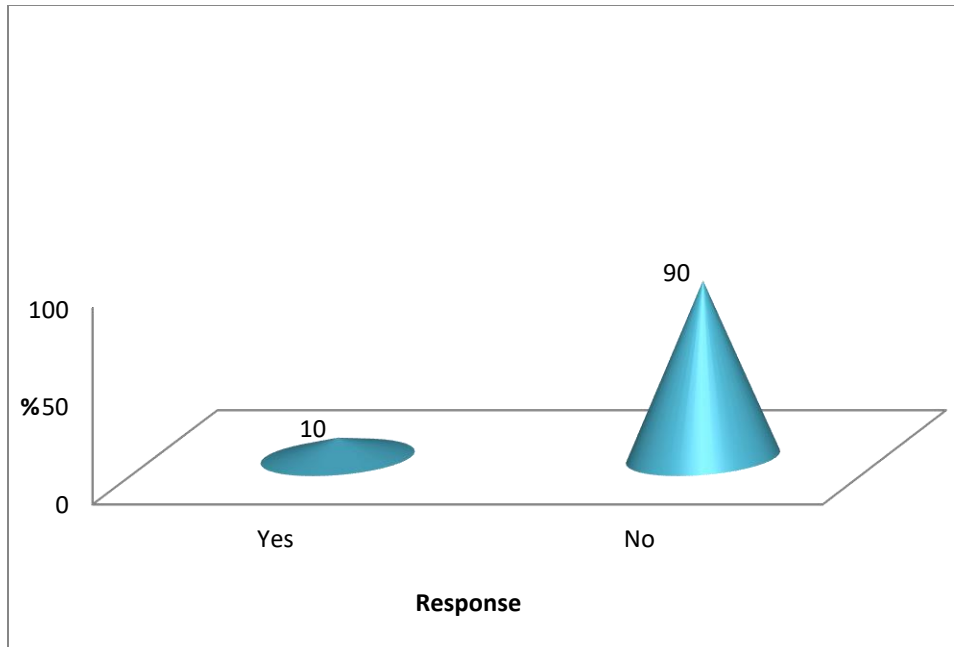


Figure 4.10: Previous history of forgoing clinic services (n = 489)

Similarly, almost all the respondents (n = 463, 94.1%) affirmed that the location of the clinic was convenient for them, while 29 (5.89%) said it was not convenient (Figure 4.11). The reasons given by the respondents who felt that the location was inconvenient were that the clinic's location was far from their particular residence or lecture rooms.

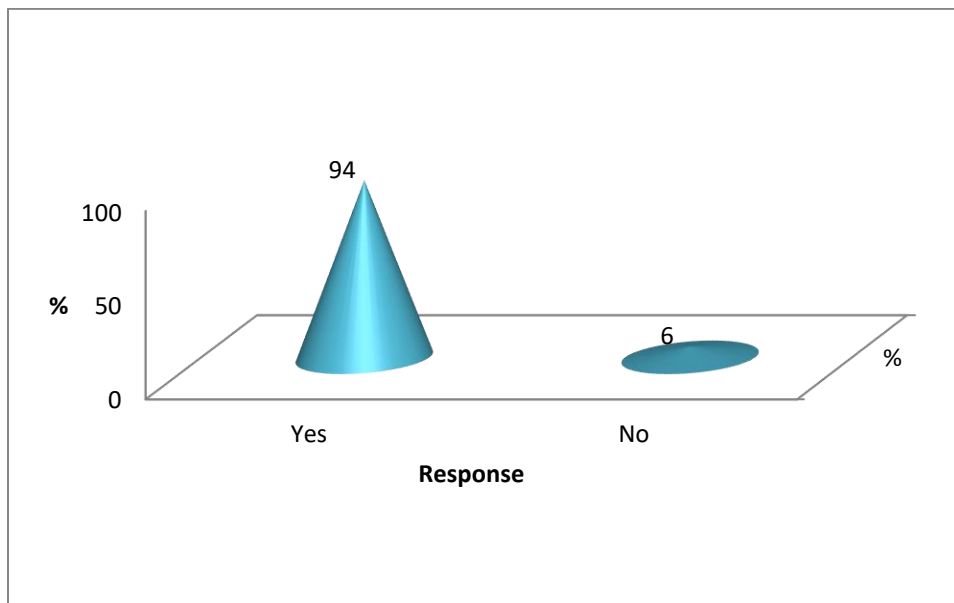


Figure 4.11: Perception regarding convenience of the campus clinic's location (n = 492)

Figure 4.12 shows that 39% of respondents said the clinic opening hours were convenient, 29% disagreed while 20% were not sure and 12% did not know if opening hours were convenient or not.

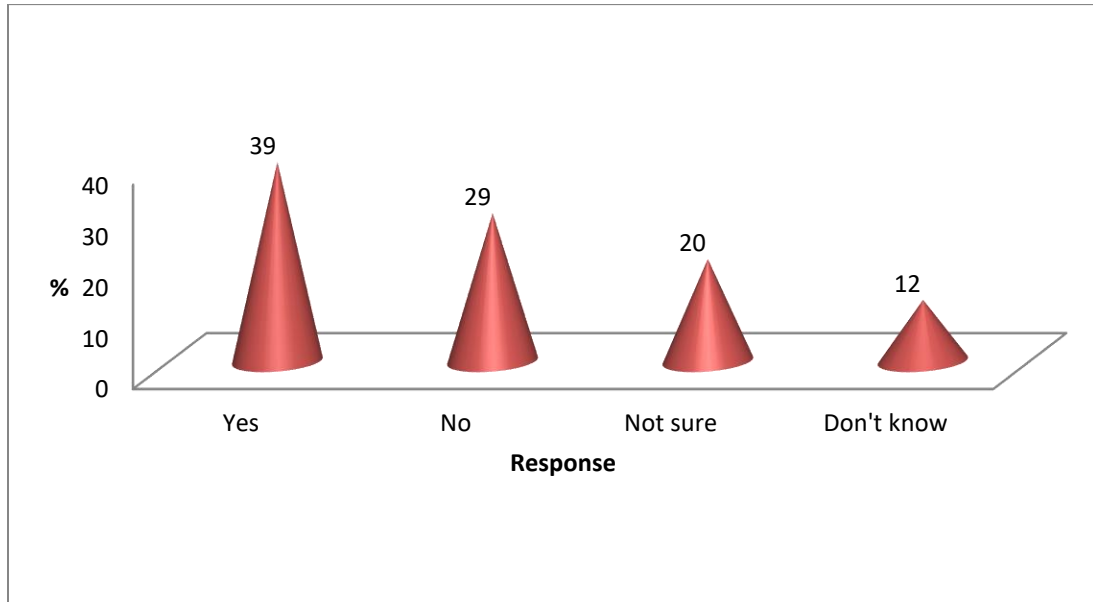


Figure 4.12: Perception regarding convenience of the clinic opening hours (n = 494)

To assess the views of the respondents regarding the waiting time at the clinic, they were requested to answer “too long”, “Ideal” and “Don’t know” to the question ‘what do you think of the waiting time before consultation at the clinic?’ Figure 4.13 shows that 32.6% said the waiting time was ideal while 35.1% felt it was too long and 32.2% did not know.



Figure 4.13: Respondents' perception of the waiting time at the clinic (n = 487)

Furthermore, respondents were asked to answer “Yes”, “No”, “Not sure” and “Don’t know” to the question ‘do you think the health providers at the clinic are adequately skilled to handle the health concerns you had at the time of your visit?’ Fifty-six percent (56%) said ‘Yes’, 7.2% said ‘No’, 21.6% were not sure and 15.2% did not know (Figure 4.14).

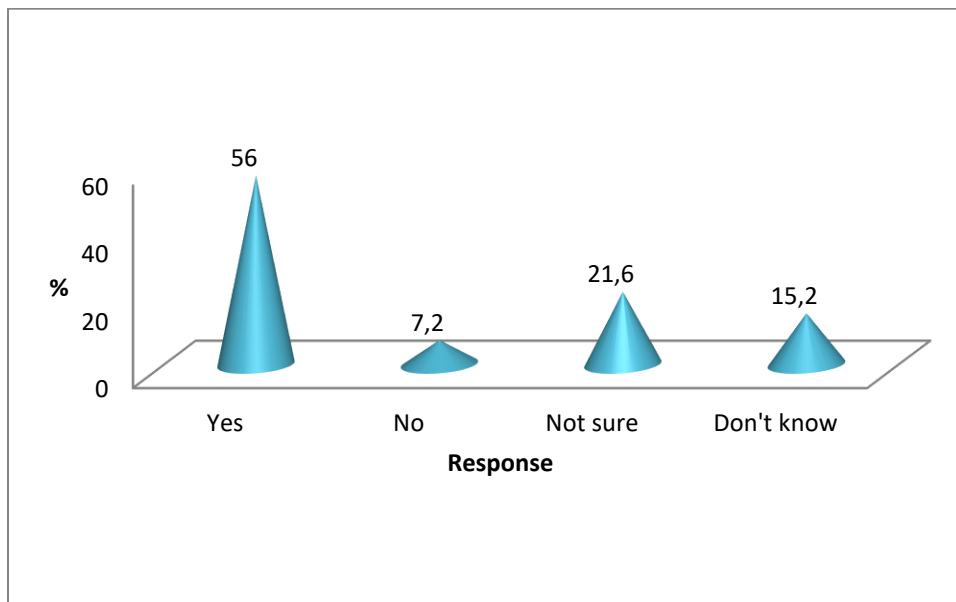


Figure 4.14: Respondents’ perception that the health provider is adequately skilled (n= 487)

4.5 Section 4: Acceptability barriers to campus health services

To find out the acceptability barriers experienced by the respondents in accessing the UNIVEN campus health services, some statements expressing acceptability concerns were listed and respondents were requested to tick boxes marked ‘Agree’, ‘Disagree’ and ‘Not sure’ as appropriate. Only the respondents who had used the services were instructed to complete this section.

Only 50 (16%) of the respondents agreed that they preferred to seek treatment outside the University even when the needed services were available at the clinic while the majority 236 (75%) disagreed with the statement as shown in Figure 4.15.

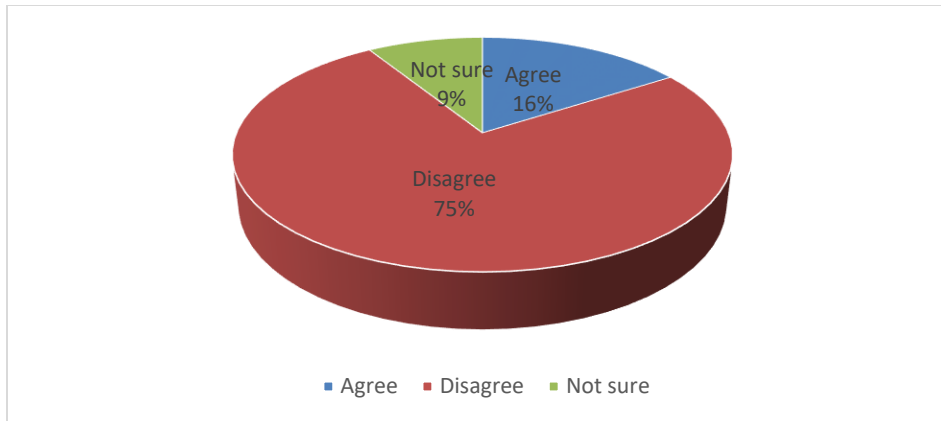


Figure 4.15: Respondents' preference for off-campus health services (n = 314)

Figure 4.16 shows that a large number 215 (70%) of the respondents agreed that they are able to talk to the clinic health providers in private while 38 (12%) disagreed with this. However, 56 (18%) respondents were not sure.

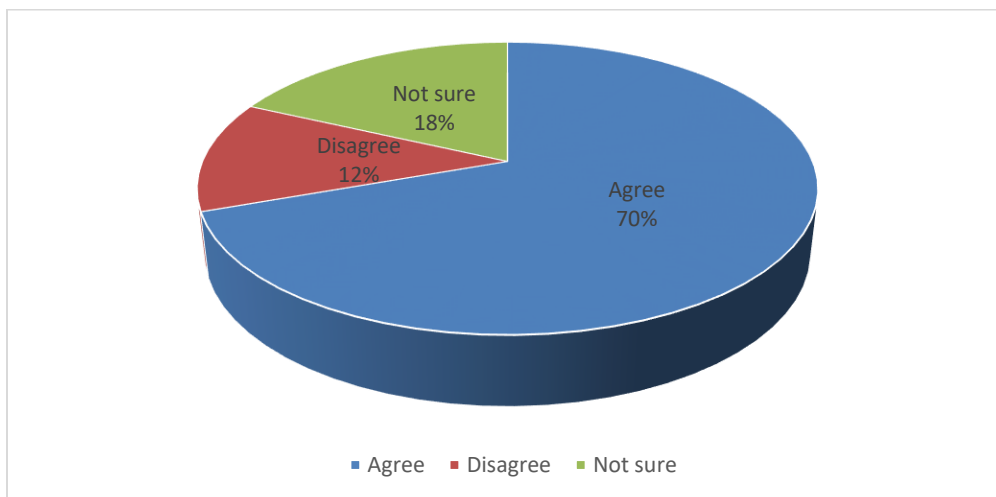


Figure 4.16: Agreement or disagreement about being able to talk to provider in private (n = 309)

Among the respondents who had used the campus health services, a small number 39 (13%) felt that that health providers did not treat them with respect and dignity, while 214 (69%) representing a majority disagreed (Figure 4.17).

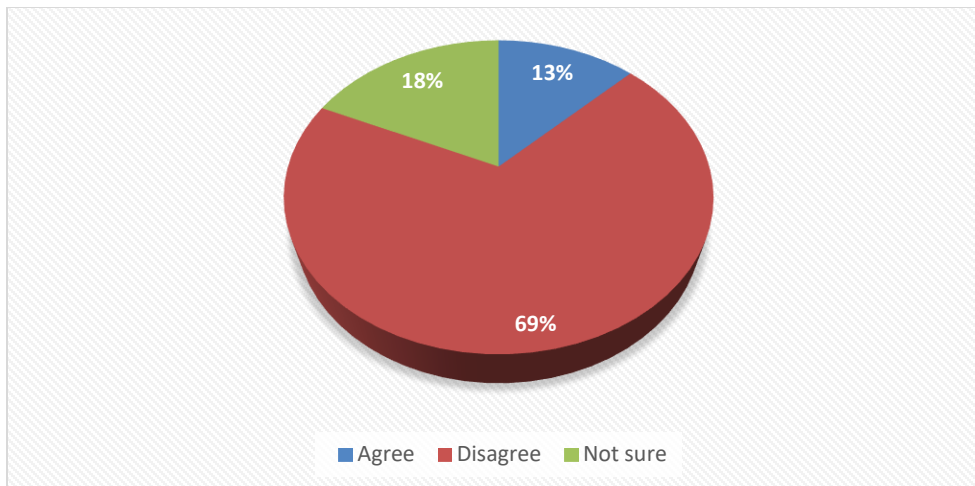


Figure 4.17: Agreement or disagreement that providers do not treat patients respectfully (n = 309)

Less than two-thirds 182 (59%) of the respondents who had consulted at the clinic felt that health providers fully communicated with them by discussing their illnesses and medications with them. Forty-one (13%) disagreed, while a considerable number 86 (28%) were not sure of having had full explanation about their illness from health workers (Figure 4.18).

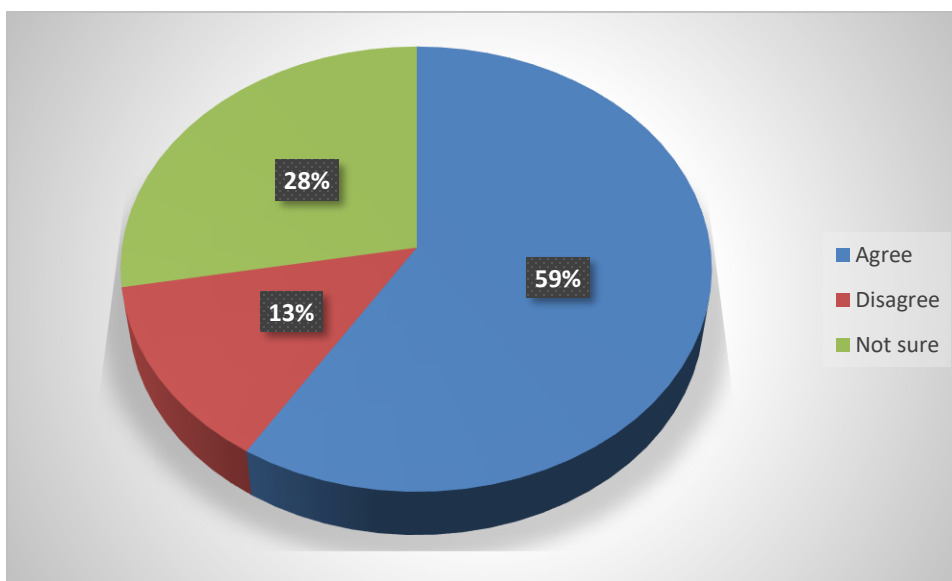


Figure 4.18: Agreement or disagreement that providers fully explain treatment plans to clinic users (n = 309)

The majority of the respondents (240, 77%) agreed that health workers respect patient's confidentiality while a small number 12 (4%) disagreed with this. Fifty-eight (19%) respondents were not sure of this (Figure 4.19).

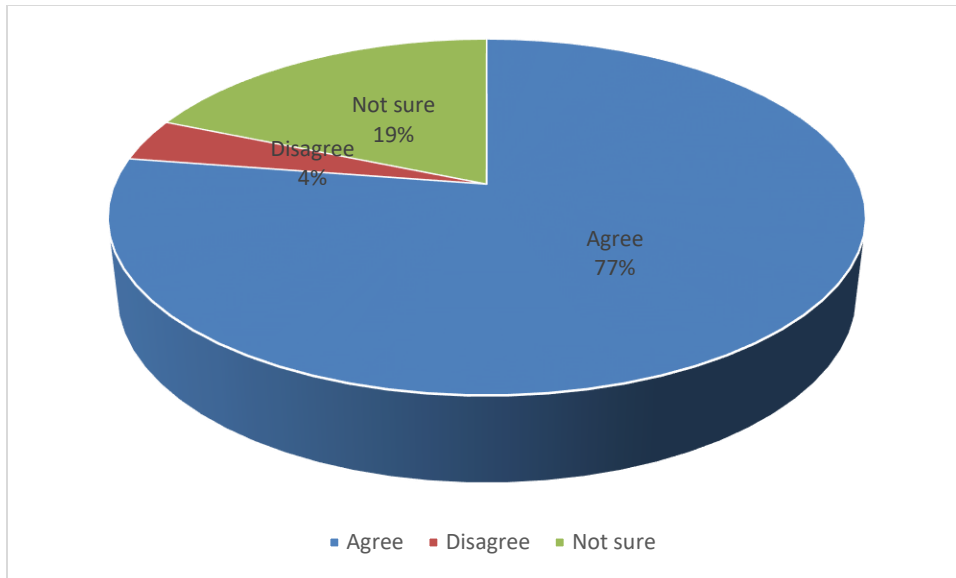


Figure 4.19: Agreement or disagreement that providers respect patients' confidentiality (n = 310)

Figure 4.20 shows that among the respondents who had gone for consultation at the campus clinic, 28 (9%) agreed that health providers cannot be trusted with sensitive information while a considerable number 170 (55%) felt otherwise. Many respondents (110, 36%) were not sure of the trustworthiness of the clinic health providers.

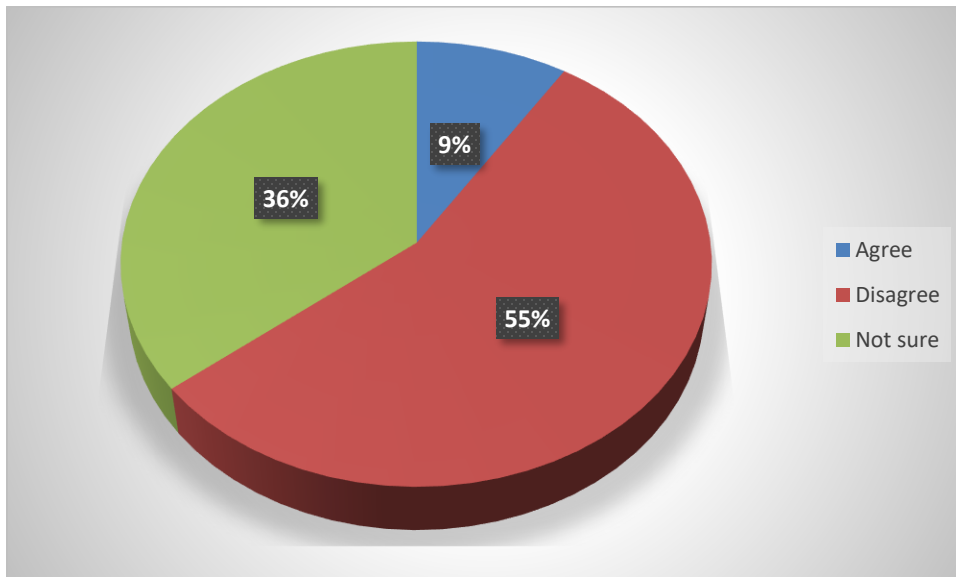


Figure 4.20: Agreement or disagreement that providers cannot be trusted with sensitive information (n = 308)

Eighty-two (27%) respondents agreed that they have a language barrier in communicating with health providers. On the other hand, a majority, 191 (63%) disagreed with language being a barrier in communicating with providers while visiting the clinic (Figure 4.21).

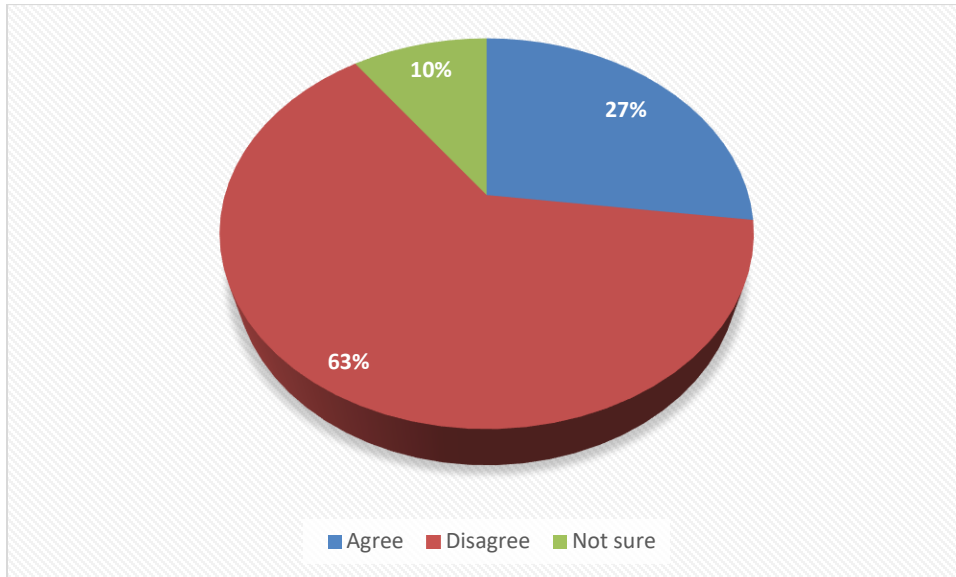


Figure 4.21: Agreement or disagreement that respondent has a language barrier in communicating with provider (n = 309)

Figure 4.22 shows that many (164, 55%) of the respondents who had consulted at the clinic expressed satisfaction with being able to communicate their reservations about the quality of service easily to providers. This was however not the case with 58 (19%) respondents who felt it was not easy to give feedback to providers about the quality of service delivery.

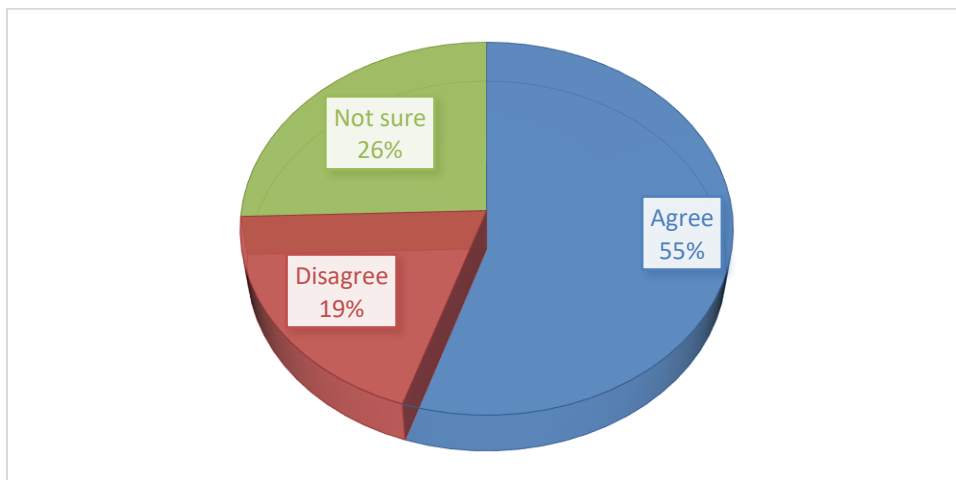


Figure 4.22: Agreement or disagreement that respondents find it easy to communicate reservations to provider about service received (n = 311)

The majority (229, 76%) of the respondents disagreed with the statement “the health providers seem too busy to listen to my problems” while a few (34, 11%) agreed that they had experienced a situation where they felt the provider wasn’t listening to their complaints. Forty (13%) respondents were not sure if they had felt this way at the clinic in the past (Figure 4.23).

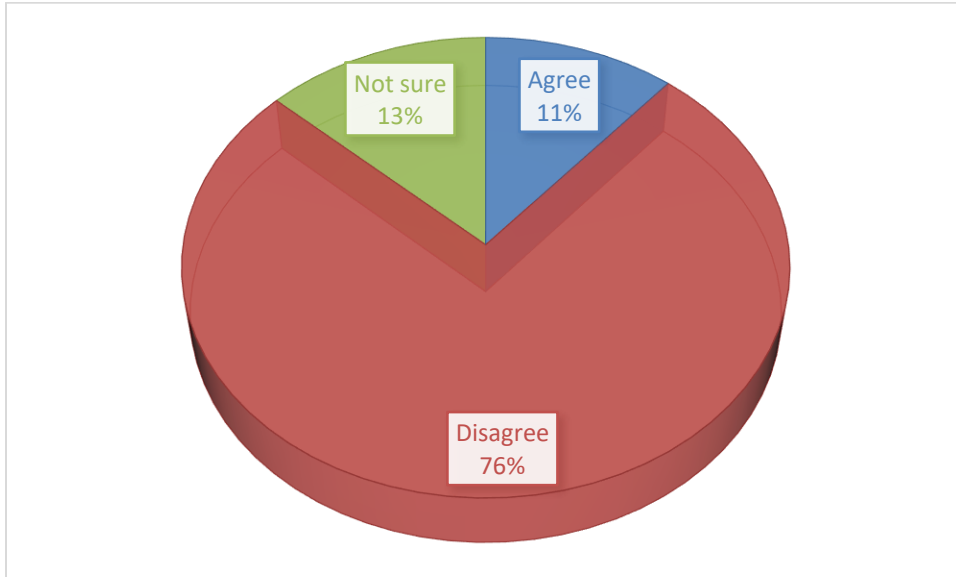


Figure 4.23: Agreement or disagreement that provider seemed too busy to listen to respondent’s complaints (n = 307)

Two hundred and four (68%) respondents agreed that patient information is kept confidential in the clinic. This opinion was not shared by a few (12, 4%), while a considerable number (85, 28%) were not sure of this (Figure 4.24).

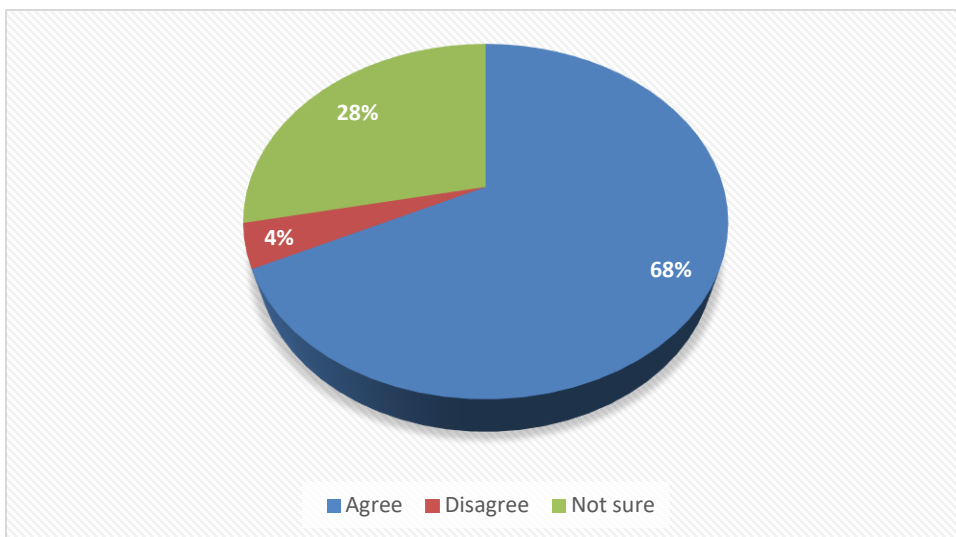


Figure 4.24: Agreement or disagreement that respondents’ information are kept confidential in the clinic (n = 309)

Most (264, 85%) respondents who had visited the clinic disagreed that the clinic environment (including waiting area and toilets) was dirty while only 8 (3%) thought otherwise. Thirty-nine (12%) respondents were not sure if the clinic area was dirty or not (Figure 4.25).

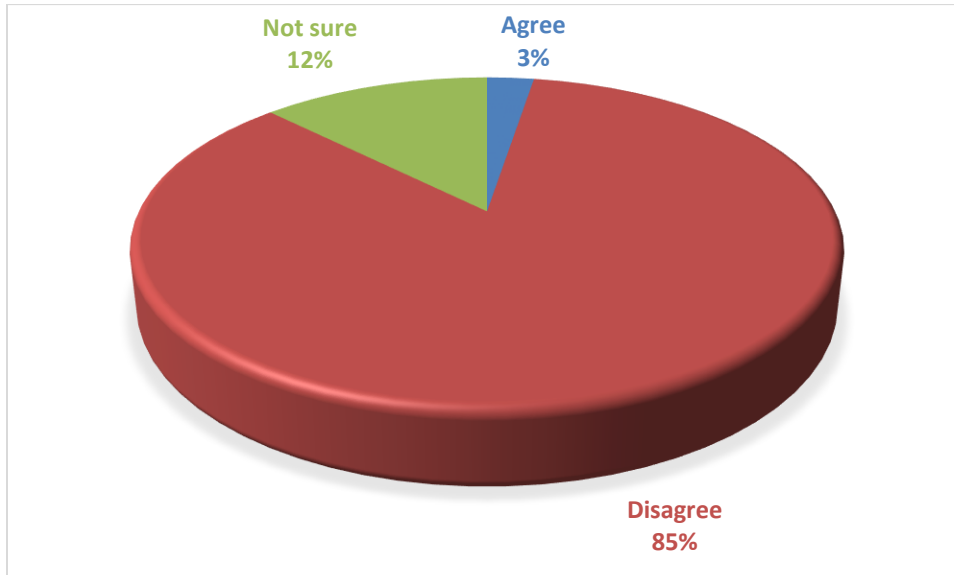


Figure 4.25: Agreement or disagreement that the clinic is dirty (n = 306)

Figure 4.26 shows that the majority (242, 76%) of respondents did not express a preference for same-sex providers while only a few (50, 16%) disagreed with this, preferring instead to be treated by a health provider of the same sex.

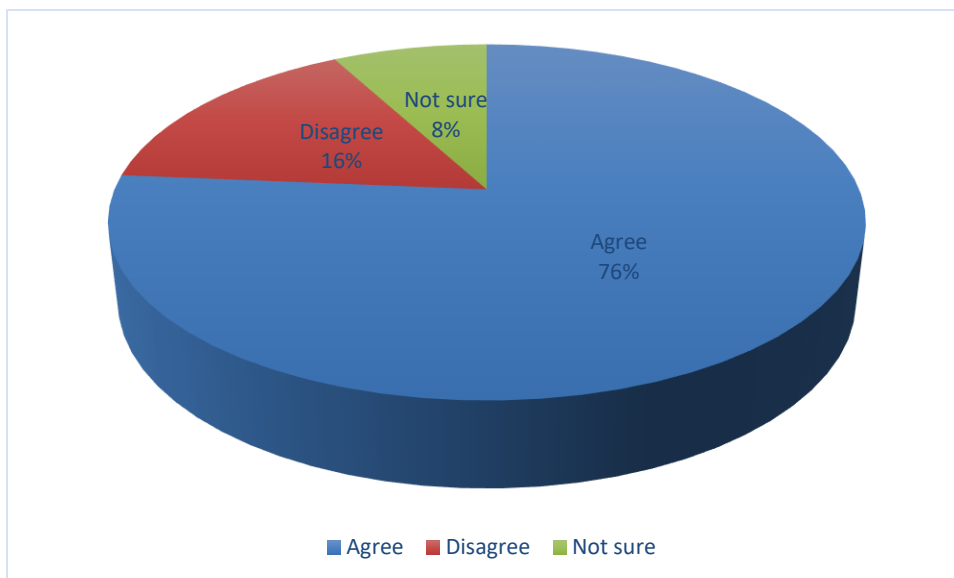


Figure 4.26: Agreement or disagreement with preference for provider of the gender (n = 311)

Less than a fifth (62, 19%) of the respondents rated the service they received at the clinic as 'very good'; the majority (238, 73%) rated the service as 'good', while twenty-three (7%) respondents felt the quality of service they received was poor. However only 3 (1%) respondents rated the quality of services at the clinic as 'very poor' (Figure 4.27).

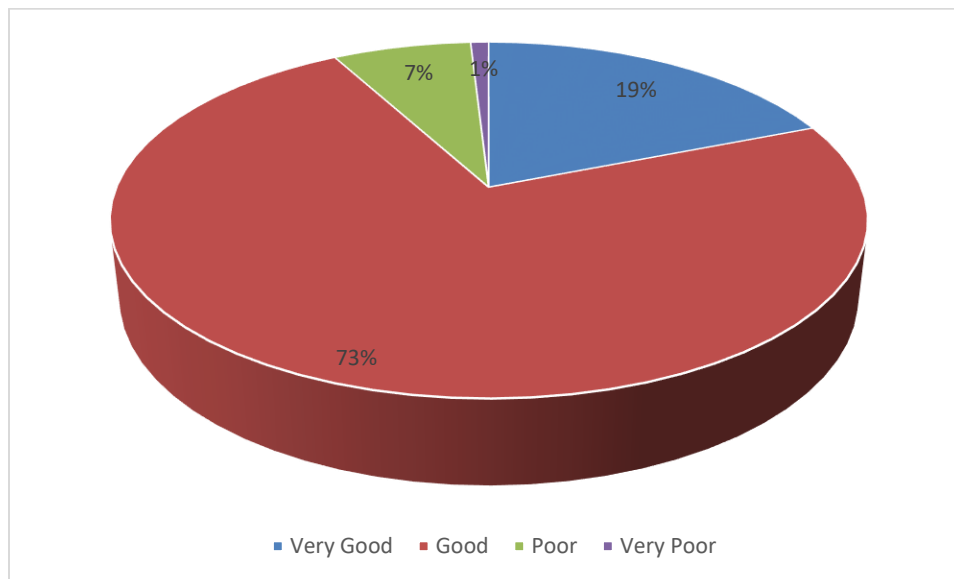


Figure 4.27: Respondents' rating of the quality of service delivery at the clinic (n = 313)

4.6 Respondents' suggestions to improve the quality of clinic services

Respondents were asked to make suggestions on what they think can be done to improve the quality of the services being provided at the clinic. Some of the respondents expressed satisfaction with the quality of services presently being provided at the clinic. More respondents wanted the opening hours to be extended with some preferring the clinic to be open beyond school hours while others expressed preference to be able to visit the clinic during weekends. Other respondents suggested that more clinical staff should be recruited in order to reduce waiting times at the clinic with a few of these respondents preferring that a medical doctor should also be contracted to handle more serious health challenges of students. Other suggestions proffered by respondents include wanting clinic staff to undergo further training to improve their professionalism, clinic staff to always communicate with students in English and the availability of medications at all times.

4.7 Association between selected variables

Associations were conducted between having medical insurance and use of campus health services. It was also done between gender and use of clinic services and needing but not

receiving services. Lastly, associations were carried out between gender, availability and acceptability barriers to campus health services.

4.7.1 Association between gender and use of clinic services

Among the females, 61% had used the clinic in the past while only 39% of the males reported having gone for consultation at the clinic in the past. There was a strong association between gender and use of clinic services (chi-square = 22.461, $p = 0.000$) as shown in Table 4.2.

Table 4.2: Gender and use of campus health services

Question	Female		Male		Total			
	n	%	n	%	n	%		
Have you gone for consultation at the clinic before	Yes	192	60.8	124	39.2	316	100	Chi-square =22.461 Pvalue0.000
	No	71	38.8	112	61.2	188	100	
	NA	19	54.3	16	45.7	35	100	

NA = Not applicable

4.7.2 Association between having medical insurance and use of the campus health services

There was no significant association between having medical insurance and utilising the campus health services (chi-square = 2.936, $p = 0.569$) as shown in Table 4.3.

Table 4.3: Association between having medical insurance and utilisation of campus clinic

Question	Have you gone for consultation at the campus clinic			Chi-square =	
	Yes	No	Total		
Have medical aid?	Yes	57	42	99	P value = 0.569
	No	250	137	387	

4.7.3 Association between gender and not receiving care when needed

Table 4.4 shows that there was no significant association between male and female who needed the clinic's services and didn't receive care (chi-square = 1.020, $p = 0.601$). Neither sex was more likely to have needed the clinic's services and not received it.

Table 4.4: Association between gender and not receiving care when needed

Question		Female		Male		Total		Chi-square = 1.020 P value = 0.601
		n	%	n	%	N	%	
Have you ever needed care and didn't receive it?	NA	27	9.6	18	7.1	45	8.4	
	Yes	25	8.9	23	9.1	48	9.0	
	No	230	81.6	211	83.7	441	82.6	

NA = Not Applicable

4.7.4 Association between gender and availability barriers at the campus clinic

There was a significant association between gender perception of the waiting time at the clinic (chi-square = 19.025, $p = 0.000$) and whether health providers were considered adequately skilled to manage the patient's complaints at the time of their visit (chi-square = 10.433, $p = 0.034$) as shown in Table 4.5. However, there is no significant association in gender perception of the convenience of the clinic opening hours to the user (chi-square = 3.775, $p = 0.437$).

Table 4.5: Association between gender and availability barriers at the campus clinic

Questions		Female		Male		Total		Chi-square = 19.025 P value 0.000
		n	%	n	%	n	%	
What do you think of the waiting time at the clinic	NA	28	9.9	19	7.5	47	8.8	
	TL	100	35.5%	71	28.2	171	32.0	
	Ideal	94	33.3	65	25.8	159	29.8	
	NS	60	21.3	97	38.5	157	29.4	
Are the opening hours convenient for you?	NA	23	8.2	17	6.7	40	7.5	Chi-square = 3.775 P value 0.437
	Yes	110	39.0	84	33.2	194	36.3	
	No	75	26.6	69	27.4	144	27.0	
	NS	47	16.7	48	19	95	17.8	
	DK	27	9.6	34	13.5	61	11.4	
Do you think the health providers are adequately skilled	NA	27	9.6	20	7.9	47	8.8	Chi-square = 10.433 P value= 0.034
	Yes	154	54.6	119	47.2	273	51.1	
	No	23	8.2	12	4.8	35	6.6	
	NS	47	16.7	58	23.0	107	19.7	
	DK	31	11.0	43	17.1	74	13.9	

NA = Not Applicable, TL = Too Long, NS = Not Sure, DK = Don't Know

4.7.5 Association between gender and acceptability barriers at the campus clinic

Table 4.6 shows that there is a significant association between gender and acceptability barriers: perception that health providers respect patient's confidentiality (chi-square = 11.538, $p = 0.009$), perception that clinic health providers do not treat patients with respect and dignity (chi-square = 16.102, $p = 0.001$); respondents being able to talk to patients in private (chi-square = 10.408, $p = 0.000$) and there was a significant association between gender and non-preference for health providers of the same gender (chi-square = 21.493, $p = 0.000$).

Table 4.6: Gender and acceptability barriers to campus health services

Questions		Female		Male		Total		
		n	%	n	%	n	%	
Clinic health providers respect confidentiality	A	145	60.4	95	39.6	240	100	Chi-square = 11.538 P value 0.009
	D	5	41.7	7	58.3	12	100	
	NS	31	53.4	27	46.6	58	100	
I am able to talk to the health workers in private	A	28	71.8	11	28.2	39	100	Chi-square = 16.102 P value 0.001
	D	127	59.3	87	40.7	214	100	
	NS	27	48.2	29	51.8	56	100	
Do you think the health providers are adequately skilled	A	128	59.5	87	40.5	215	100	Chi-square = 10.408 P value 0.015
	D	20	52.6	18	47.4	38	100	
	NS	33	58.9	23	41.1	56	100	
I do not mind being treated by a health provider of the opposite sex	A	139	57.4	103	42.6	242	100	Chi-square = 21.493 P value 0.000
	D	38	76.0	12	24.0	50	100	
	NS	11	44.0	14	56.0	25	100	

A = Agree, D = Disagree, NS = Not Sure

4.8 Modelling

4.8.1 Relationship between Preference for Off-campus Health Services (POCHS) and independent variables

Tables 4.7 to 4.9 represent results from Generalised Linear Model (GLM) analysis. The association between the dependent variable (POCHS) and five predictor variables is shown.

The independent variables are; gender, age, level of study, location of clinic and convenience of opening hours. These independent variables were chosen as they were believed to have some influence on respondents' preference to seek health services outside the university campus.

Table 4.7 shows the Omnibus test which confirms that there is a significant relationship between the dependent variable and the independent variables when considered together.

Table 4.7: Omnibus Test

Likelihood Ratio Chi-Square	df	Sig
105.161	20	0.000

df = degree of freedom; Sig = significance

However, as shown in Table 4.8, only gender, age and opening hours have significant association with POCHS. The model revealed no significant relationship between level of study, location of the clinic and POCHS.

Table 4.8: Tests of Model Effects

Source	Type III		
	Wald Chi-Square	df	Sig.
Gender	9.077	1	0.003
Level of Study	1.706	1	0.192
Location of clinic	4.075	2	0.130
Opening hours	11.717	3	0.006
Age	5.040	1	0.025

Dependent Variable: I prefer to seek treatment outside UNIVEN

evenwhen services are available at UNIVEN Health Center

Model: (Threshold), Gender, Level of Study, Location of clinic, Opening hours, Age.

df = degree of freedom; Sig = significance

Table 4.9: Parameter Estimates

Parameter			95% Wald Confidence Interval		Hypothesis Test		
	B	S.E.	Lower	Upper	Wald Chi-Square	df	Sig
[Gender = Male]	-0.572	0.190	-0.945	-0.200	9.077	1	0.003
[Gender=Female]	0 ^a						
[Age]	0.072	0.032	0.009	0.134	5.040	1	0.025
[Inconvenient opening hours]	21.638	37224.724	-72937.48	72980.75	0.000	1	0.006
[Convenient opening hours]	0 ^a						

Dependent Variable: I prefer to seek treatment outside UNIVEN even when services are available at the UNIVEN health center

Model: (Threshold), Gender, Age, Opening hours

a. Set to zero because this parameter is redundant;

B = Beta; S.E = Standard Error; df = degree of freedom; sig = significance

4.8.2 Model presentation

The model is represented mathematically as:

$$\log_m [\text{POCHS}] = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \dots + \beta_i X_i \dots \dots \dots (1)$$

Where X_1 , X_2 and X_3 refer to the variables; gender, age and opening hours respectively.

The model as derived from Table 4.9 is as follows:

$$\log_m [\text{POCHS}] = -0.572\text{Gender} + 0.072\text{Age} + 21.638\text{Opening hours} \dots \dots \dots (2)$$

Equation 2 illustrates that POCHS is negatively related to gender (male) but positively related to age and inconvenient clinic opening hours.

The interpretation of this is that females, older respondents and respondents who found the clinic opening hours inconvenient were more likely to prefer seeking treatment outside UNIVEN. This model implies that the older the students, the more likely they prefer to seek health services outside the university. This could probably be due to confidentiality concerns among older students who may be known to campus health workers. Furthermore, the model

shows that opening hours that are not convenient will force students to seek health services outside the campus. With respect to gender, for every hundred female students that seek off-campus health services, only fifty-six male students do so, meaning that more females than males prefer to go off-campus.

Therefore, according to the model, the predictors of preference for off-campus health services are female gender, age and inconvenient opening hours.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter contains the discussion of the results and comparisons with previous similar studies, both within and outside South Africa.

5.2 Socio-demographic characteristics of the respondents

The findings of this study show an age range of 17 to 51 years with a mean age of 21.85 (SD = 3.79). This is consistent with the age profile of university students in the Kwazulu-Natal Province of South Africa (Hoque & Ghuman, 2012), Lesotho (Akintade et al., 2011) and in the US (Buzi & Smith, 2014). Similar to Alli et al. (2013) study, gender distribution was almost equal with a marginal 52.8% female dominance. Most of the respondents were undergraduates (84.4%) and were from the Schools of Environmental and Management Sciences (16.9%).

Medical insurance coverage has been known to represent a major barrier to access of non-school based health services among university students. This arises as many of these young adults attain the age at which they no longer qualify for coverage under their parents' medical aid and are also not in paid employment. This study revealed that only 1 in 5 (21%) respondents had medical insurance coverage. This contrasts with Hunt and Eisenberg's (2010) study in which over 90% of students had medical insurance.

This study found no significant association between having medical insurance and utilisation of campus health services (Chi-square = 2.936; $p = 0.569$). This is in contrast to findings from the US which indicate that students without medical insurance were more likely to use campus health services than the insured (Allison, Crane, Beaty, Davidson, Melinkovich & Kempe, 2007; Amaral, Geierstanger, Soleimanpour & Brindis, 2011). The findings of the present study may have differed due to the availability of free primary health care at government health facilities in the locality of the university thus reducing the need for medical insurance by the participants.

5.3 Awareness barriers to campus health services

Knowledge of the existence of a clinic on campus was high with most respondents (95%) being aware of the presence of a clinic on the UNIVEN campus. This figure was higher than that reported in a similar study among Canadian students in which only 57% of respondents had knowledge of a health facility on their university campus (Fletcher et al., 2007). DiCenso et al. (2001) reported that the majority of male students were not aware of the presence of a public

health nurse on campus thus limiting their use of available sexual health services. Akintade et al. (2011) reported that less than two-thirds (62%) of female university students in Lesotho knew of the presence of a reproductive health facility on their university campus. In a study conducted at the University of Free State in South Africa, the majority of students were found to be ignorant of where to access available campus HIV Counselling and Testing services (Mbengo, Ngirande, Ndou & Mavundla, 2014).

Awareness of respondents regarding services provided at the campus health clinic was low. HIV Counselling and Testing (19%) was the service students were most likely to be aware of. On the other hand, behavioural counselling was only known to 3% of respondents. This is worrisome, considering the negative effects of risky sexual behaviour and substance abuse among university students (Wechsler, Lee, Kuo & Lee, 2000; Cooper, 2002; Perkins, 2002). The finding of this study is lower than that described by Njagi and Maharaj (2006) study in which 53% of students of the University of KwaZulu-Natal in South Africa were aware of HIV counselling and testing services provided on-campus. Similarly, 50% of the students in a Hong Kong study had sufficient knowledge of the services provided in the University health centre (Siu, 2013). Lu, Dear, Johnston, Wootton and Titor (2014) reported that only 34% of Chinese international students in an Australian university were aware of services available on campus. It is likely that participants in the present study may be aware of more services than they indicated and only chose the ones they visited the clinic for.

As in previous studies carried out on university campuses in other parts of Africa (Tamire & Enqueselassie, 2007; Akintade et al., 2011), this study found that friends (50.6%) were the major source of information for respondents in becoming aware of the clinic and its services. The results suggest that friends were usually more likely to be consulted first when a student needed health information and their recommendations were a determinant of help-seeking behaviour in many cases. The role of friends in determining access to SBHC was reported to be particularly important with respect to male students who only become aware of on-campus services through their girlfriends (Davies et al., 2000; Booth et al., 2004). However, an Ethiopian study reported that the electronic media (TV and radio) was the major source of information for 62% of the participants of the study (Kassa, Luck, Bekele & Riedel-Heller, 2016). The source of health knowledge is important as misinformation about health issues may result in negative consequences on an individual's health status.

Although the majority of the respondents were aware of the availability of health services on campus, only 63% had used these services. This is also worrying, as a previous study among

university students in the same university reported a high rate of unintended pregnancies (25.8%) largely due to high rate of risky sexual behaviour and low prevalence of contraceptive usage (Mabunda et al., 2015). Furthermore, SBHC have been shown to be a very important provider of age-appropriate reproductive and mental health services for young people and reduces attendance at secondary health facilities (Tylee et al., 2007; Mason-Jones, Crisp, Momberg, Koech, De Koker & Mathews, 2012).

The findings of this study are comparable to those reported in a US study in which 65% of students were reported to have accessed school health services with majority of the users being females (Juszczak, Melinkovich & Kaplan, 2003). In contrast, Pastore and Techow's (2004) study reported that only an average of 46% of respondents had used school health services in a comparative study carried out in two schools in the US. A Canadian study revealed that although 59% of students had visited a SBHC, only 19% of males and 59% of females with identified risky health behaviour had used available school health services (Langille, Asbridge, Kisely, Leblanc, Schaller, Lynk & Allen, 2008).

Sixty-one percent of the respondents who had used the UNIVEN health services were female while only 39% were male. There was a significant association between gender and the utilisation of health services. The study found that females were more likely to use the UNIVEN health services than were males. This finding is not unique to UNIVEN as various studies particularly in North America have reported similar findings (Langille et al., 2008; Szumilas, Kutcher, Leblanc & Langille, 2010; Ingram & Salmon, 2010). Flisher, De Beer and Bokhorst's (2002) study to determine the characteristics of students seeking counselling services at the University of Cape Town in South Africa, reported that females were more likely than males to access campus-based counselling and mental health services.

The low utilisation of the clinic by males represents a troubling finding, as males are known to indulge in risky behaviour, including unsafe sexual acts and substance abuse. Kyei and Ramagoma's (2013) study reported that over 65% of students interviewed at UNIVEN used alcohol, while almost half of those students (49%) abused it. Over 70% of the males in this study were found to be using alcohol with males strongly associated with abusing it.

5.4 Availability barriers to campus health services

Unavailability of some services was identified as one of the barriers. One in ten respondents (10%) reported that they had not received the clinic's services when they needed it. The figure from this study is lower than that reported by Stebleton, Soria and Huesman's (2014) study in

which 16% of students at different universities in the US did not access needed care. The students in the present study cited inconvenient opening hours, not being aware of services and not having enough time to seek services, as reasons for forgoing health care. Similarly, 17% of students in a study in New Zealand reported needing health services and not receiving same (Denny, Farrant, Cosgriff, Hart, Cameron, Johnson, McNair, Utter, Crengle, Fleming, Ameratunga, Sheridan & Robinson, 2012).

Services required by students included emergency contraceptives over the weekend and they were likely to resort to borrowing money to cover transport costs to public clinics or for purchase of medicines from private pharmacies with a few having to forgo care altogether. This may result in unintended pregnancies with associated poor health and educational outcomes for students. Elliott and Larson (2004) also reports that students were likely to forgo health care due to lack of access resulting from lack of transportation, not being able to afford care and not being aware of available services.

Opening hours was also identified as a barrier. School health services become unavailable to students when clinic opening hours coincide with lecture hours. This is made worse when school clinics do not open on weekends and public holidays. This study found that about a third of the respondents (30%) felt that the opening hours were inconvenient. This figure is higher than that reported by Downs and Eisenberg (2012) where 14% of students expressed barriers related to clinic opening hours. It is also higher than that reported by Givens and Tjia (2002) in which 17% could not access health services after school hours. However, the finding of the present study is lower than that reported by an Ethiopian study which revealed that as many as 70% of students believed that opening hours was a major barrier in accessing campus health services (Cherie & Berhane, 2012). This finding of the present study is of significance because important non-emergency campus health services such as behavioural counseling which can help to reduce risky behaviour and substance abuse would be better utilized if made available over the weekend.

Young people, whether as students or in paid employment tend to have less control over their time and view long waiting times negatively as predisposing to lost wages (Khalaf et al., 2010) or undermining their anonymity (Klingsberg-Allvin et al., 2006) when seeking services. More than one in three (35%) of respondents in this study viewed waiting time at the campus clinic as being 'too long' with a significant association found between male and female. This is comparable to Erulkar et al. (2010) finding that Kenyan female students were significantly more likely to view waiting time as a very important characteristic of 'youth-friendliness' of service

delivery. The finding of this study compares favourably to that reported in a UK study in which an appreciable number of the respondents (42%) expressed displeasure at the time they waited to see a doctor and 46% reported experiencing delay in receiving treatment (Fry et al., 2007). Waiting time barriers may cause respondents to forgo crucial health care such as sexual and mental health services which may have grave implications for their future well-being.

Students' health-seeking behaviour has been reported to be influenced by their perception of the health provider's knowledge and skill (Erulkar et al., 2005; Gharafi et al., 2014). The quality of service delivery is usually rated as low when the young patient feels that the provider does not possess adequate medical knowledge or skill to deal with their health issues (WHO, 2002). This study found that only about half (56%) of the students thought that the clinic health providers were adequately skilled to handle the health challenges they had at the time of their visit. This is lower than 68% of participants who reported that their health providers had the required skills to handle their health concerns in a New Zealand study (Farrant & Watson, 2004). The findings were also lower than that reported by Mah, Tough, Fung, Douglas-England and Verhoef (2006) study which reported that three out of four (75%) participants felt that health providers had the right medical information on their health issues and a similar percentage expressing satisfaction with all aspects of their care.

5.5 Acceptability barriers to campus health services

Comparable to Biddlecom, Munthali, Singh and Woog's (2007) finding that 85% of students expressed satisfaction with confidentiality of their school health centre, majority of the respondents (77%) felt that the campus health clinic was a confidential source of needed health services. This is higher than the 59% (Hampana, Ybarra & Bull (2014) and 42% (Berhane, Berhane & Fantahun, 2016) of students reporting their school health services as confidential in Uganda and Ethiopia respectively. According to a New Zealand study, less than a third of the participants (27%) perceived their campus health centre as providing confidential care (Denny et al., 2012).

The study also showed a significant association between gender and confidentiality of the health centre. Females were more likely to report that clinic health workers respect the confidentiality of students. This is similar to Denny et al. (2012) study in which female students reported having received confidential care more often than males.

University students, like other young people worldwide, are likely to report experiencing barriers to accessing health care when providers do not treat them with respect. Thirteen percent of

respondents reported being treated disrespectfully by health providers. This is comparable to Mathews, Guttmacher, Flisher, Mtshizana, Nelson, McCarthy and Davies (2009) finding that 12% of respondents felt they had been treated with disrespect by providers while trying to access health services. However, in contrast to the present study, a Zambian study reported that most of the respondents (85%) were denied reproductive health services after being deemed 'too young' and disrespected by health workers (Mmari & Magnami, 2003). A health provider's attitude can thus have untoward implications on the health of young people when it presents an obstacle to access of needed mental and reproductive health services.

Several factors may contribute to non-use or preference for non-SBHCs. When asked if respondents would prefer to use health services outside the campus even when such services were present on campus, 16% reported preferring to seek treatment outside the campus while 75% disagreed and 9% were not sure. A study to determine medical students' preferred sources of Non-Occupational Post-Exposure Prophylaxis of HIV services at Stellenbosch University in South Africa reported that more than two-thirds (68%) of the students interviewed preferred to access these services from sources other than the university campus clinic due to HIV-related stigma and discrimination (Ncube et al., 2014). Booth et al. (2004) reported that more than 50% of students in an Australian tertiary institution forgo campus health services due to feelings of embarrassment, confidentiality concerns, preference for a provider of the same gender and not knowing the range of health services available at the campus.

In this study, 16% of participants expressed a preference for same-sex providers while 76% disagreed with this. An Australian study reported that female students were more inclined to prefer same-sex providers due to uneasiness and discomfort in discussing their sexual health concerns with male health providers (Booth et al., 2004). A study among young people in Malawi also reported that females did not access needed health care due to shyness and embarrassment at revealing 'sensitive' information to male providers (Munthali & Zakeyo, 2011). Berhane et al. (2005) reported that a considerable number of students (44.3%) would increase their utilisation of health services if providers were young and of the same sex as themselves. Male students in an American study expressed non-preference for same-sex providers to prevent homophobic thoughts being nursed towards them (Davies et al., 2000).

There was a significant difference between the gender of a participant and not expressing preference for a provider of the same sex (chi-square = 13.609, $p = 0.000$). Females were more likely than males not to prefer being treated by a health provider of the same sex. This is an interesting finding considering that most other studies reported that females were more likely to

express preference for providers of the same sex (Booth et al., 2004; Berhane et al., 2005). The reason for this may be partly due to the fact that this study does not focus specifically on women's health issues. This finding is of particular importance to the sexual health of female students as young females were more likely to avoid seeking sexual health services from male health providers (Booth et al., 2004; Munthali & Zakeyo, 2011).

5.6 Predictors of preference for off-campus health services

Results from generalised linear model analysis done show that female gender, age and inconvenient opening hours are the predictors of respondents' preference to use other health facilities for services which are available at the UNIVEN health center.

Gender is strongly associated with determining students' health-seeking behaviour at the campus clinic. In Table 4.9, when females are taken as the base for comparison, males were less likely to prefer seek treatment outside the university (p value = 0.003). This may be due to the fact that females are more likely to be concerned about the privacy and confidentiality of the health facility especially when seeking sexual health services. However, transportation costs may constitute a barrier to utilization of off-campus sexual health services and engender negative reproductive health outcomes.

Respondent's age was found to be significantly associated with preference to seek services outside the university (p value = 0.025). This may be because older respondents are more likely to be in higher levels of study, be more involved in research rather than coursework and hence have more flexible schedules. Therefore the less-restrictive schedules of older students may afford them more time to be able to utilize off-campus health services. Also, older respondents especially postgraduate students who have spent more time at the university were likely to have confidentiality concerns with using the campus health services and hence may prefer to use off-campus health services.

Opening hour barriers tend to make students forgo services at the campus clinic as those who are unable to access services after school hours and weekends tend to prefer seeking health care from other health facilities. Table 4.9 shows that when convenient opening hours are taken as the base, inconvenient opening hours were found to be strongly associated with respondents' preference for off-campus health services (p value = 0.006). This may be because respondents who need services may experience barriers related to the conflict between lecture times and clinic opening hours.

5.6 Conclusion

This study found that several barriers exist which impede students living on the university campus from accessing the clinic's services. These include low awareness of the services available at the clinic, low utilisation of the clinic especially by male students, unsatisfactory waiting times, and inconvenient clinic opening hours. Nevertheless, this study found that most students considered the clinic location to be ideal and only a few students experienced acceptability barriers.

CHAPTER SIX

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter provides a summary of the study, makes conclusions and then suggests recommendations that can aid in removing barriers to accessing the UNIVEN campus health services.

6.2 Summary

SBHCs, by their strategic location in schools, are a veritable means of providing age-appropriate health services for students. They can also facilitate campus outreach and preventive intervention strategies. This is particularly important in the face of a high rate of risky sexual behaviour, substance abuse and unintended pregnancies among university students. SBHC have proven effective in improving access to and utilisation of health services by students thus contributing to overall positive health and educational outcomes. However, as important as these health centres are to the future aspirations of students, several barriers have been found to limit access to their services. This study adopted a quantitative approach using cross sectional design and a sample of 534 students. The study aimed to assess the level of awareness of UNIVEN students regarding the services available at the UNIVEN clinic and to identify the availability and acceptability barriers experienced by students in accessing these services. Data was analysed descriptively using percentages, chi-square tests and generalised linear models.

The major findings of the study are as follows:

Awareness of students regarding clinic services

1. There was a low knowledge of the different services being provided at the Univen health centre.
2. The low level of awareness of available services may have contributed to the low utilisation of campus health services especially by male students.

Availability barriers to campus health services

1. The study showed that a small group of students forgo health services such as emergency contraceptive services due to poor referral systems when clinic is closed.

2. There was a high level of disapproval of the waiting times at the clinic with many students regarding the duration of time they waited to receive treatment at the clinic as being 'too long'
3. Clinic opening hours were regarded by many students as constituting a barrier to access of services. Many students expressed their preference for the clinic to be open after school hours and during weekends.
4. The reasons cited for preference to use traditional health facilities include long waiting times, inconvenient opening hours and confidentiality concerns.

Acceptability barriers to campus health services

1. A few students reported experiencing acceptability barriers related to confidentiality concerns, disregard for privacy and disrespect from providers.
2. Most students did not express a preference for a provider of the same gender.

6.3 Limitations of the study

1. The self-report nature of the study may have led to inaccuracies in reporting clinic use. Although students' confidentiality and anonymity was assured prior to their participation in the study, some may not have been truthful in their responses.
2. The quantitative approach used in this study may not allow the barriers to be fully investigated and understood. In addition, a self-administered questionnaire may be influenced by the respondent's knowledge of the subject being investigated and may lead to bias.
3. The return rate of the questionnaires was low thereby prolonging the time used for the study.

6.4 Conclusions

The study showed that although most students knew of the presence of a health facility on campus, many students, particularly males had not utilised the services. There was also a low level of awareness of the range of services available at the campus health centre. A major finding of this study was that the availability of lifestyle and behavioural counselling service at the clinic was not known to most students despite the high prevalence of substance abuse among Univen students as reported in a previous study.

The study also identified the presence of availability barriers to campus health services. These include the waiting times at the clinic which was considered by many students as being 'too

long'. Similarly, many students expressed dissatisfaction with the clinic opening hours. This represented a barrier for some students, particularly females needing emergency contraceptives during weekends when the clinic is usually closed. In contrast, the strategic location of the clinic between the student residences and the lecture rooms was found to be a facilitator to the use of the clinic as most students found the location to be ideal.

Furthermore, the study revealed that most UNIVEN students do not experience acceptability barriers related to confidentiality concerns, privacy of the consulting room and respectful treatment from campus health providers. Most students did not express a preference for providers of the same gender, as seen in similar studies in other parts of the world.

6.5 Recommendations

Awareness of students regarding campus health services

- Regular campus awareness campaigns should be undertaken by the clinic staff in order to improve the knowledge of students about the clinic services.
- Compulsory orientation programmes should be organised for all new students to inform them of the range of services available and correct their misconceptions about utilising the clinic services.
- Policy makers and stakeholders should design interventions targeted at improving male students' utilisation of the clinic services.

Availability barriers to campus health services

- Clinic opening hours should be made more student-friendly and extended to weekends to reduce access barriers for students with busy weekday schedules.
- Recruitment of more staff and ensuring more effective organisation of the health delivery system to reduce waiting times at the clinic.
- Creation of a relaxing waiting environment and provision of current magazines, newspapers and puzzles can help to decrease the perceived waiting time.

Acceptability barriers to campus health services

- Training and re-training of clinical and non-clinical staff in the provision of youth-friendly services to eliminate barriers related to provider attitudes.
- Strategies should be developed to include students in the planning of future intervention programmes to make them more acceptable to students.

6.6 Suggestions for further research

- Research should be encouraged on access barriers to campus health services in other university campuses in South Africa to aid policy formulation in tackling these obstacles.
- Further community-based research is needed to assess the barriers faced by young people in the community-at-large in accessing health services.

In conclusion, this concluding chapter has presented the findings from the study upon which the study conclusions were based. The chapter proposed recommendations based on the objectives of the study.

Generally, the study revealed that University of Venda students face some barriers in accessing campus health services. These include low knowledge of available services, inconvenient opening hours of the clinic and long waiting times before receiving treatment at the clinic. These barriers contribute to the low utilisation of the campus health services and may impart negatively on students' educational outcomes if they are not urgently addressed.

REFERENCES

- Agampodi, S. B., Agampodi, T. C. and Ukd, P., 2008. Adolescents' perception of reproductive health care services in Sri Lanka. *Biomed Central Health Services Research*, 8, p.98.
- Agenor, M., Peitzmeier, S., Gordon, A. R., Haneuse, S., Potter, J. E. and Austin, S. B., 2015. Sexual Orientation Identity Disparities in Awareness and Initiation of the Human Papilloma Virus Vaccine among U.S. Women and Girls. *Annals of Internal Medicine*, 163, pp.99-106.
- Akintade, O.L., Pengpid, S. and Peltzer, K., 2011. Awareness and use of and barriers to family planning services among female university students in Lesotho. *South African Journal of Obstetrics and Gynaecology*, 17, p.3.
- Alli, F., Maharaj, P. and Vawda, M. Y., 2013. Interpersonal Relations Between Health Care Workers and Young Clients: Barriers to Accessing Sexual and Reproductive Health Care. *Journal of Community Health*, 38, pp.150-155.
- Ali, M. and De Muynck, A., 2005. Illness incidence and health seeking behaviour among street children in Rawalpindi and Islamabad, Pakistan – a qualitative study. *Child Care, Health & Development*, 31(5), pp.525-532.
- Ali, M., Bhatti, M. A. and Ushijima, H., 2004. Reproductive Health Needs of Adolescent males in rural Pakistan. *The Tohoku Journal of Experimental Medicine*, 204(1), pp.17-25.
- Allison, M., Crane, L., Beaty, B., Davidson, A., Melinkovich, P. and Kempe, A., 2007. School-based health centers: improving access and quality of care for low income adolescents. *Paediatrics*, 120, pp.887-894.
- Amaral, G., Geierstanger, S., Soleimanpour, S. and Brindis, C., 2011. Mental health characteristics and health-seeking behaviours of adolescent school-based health center users and nonusers. *Journal of School Health*, 81, pp.138-145.
- Ambresin, A., Bennett, K., Patton, G. C., Sanci, L. A. and Sawyer, S. M., 2013. Assessment of Youth-Friendly Health Care: A Systematic review of Young People's Perspectives. *Journal of Adolescent Health*, 52(6), pp.670-681.
- American Student Dental Association, 2015. The Issues: Barriers to Care. Retrieved from: <http://www.asdanet.org/barriers-to-care.aspx> on 20-01-2015.
- Armstrong, B., 2003. The young men's clinic: Addressing men's reproductive health and responsibilities. *Perspectives on Sexual and Reproductive Health*, 35, pp.220–225.

- Babbie, E., 2010. *The Practice of Social Research*, 12th Edition. Los Angeles: Wadsworth Cengage Publication.
- Berhane, F., Berhane, Y. and Fantahun, M., 2016. Adolescents' health service utilization pattern and preferences: Consultation for reproductive health problems and mental stress are less likely. *The Ethiopian Journal of Health Development*, 19(1), pp.29-36.
- Biddlecom, A. E., Munthali, A., Singh, S. and Woog, V., 2007. Adolescents' views of and preferences for sexual and reproductive health services in Burkina Faso, Ghana, Malawi and Uganda. *African Journal of Reproductive Health*, 11(3), pp.99-110.
- Blum, R. W., 2009. Young people: Not as Healthy as They Seem. *Lancet*, 374(9693), pp.853–854.
- Bogart, L. M., Chetty, C. S., Giddy, J., Sypek, A., Sticklor, L., Walensky, R. P., Losina, F. E., Katz, J. N. and Bassett, I. V., 2013. Barriers to care among people living with HIV in South Africa: Contrasts between patient and healthcare provider perspectives. *AIDS Care*, 25(7), pp.843-853.
- Boltena, A. T., Khan, F. A., Asamoah, B. O. and Agardh, A., 2012. Barriers faced by Ugandan University students in seeking medical care and sexual health counselling: a cross-sectional study. *Biomedical Center Health Services Research*, 12, p.986.
- Booth, M. L., Bernard, D., Quine, S., Kang, M. S., Usherwood, T., Alperstein, G. and Bennett, D. L., 2004. Access to Health Care Among Australian Adolescents Young People's Perspectives and Their Sociodemographic Distribution. *Journal of Adolescent Health*, 34, pp.97–103.
- Britto, M. T., Slap, G. B., DeVellis, R. F., Hornung, R. W., Atherton, H. D., Knopf, J. M. and DeFries, G. H., 2007. Specialists Understanding of the Health Care Preferences of Chronically Ill Adolescents. *Journal of Adolescent Health*, 40, pp.334–341.
- Buzi, R. S. and Smith, P. B., 2014. Access to Sexual and Reproductive Health Care Services: Young Men's Perspectives. *Journal of Sex & Marital Therapy*, 40(2), pp.149–157.
- Byczkowski, T., Linda, M. K. and Maria, T. B., 2010. Family experiences with outpatient care: Do adolescents and parents have the same perceptions? *Journal of Adolescent Health*, 47, pp.92-98.
- Chacko, S., Kipp, W., Laing, L. and Kabagambe, G., 2007. Knowledge of and perceptions about sexually transmitted diseases and pregnancy: A qualitative study among adolescent students in Uganda. *Journal Health Population Nutrition*, 25(3), pp.319–327.

Cherie, A. and Berhane, Y., 2012. Knowledge of Sexually Transmitted Infections and Barriers to Seeking Health Services among High School Adolescents in Addis Ababa, Ethiopia. *Journal of AIDS and Clinical Research*, 3, p.153.

Chng, C. L., Carlon, A. and Toynes, B., 2006. HIV on Historically Black Colleges and Universities (HBCU): a study of five campuses in Texas, Oklahoma and Louisiana. *College Student Journal*, 40(1), p.25.

Constitution of the Republic of South Africa (2003). Second Amendment Act, No 3. Retrieved from: <http://www.gov.za/sites/www.gov.za/files/images/a108-96.pdf> on 04/10/2015.

Cooper, M. L., 2002. Alcohol use and risky sexual behaviour among college students and youth: evaluating the evidence. *Journal of Studies on Alcohol, supplement*,(14), pp.101-117.

Creswell, J. W., 2009. *Research design: Qualitative, Quantitative and Mixed Methods Approaches*, 18th edition. Los Angeles: Sage

Davies, J., McCrae, B. P., Frank, J., Dochnahl, A., Pickering, T., Harrison, B., Zakrzewski, M. and Wilson, K., 2000. Identifying Male College students' Perceived Health Needs, Barriers to seeking Help, and Recommendations to help men adopt Healthier lifestyles. *Journal of American College Health*, 48, pp.259-267.

Delany-Moretlwe, S., Cowan, F. M, Busza, J., Bolton-Moore, C., Kelley, K. and Fairlie, L., 2015. Providing comprehensive health services for young key populations: needs, barriers and gaps. *Journal of the International AIDS Society*, 18(1), pp.29-40.

Denny, S., Farrant, B., Cosgriff, J., Hart, M., Cameron, T., Johnson, R., McNair, V., Utter, J., Crengle, S., Fleming, T. and Ameratunga, S., 2012. Access to private and confidential health care among secondary school students in New Zealand. *Journal of Adolescent Health*, 5(13), pp.285-291.

DiCenso, A., Borthwick, V. W., Busca, C. A., Creatura, C., Holmes, J. A., Kalagian, W. F. and Partington, B. M., 2001. Completing The Picture: Adolescents Talk about What's Missing in Sexual Health Services. *Canadian Journal of Public Health*, 92(1), pp.35-41.

Donnelly, C., 2000. Sexual Health Services: A Study of Young Peoples' Perceptions in Northern Ireland. *Health Education Journal* 59, pp.288-296.

Downs, M. F. and Eisenberg, D., 2012. Help seeking and treatment use among suicidal college students. *Journal of American College Health*, 60(2),pp.104-114.

- Elliott, B. A. and Larson, J. T., 2004. Adolescents in mid-sized and rural communities: forgone care, perceived barriers, and risk factors. *Journal of Adolescent Health*, 35(4), pp.303-309.
- Ensign, J., 2004. Quality of Health care: The views of homeless youth. *Health Services Research*, 39, pp.695-708.
- Ensign, J. and Panke, A., 2002. Barriers and bridges to care: voices of homeless female adolescent youth in Seattle, Washington, USA. *Journal of Advanced Nursing*, 37(2), pp.166-172.
- Ensor, T. and Cooper, S., 2004. Overcoming Barriers to Health Service Access: Influencing the Demand Side Through Purchasing. *Health Policy and Planning*, 19(2), pp.69-79.
- Erulkar, A. S., Onoka, C. J. and Phiri, A., 2005. What is youth-friendly? Adolescents' Preferences for Reproductive Health Services in Kenya and Zimbabwe. *African Journal of Reproductive Health*, 9(3), pp.51-58.
- Evans, J. and Cross, J., 2007. Community sexually transmitted infections are good enough: a qualitative study of clients' experiences. *Journal of Family Planning & Reproductive Health Care*, 33(4), pp.259-262.
- Falkingham, J., 2004. Poverty, out-of-pocket payments and access to health care: Evidence from Tajikistan. *Social Science and Medicine*, 58, pp.247-258.
- Farrant, B. and Watson, P. D., 2004. Health care delivery: Perspectives of young people with chronic illness and their parents. *Journal of Paediatrics and Child Health*, 40, pp.175-179.
- Fletcher, P. C., Bryden, P. J., Schneider, M. A., Dawson, K. A. and Vandermeer, A., 2007. Health issues and service utilization of university students: experiences, practices and perceptions of students, staff and faculty. *College Student Journal*, 41(2), pp.482-493.
- Flisher, A. J., De Beer, J. P. and Bokhorst, F., 2002. Characteristics of students receiving counselling services at the University of Cape Town, South Africa. *British Journal of Guidance and Counselling*, 30(3), pp.299-310.
- Fry, R., Ryan, J., Salter, N., Murrin, C. and Kelleher, C. C., 2007. Adolescents attending an adult emergency department: their utilization characteristics and self-reported opinions of care provided. *Irish Medical Journal*, 100(7), pp.525-528.

- Geary, R. S, Gomez-Olive, F. X., Kahn, K., Tollman, S. and Norris, S. A., 2014. Barriers to and facilitators of the provision of a youth-friendly health services programme in rural South Africa. *Biomed Central Health Services Research*, 14, p.259.
- Gharafi, M., Shamsuddin, K. and Amiri, M., 2014. Barriers to Utilization of Health Services: Perception of Postsecondary School Malaysian Urban Youth. *International Journal of Preventive Medicine*, 5(7), pp.805-807.
- Gilbert, P., Bhundia, R., Mitra, R., McEwan, K., Irons, C. and Sanghera, J., 2007. Cultural differences in shame-focused attitudes towards mental health problems in Asian and Non-Asian student women. *Mental, Health, Religion & Culture*, 10(2), pp.127-141.
- Givens, J. L. and Tjia, J., 2002. Depressed Medical Students' Use of Mental Health Services and Barriers to Use. *Academic Medicine*, 77(9), pp.918-921.
- Goddard, M. and Smith, P., 2001. 'Equity of access to health care services: theory and evidence from the United Kingdom'. *Social Science and Medicine*, 53, pp.1149–1162.
- Gore, F. M., Bloem, P. J. N., Patton, G. C., Ferguson, J., Joseph, V., Coffrey, C., Sawyer, S. M. and Mathers, C. D., 2011. Global burden of disease in young people aged 10-24 years: a systemic analysis. *The Lancet*, 377(9783), pp.2093-2102.
- Guagliardo, M., 2004, 'Spatial accessibility of primary care: concepts, methods and challenges', *International Journal of Health Geographics*, 3, p.3.
- Guilford, J. P. and Fruchter, B., 1973. *Fundamental Statistics in Psychology and Education*, 5th Edition. New York: Mc Graw-Hill.
- Guilliford, M. C., 2002. Availability of primary care doctors and population health in England: Is there an association? *Journal of Public Health*, 24(4), pp.252-254.
- Guo, J. J., Wade, T. J., Pan, W. and Keller, K. N., 2010. School-Based Health Centers: Cost–Benefit Analysis and Impact on Health Care Disparities. *American Journal of Public Health*, 100(9), pp.1617-1623.
- Hampanda, K., Ybarra, M. and Bull, S., 2014. Perceptions of health care services and HIV-related health-seeking behavior among Uganda adolescents. *AIDS Care*, 26(10), pp.1209-1217.
- Hancock, J., 2004. Can mainstream services learn from male only sexual health pilot projects? *Sexually Transmitted Infections*, 80, pp.484–487.

Hoque, M. and Ghuman, S., 2012. Contraceptive practices in the era of HIV/AIDS among university students in KwaZulu-Natal, South Africa. *Journal of Social Aspect of HIV/AIDS Research Alliance*, 9(1), pp.15-19.

Hunt, J. and Eisenberg, D. 2010. Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health*, 46(1), pp.3-10.

Hussain, R., Guppy, M., Robertson, S. and Temple, E., 2013. Physical and mental health perspectives of first year undergraduate rural university students. *Biomed Central Public Health*, 13, p.848.

Idele, P., Gillespie, A., Porth, T., Suzuki, C., Mahy, M., Kassedde, S. and Luo, C., 2012. Epidemiology of HIV and AIDS Among Adolescents: Current Status, Inequities and Data Gaps. *Journal of Acquired Immune Deficiency Syndrome*, 66(2), pp.144-153.

Ingram, J. and Salmon, D., 2010. Young people's use and views of a school-based sexual health drop-in service in areas of high deprivation. *Health Education Journal*, 69(3), pp.227-235.

International Labour Organization, 2013. Global Employment Trends for Youth 2013: A Generation at Risk. Geneva: International Labour Organization. Retrieved from: http://www.ilo.org/wcmsp5/groups/public/dgreports/dcomm/documents/publication/wcms_212423.pdf on 04-03-2016.

Irwin, C. E., Burg, S. J. and Cart, C. U., 2002. America's adolescents: Where have we been, where are we going? *Journal of Adolescent Health*, 31(6), pp.91-121.

Iskra, W., Deane, F. P., Wahlin, T. and Davis, E. L., 2015. Parental perceptions of barriers to mental health services for young people. *Early Intervention in Psychiatry*, 9(6), pp.1-10.

Joint United Nations Programme on HIV/AIDS, 2015. All In To #EndAdolescentAIDS. Retrieved from: http://www.unaids.org/sites/default/files/media_asset/20150217_ALL_IN_brochure.pdf on 02-03-2016.

Joppe, M., 2000. The Research Process. Retrieved from: <http://www.ryerson.ca/~mjoppe/rp.htm> on 15-02-2016.

Jorm, A. F., 2009. Australian young people's awareness of headspace, beyond blue and other mental health organizations. *Australian Psychiatry*, 17(6), pp.472-474.

Juszczak, L., Melinkovich, P. and Kaplan, D., 2003. Use of health and mental health services by adolescents across multiple delivery sites. *Journal of Adolescent Health*, 32(6), pp.108-118.

- Kaestle, C. E., Halpern, C. T., Miller, W. C. and Ford, C.A., 2005. Young Age at First Sexual Intercourse and Sexually Transmitted Infections in Adolescents and Young Adults. *American Journal of Epidemiology*, 161(8), pp.774-780.
- Kessler, R.C., Berglund, P., Demler, O., Jin, R., Merikangas, K.R. and Walters, E.E., 2005. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, pp.593-602.
- Khalaf, I., Abu-Moghli, F. and Froelicher, E. S., 2010. Youth-friendly reproductive health services in Jordan from the perspective of the youth: a descriptive qualitative study. *Scandinavian Journal of Caring Sciences*, 24, pp.321-331.
- Kassa, T. A., Luck, T., Bekele, A. and Riedel-Heller, S. G., 2016. Sexual and reproductive health of young people with disability in Ethiopia: a study on knowledge, attitude and practice: a cross-sectional study. *Globalisation and Health*, 12(1), p.5.
- Kiapi-Iwa, L. and Hart, G. J., 2004. The sexual and reproductive health of young people in Adjumani district, Uganda: qualitative study of the role of formal, informal and traditional health providers. *AIDS Care*, 16(3), pp.339-347.
- Kitts, R. L., 2010. Barriers to optimal care between physicians and lesbian, gay, bisexual, transgender, and questioning adolescent patients. *Journal of Homosexuality*. 57(6), pp.730-747.
- Klingberg-Allvin, M., Nga, N. T., Ransjo-Arvidson, A. and Johansson, A., 2006. Perspectives of midwives and doctors on adolescent sexuality and abortion care in Vietnam. *Scandinavian Journal of Public Health*, 34, pp.414–421.
- Kullgren, J.T, McLaughlin, C. G., Mitra, N. and Armstrong, K., 2012. Nonfinancial Barriers and Access to Care for U.S. Adults. *Health Services Research* 47(1),pp.462–485.
- Kyei, K. A. and Ramagoma, M., 2013. Alcohol Consumption in South African Universities: Prevalence and Factors at the University of Venda, Limpopo Province. *Journal of Social Sciences*, 36(1), pp.77-86.
- Langhaug, L. F., Cowan, F. M., Nyamurera, T. and Power, R., 2003. Improving young people's access to reproductive health care in rural Zimbabwe. *AIDS Care*, 15(2), pp.147-157.
- Langille, D. B., Asbridge, M., Kisely, S., Leblanc, M. B., Schaller, E., Lynk, A. and Allen, M., 2008. The relationship of sex and risk behaviours to students' use of school-based health centers in Cape Breton, Nova Scotia. *Paediatrics & Child Health*, 13(7), p.605.

- Lebese, R. T., Maputle, M. S., Mabunda, J. T. and Chauke, P. K., 2015. Knowledge, Attitude and Perceptions of Students on Teenage Pregnancy: A Case Study of Rural Based University Students in South Africa. *Journal of Human Ecology*, 51(12), pp.55-65.
- Lee, L., Rand, C. S., Ellen, J. M. and Agwu, A. L., 2014. Factors informing HIV providers' decisions to start antiretroviral therapy for young people living with behaviorally acquired HIV. *Journal of Adolescent Health*, 55(3), pp.358-365.
- Lu, S. H., Dear, B. F., Johnston, L., Wootton, B. M. and Titor, N., 2014. An internet survey of emotional health, treatment seeking and barriers to accessing mental health treatment among Chinese-speaking international students in Australia. *Counselling Psychology Quarterly*, 27(1), pp.96-108.
- Mabunda, J. T., Lebese, R. T., Maputle, M. S. and Chauke, P. K., 2015. Perceived Risk Behaviours Related to Teenage Pregnancy among University Students in Limpopo Province, South Africa. *Journal of Human Ecology*, 51(1, 2), pp.66-72.
- Madu, S. N. and Matla, M. Q., 2003. Illicit drug use, cigarette smoking and alcohol drinking behaviour among a sample of high school adolescents in the Pietersburg area of the Northern Province, *South Africa Journal of Adolescents*, 2003(26), pp.121–136.
- Mah. J. K., Tough, S. Fung, T., Douglas-England, K. and Verhoef, M., 2005. Adolescent quality of life and satisfaction with care. *Journal of Adolescent Health*, 38(607), pp.1-7.
- Mallesappa, K. and Krishna, S., 2012. Awareness and attitude of youth toward HIV/AIDS in rural southern India. *Biomedical Research*, 23(2), pp.241-246.
- Mashamba, A. and Robson, E., 2002. Youth reproductive health services in Bulawayo, Zimbabwe. *Health & Place*, 8, pp.273-283.
- Mason-Jones, A. J., Crisp, C., Momberg, M., Koech, J., De Koker, P. and Mathews, C., 2012. A systematic review of the role of school-based healthcare in adolescent sexual, reproductive, and mental health. *Systematic reviews*, 1(1), p.49.
- Mathews, C., Guttmacher, S. J., Flisher, A. J., Mtshizana, Y. Y., Nelson, T., McCarthy, J. and Davies, V., 2009. The Quality of HIV Testing Services for Adolescents in Cape Town, South Africa: Do Adolescent-Friendly Services Make a Difference. *Journal of Adolescent Health*, 44, pp.188-190.

Mbengo, F., Ngirande, H., Ndou, N. D. and Mavundla, T. R., 2014. Strategies to Boost the Uptake of Voluntary Testing and Counselling (VCT) by University Students. *Mediterranean Journal of Social Sciences*, 5(15), pp.458-463.

Mchunu, G., Peltzer, K., Tutshana, B. and Seutlwadi, L., 2012. Adolescent pregnancy and associated factors in South African youth. *African Health Sciences*, 12(4), pp.426 – 434.

McIntyre, P., 2002. Adolescent friendly health services: an agenda for change. Geneva. World Health Organisation.

McIntyre, D., Thiede, M. and Birch, S., 2009. Access as a policy-relevant concept in low and middle-income countries. *Health Economics, Policy and Law*, 4, pp.179-193.

Meilman, P. W., 2001. Human resource issues in university health services. *Journal of American College of Health*, 50(1), pp.43-47.

Mmari, K. N. and Magnani, R. J., 2003. Does Making Clinic-based Reproductive Health Services More Youth-friendly Increase Service Use by Adolescents? Evidence From Lusaka, Zambia. *Journal of Adolescent Health*, 33, pp.259-270.

Mollaab, M. E., Berhaned, M. and Lindtjørna, Y., 2009. Readiness of youth in rural Ethiopia to seek health services for sexually transmitted infections. *African Journal of AIDS Research*, 8(2), pp.135–146.

Munthali, A. and Zakeyo, B., 2011. Do they match? Adolescents' Realities and Needs Relating to Sexuality and Youth Friendly Service in Dowa District, Central Malawi. Retrieved from: <https://www.researchgate.net/publication/262881396> on 22-12-2016

National Center for Injury Prevention and Control, 2006. Leading Causes of Death and Fatal Injuries Mortality Reports. Atlanta, Georgia: Centers for Disease Control and Prevention. Retrieved from <http://www.cdc.gov/ncipc/wisgars> on 03-03-2016.

Ncube, N. B. Q., Meintjes, W. A. J. and Chola, L., 2014. Knowledge and attitudes of non-occupational HIV post exposure prophylaxis amongst first and second-year medical students at Stellenbosch University in South Africa. *African Journal of Primary Health Care & Family Medicine*, 6(1), pp.1-9.

Newachek, P. W., McManus, M., Fox, H. B., Hung, Y. and Halfon, N., 2000. Access to Health Care for Children With Special Health Care Needs. *Paediatrics*, 105(4), pp.760-766.

Njagi, F. and Maharaj, P., 2006. Access to voluntary counselling and testing services: perspectives of young people. *South African Review of Sociology*, 37(2), pp.113-127.

- Nwokolo, N., McOwan, A., Hennebry, G., Chislett, L. and Mandalia, S., 2002. Young people's views on provision of sexual health services. *Sexually Transmitted Infections*, 78, pp.342–345
- Oakley-Browne, M. A., Wells, J. E., Scott, K. M. and McGee, M. A., 2006. Lifetime prevalence and projected lifetime risk of DSM-IV disorders in Te Rau Hinengaro: The New Zealand Mental Health Survey. *Australian and New Zealand Journal of Psychiatry*, 40, pp.865– 874
- Oluwole, O. C., Elison, A. D. and Olateju, O. B., 2010. Awareness of Premarital Genetic Counselling among Youth Corpers in South-West Nigeria. *TAF Preventive Medicine Bulletin* 9(6), pp.575-578.
- Oraby, D. M., 2013. Sexual and reproductive health among young people in Egypt: the role and contribution of youth-friendly services. *Sex Education*, 13(4), pp.470-477.
- Paluku, L. J., Mabuza, L. H., Maduna, P. M. H. and Ndimande, J. V., 2010. Knowledge and attitude of schoolgirls about illegal abortions in Goma, Democratic Republic of Congo. *African Journal of Primary Health Care and Family Medicine*, 2(1), pp.78-83.
- Panday, S., Makiwane, M., Ranchod, C. and Letsoalo, T., 2009. Teenage pregnancy in South Africa - with a specific focus on school-going learners. Child, Youth, Family and Social Development, Human Sciences Research Council. Pretoria: Department of Basic Education.
- Pastore, D. and Techow, B., 2004. Adolescent School-Based Health Care. *The Mount Sinai Journal of Medicine*, 71(3), p.191.
- Patton, G. C., Coffrey, C., Sawyer, S. M., Viner, R. M., Haller, D. M., Bose, K., Vos, T., Ferguson, J. and Mathers, C. D., 2009. Global Patterns of Mortality in Young People: A Systematic Analysis of Population Health Data. *Lancet*, 374, pp.881-892.
- Patton, G. C. and Viner, R., 2007. Pubertal transitions in health. *Lancet*, 369, pp.1130-1139.
- Perkins, H. W., 2002. Surveying the damage: a review of research on consequences of alcohol misuse in college populations. *Journal of Studies on Alcohol, supplement* 14, pp.91-100.
- Peters, D. H., Garg, A. and Bloom, G., 2008. Poverty and Access to health care in developing countries. *Annals of the New York Academy of Science*, 1136, pp.161-171.
- Peterson, W. E., Sword, W., Charles, C. and DiCenso, A., 2007. Adolescents' Perception of Inpatient Postpartum Nursing Care. *Qualitative Health Research*, 17(2), pp.201-212.
- Philbin, M. M., Tanner, A. E., Duval, A., Ellen, J. M., Xu, J., Kapogiannis, B., Bethel, J. and Fortenberry, J. D., 2014. The Adolescent Trials Network for HIV/AIDS Interventions. Factors

Affecting Linkage to Care and Engagement in Care for Newly Diagnosed HIV-Positive Adolescents Within Fifteen Adolescent Medicine Clinics in the United States. *AIDS and Behavior*, 18(8), pp.1501-1510.

Plaistow, J., Masson, K., Koch, D., Wilson, J., Stark, R.M., Jones, P. B. and Lennox, B. R., 2014. Young people's views of United Kingdom mental health services. *Early Intervention in Psychiatry* 8, pp.12–23.

Polit, D. F. and Beck, C. T., 2008. *Nursing Research: Principles and Methods (7th Ed.)*, Philadelphia: Lippincott.

Regmi, P.R., Teijlingen, E., Simkhada, P. and Acharya, D.R., 2010. Barriers to Sexual Health Services for Young People in Nepal. *Journal of Health, Population and Nutrition*, 28(6), pp.618-627.

Roberts, C., Moodley, J. and Esterhuizen, T., 2004. Emergency contraception: knowledge and practices of tertiary students in Durban, South Africa. *Journal of Obstetrics and Gynaecology*, 24(4), pp.441-445.

Ronnberg, A. M. and Hammarstrom, A., 2000. Barriers within the health care system to dealing with sexualized violence: a literature review. *Scandinavian Journal of Public Health*, 28, pp.222-229.

Ruberman, L., 2014. Challenges in the Transition to College: The Perspective of the Therapist Back Home. *American Journal of Psychotherapy*, 68(1), pp.103 – 115.

Rushing, M., Watts, C. and Rushing, S., 2005. Living the reality of forced sex work: perspectives from young migrant women sex workers in northern Vietnam. *Journal of Midwifery and Women's Health*, 50(4), pp.41-44.

Russell, J., Thomson, G. and Rosenthal, D., 2008. International student use of university health and counselling services. *Higher Education*, 56, pp.59-65.

Russell, S., 2004. 'The economic burden of illness for households in developing countries: a review of studies focusing on malaria, tuberculosis and Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome'. *American Journal of Tropical Medicine and Hygiene*, 7(2), pp.147–155.

Sable, M. R., Danis, F., Mauzy, D. L. and Gallagher, S. K., 2006. Barriers to Reporting Assault for Men and Women: Perspectives of College Students. *Journal of American College Health*, 55(3), pp.157-162.

- Samargia, L. A., Saewyr, E. M. and Elliot, B. A., 2006. Foregone Mental Health Care and Self-Reported Access Barriers Among Adolescents. *The Journal of School Nursing*, 22(1), pp.17-24.
- Sawyer, S. M, Afifi, R.A., Bearinger, L. H., Blakemore, S. J., Dick, B. and Ezeh, A.C., 2012. Adolescence: A Foundation for Future Health. *Lancet*, 379(9826), pp.1630-1640.
- Schriver, B., Meagley, K., Norris, S., Geary, R. and Stein, A., 2014. Young people's perceptions of youth-oriented health services in urban Soweto, South Africa: a qualitative investigation. *Biomed Central Health Services Research* 14, p.625.
- Scorgie, F., Nakato, D., Harper, E., Richter, M., Maseko, S., Nare, P., Smit, J. and Chersich, M., 2013. We are despised in the hospitals': sex workers' experiences of accessing health care in four African countries. *Culture, Health & Sexuality*, 15(4), pp.450-465.
- Scott, D. B., 2013. The training needs of general practitioners in the exploration of sexual health matters and providing sexual healthcare to lesbian, gay and bisexual patients. *Medical Teacher*, 35, pp.752–759.
- Shaw, K. L., Southwood, T. R. and McDonagh, J. E., 2006. Young people's satisfaction of transitional care in adolescent rheumatology in the UK. *Child Care Health & Development*, 33, pp.368-379.
- Simpson, L., Owens P. L., Zodet, M. W., Chevarley, F. M., Dougherty, D., Elixhauser, A. and McCormick, M. C., 2005. Health Care for Children and Youth in the United States: Annual Report on Patterns of Coverage, Utilization, Quality, and Expenditures by Income. *Ambulatory Paediatrics* 5(1), pp.6 – 44.
- Singh, S., Darroch, J. E., Ashford, L. S. and Vlassoff, M., 2009. Adding It Up: The Cost and Benefits of Investing In Family Planning and Maternal and Newborn Health. New York: Guttmacher Institute. Retrieved from: <https://www.guttmacher.org/pubs/AddingItUp2009.pdf> on 04-02-2016
- Siu, J. Y., 2013. Barriers to receiving human papillomavirus vaccination among female students in a university in Hong Kong. *Culture, Health and Sexuality*, 15(9), pp.1071-1084.
- Statistics South Africa, 2013. Morbidity and Mortality Patterns among the youth of South Africa. Pretoria: Statistics South Africa. Retrieved from: <http://www.statssa.gov.za/publications/Report-03-09-12/Report-03-09-122013.pdf> on 28-02-2015.
- Statistics South Africa, 2015. Mid-year estimates. Retrieved from: <http://www.statssa.gov.za/> on 18-09-2015.

- Stebleton, M. J., Soria, K. M. and Huesman, R. L., 2014. First-Generation Students' Sense of Belonging, Mental Health, and Use of Counseling Services at Public Research Universities. *Journal of College Counseling*, 17(1), pp.6-20.
- Stone, N. and Ingham, R., 2003. When and Why Do Young People in the United Kingdom First Use Sexual Health Services. *Perspectives on Sexual and Reproductive Health*, 35(3), pp.114-120.
- Strauss, M., Rhodes, B. and George, G., 2015. Aqualitative analysis of the facilitators and barriers to HIV counseling and testing perceived by adolescents in South Africa. *Biomedical Center Health Services Research* 15, pp.250-256.
- Szumilas, M., Kutcher, S., LeBlanc, J. C. and Langille, D. B., 2010. Use of school-based health centres for mental health support in Cape Breton, Nova Scotia. *The Canadian Journal of Psychiatry*, 55(5), pp.319-328.
- Tamire, W. and Enqueselassie, F., 2007. Knowledge, attitude, and practice on emergency contraceptives among female university students in Addis Ababa, Ethiopia. *Ethiopian Journal of Health Development*, 21(2), pp.111-116.
- Tilson, E. C., Sanchez, V., Ford, C. L., Smurzynski, M., Leone, P. A., Fox, K. K., Irwin, K. and Miller, W. C., 2004. Barriers to asymptomatic screening and other STD services for adolescents and young adults: focus group discussions. *Biomed Central Public Health*, 4, p.21.
- Tivorsak, T. L., Britto, M.T., Klostermann, B. K., Nebrig, D. M. and Slap, G. B., 2004. Are Paediatric Practice Settings Adolescent Friendly? An Exploration of Attitudes and Preferences. *Clinical Paediatrics*, 43, pp.55-61.
- Topper, K., van Rooyen, K., Grobler, C., van Rooyen, D. and Andersson, L. M., 2015. Posttraumatic Stress Disorder and Barriers to Care in Eastern Cape Province. *South Africa Journal of Traumatic Stress* 28(4), pp.375-379.
- Tsai, M., Lin, S., Chou, Y. and Lin, S., 2014. Exploration of health status, healthcare utilization and health service expectation among Taiwanese adolescents. *European Journal of Paediatrics*, 173(2), pp.187-196.
- Tylee, A., Haller, D. M., Graham, T., Churchill, R. and Sanci, L. A., 2007. Youth-friendly primary-care services: how are we doing and what more needs to be done? *Lancet* 369, pp.1565 – 1573.

United Nations, 2012. United Nations Youth: Young People and HIV. Retrieved from: <http://www.un.org/esa/socdev/documents/youth/fact-sheets/youth-hiv.pdf> on 02-03-2016.

United Nations Department of Economic and Social Affairs, 2014. World Economic Situation and Prospects. New York. Retrieved from <http://www.un.org/en/development/desa/policy/wesp/wespcurrent/2014Chap1en.pdf> on 02-03-2016.

United Nations' Children's Fund, 2015. UNICEF Data: Monitoring the Situation of Children and Women. Retrieved from: <http://data.unicef.org/hiv-aids/adolescents-young-people.html> on 02-03-2016.

United Nations' Population Fund, 2012. By Choice, Not by Chance: Family planning, Human Rights and Development. Retrieved from: https://www.unfpa.org/sites/default/files/pub-pdf/EN_SWOP2012_Report.pdf on 14-10-2015.

United Nations' Population Fund, 2014. The Power of 1.8 billion: Adolescents, Youth and the Transformation of The Future. Retrieved from: http://www.unfpa.org/sites/default/files/pub-pdf/EN-SWOP14-Report_FINAL-web.pdf on 20-09-2015.

Van Cura, M., 2010. The Relationship Between School-Based Health Centers, Rates of Early Dismissal from School, and Loss of Seat Time. *Journal of School Health*, 80(8), pp.371-377.

Venkat-Narayan, K. M., Ali, M. K. and Koplan, J. P., 2010. Global Non-communicable Diseases: Where Worlds Meet. *The New England Journal of Medicine*, 363(13), pp.1196-1198.

Viner, R. M., 2007. Do adolescents' in-patient wards make a difference? Findings from a national young patient survey. *Paediatrics*, 120, pp.749-755.

Ware, V., 2013. Improving the accessibility of health services in urban and regional settings for Indigenous people. Retrieved from: www.aihw.gov.au/closingthegap on 18-09-2015.

Waters, H., 2000. Measuring equity in access to health care. *Social Science and Medicine*, 51, pp.599-612.

Wechsler, H., Lee, J. E., Kuo, M. and Lee, H., 2000. College binge drinking in the 1990s: a continuing problem. Results of the Harvard School of Public Health 1999 College Alcohol Study. *Journal of American College Health*, 48(5), pp.199-210.

White, P. H., 2002. Access to Healthcare: Health Insurance Considerations For Young Adults with Special Health Care Needs/Disabilities. *Paediatrics*, 110(6), pp.1328-1335.

Williams, K. A. and Chapman, M.V., 2011. Comparing health and mental health needs, service use, and barriers to services among sexual minority youths and their peers. *Health & Social Work*, 36(3), pp.197-206.

Woosely, S., 2003. How important are the first few weeks of college? The long term effects of initial college experiences. *College Study Journal*, 37(2), pp.201-207.

World Health Organisation, 2002. Adolescent friendly health services: an agenda for change. Geneva: WHO.

World Health Organisation, 2015. Fact Sheet: Youth Violence. Retrieved from www.who.int/mediacentre/factsheets/fs356/en on 02/03/2016.

Yorgason, J. B., Leville, D. and Zitzman, B., 2008. Mental Health among College Students: Do Those Who Need Services Know About and Use Them. *Journal of American College Health*, 57(2), pp.173-182.

Zidourek, R. A., King, K. A., Nabors, L. A. and Merianos, A. L., 2014. Students' benefits and barriers to mental health help-seeking. *Health Psychology & Behavioral Medicine*, 2(1), pp.1009-1022.

APPENDIX 1

ACCESS BARRIERS TO CAMPUS HEALTH SERVICES AMONGST UNIVERSITY OF VENDA STUDENTS

QUESTIONNAIRE

SECTION 1: DEMOGRAPHIC DETAILS (Please tick the applicable)

1. Gender Male () Female ()
2. What was your age at your last birthday? () Years
3. What is your current level of study?

Level Of Study	Tick the appropriate
First year	
Second year	
Third year	
Fourth year	
Honours	
Master	
PhD	
Diploma	

4. Which school are you currently enrolled in?

School	Tick as appropriate
School of Agriculture	
School of Education	
School of Environmental Sciences	
School of Health Sciences	
School of Human and Social Sciences	
School of Law	
School of Management Sciences	
School of Mathematical and Natural Sciences	

5. Which is your hostel of residence?

Hostel	Tick the applicable
Bernard Ncube	
Carousel	
F3	
F4	
F5	
Lost City	
Mango Grove	

Prefabs	
Riverside	

6. Are you on any medical aid/scheme Yes () No ()

SECTION B: AWARENESS OF SERVICES AVAILABLE AT THE UNIVEN HEALTH CENTER

7. Do you know if there is a Health Center within the UNIVEN campus?

Yes () No ()

8. If Yes, who informed you about the clinic's services?

	Tick the applicable
Friends/Colleagues	
University Staff	
Family	
No-one	
Others (specify)	

If No, go to section D.

9. Have you gone for consultation at the UNIVEN Health Center before? Yes () No ()

If Yes, go to Question 13.

10. If No, Kindly state the reason:

.....

.....

.....

.....

11. Do you encounter any difficulty using UNIVEN health center?

Yes () No ()

12. What factors make it difficult for you to use the UNIVEN health center?

	Tick the Applicable
I am not aware of the services provided by the Health Center	
My friends don't use the health center	
I need to protect my privacy	
The hours of operation are not favourable to my lecture schedule	
The waiting time at the clinic is too long	
Others	
Specify	

Go to question 15

13. How often do you visit the clinic?

Frequency	Tick the applicable
More than once a week	
Weekly	
Fortnightly	
Monthly (once a month)	
Once every two months	
If other, specify	

14. Which services did you visit the clinic for?

Services	Tick the applicable
Treatment of common ailments (such as flu, diarrhoea, body pain etc.)	
Surgical procedures (Cuts, Wound dressings etc.)	
Treatment of Sexually Transmitted Infections	
Contraception (Morning After Pill)	
Pregnancy Test	
HIV Counselling and Testing	
Lifestyle & Behavioural advice	
Health Education	
Referral for secondary care	

15. Which of the following services are you aware that are available at the UNIVEN Health Center.

Services	Tick the applicable
Treatment of Minor Ailments	
Surgical Procedures	
Treatment of Sexually Transmitted Infections	
Pregnancy Test	
Emergency Contraception (Morning-After Pill)	
HIV Counselling & Testing	
Behavioural change counselling (such as how to stop smoking, drugs and alcohol abuse; how to remain a virgin on campus)	
Lifestyle change counselling (such as advice on good eating habits, exercises)	
Physical Check-up programmes (such as weight, height, blood pressure checks)	
Emergency Medical Services (after close of clinic on weekdays and on weekends)	

SECTION C: AVAILABILITY BARRIERS

16. Have you ever needed the clinic’s services and you did not receive it? Yes () No ().

If No, go to question 19.

17. If Yes, Please specify the services needed in this case

.....

18. What did you do in this particular situation?

Specify.....

19. Is the location of the clinic convenient for you? Yes () No ().

If Yes, go to Question 21.

20. If No, what do you think is wrong with the location?

.....

21. Are the opening hours convenient for you?

Yes..... No..... Not sure..... Don’t know.....

22. What do you think of the waiting time before consultation at the clinic?

Too long..... Ideal.....Not sure.....

23. Do you think the health providers at the clinic are adequately skilled to handle the health concerns you had at the time of your visit?

Yes..... No..... Not sure..... Don’t know.....

If your response to question 9 is NO, kindly go to question 37.

SECTION D: ACCEPTABILITY BARRIERS

Please indicate whether you agree or disagree with the statements made:

	Agree	Disagree	Not Sure
24.I prefer to seek treatment outside the University even when the required services are available at the Health Center			
25. I am able to talk to the health workers at the clinic in private			
26. Health workers at the clinic do not treat patients with respect and dignity			

27. Clinic health workers fully explain patients' illnesses and medications to them.			
28. Clinic health providers respect confidentiality when dealing with patients			
29. Clinic health providers cannot be trusted with sensitive information			
30. I have a language barrier in communicating with the health providers			
31. I find it easy to communicate my reservations about the quality of service to the health providers			
32. The health providers seem too busy to listen to my problems			
33. Patient information is kept confidential in this clinic			
34. The clinic (including waiting area and toilets) are dirty			
35. I do not mind being treated by the opposite sex			

36. Please specify how you rate the quality of the service provided at the clinic?

Very Good..... Good..... Poor..... Very Poor.....

37. What do you suggest should be done to improve the quality of services being provided at the clinic?

.....

Thank you for your time.

APPENDIX 2: INFORMATION LETTER

ACCESS BARRIERS TO CAMPUS HEALTH SERVICES AMONGST UNIVERSITY OF VENDA STUDENTS

My name is Olumide Sanyaolu. I am a post graduate student of the Department of Public Health, School of Health Sciences, UNIVEN. I am conducting a research on the access barriers to campus health services among UNIVEN students. The need for this study has arisen in light of the presence of barriers to access of health care by young people all over the world.

It is necessary to know the barriers UNIVEN students face in accessing the institution's health services so as to be able to address this problem. The study is of importance as the research hopes that the result of the study will help to improve the quality of health service delivery at the UNIVEN Health Center. This will also impart positively on the health status of students who utilize the various services available at the center.

I would like you to participate in this study and I assure you that any information obtained from you will be treated as confidential.

Your participation in this study is voluntary and the study will have no negative impact on your life or health nor will you be compensated for your participation. You are free to withdraw from the study should you feel unsatisfied with the way the study is being conducted.

Researcher's contact: 0726867266

Main Supervisor's contact: 0786908049

Co- Supervisor's contact : 0828426328

APPENDIX 3: CONSENT FORM

ACCESS BARRIERS TO CAMPUS HEALTH SERVICES AMONGST UNIVERSITY OF VENDA STUDENTS

I _____ have read through the content of the information form and understand the nature of the research study. I understand that my participation is voluntary and that I can withdraw from the study at any time without any negative impact on my life or health. I hereby voluntarily consent to participate in this study.

Participants' signature _____ Date _____

Researcher's signature _____ Date _____

APPENDIX 4: ETHICAL CLEARANCE CERTIFICATE

**RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR**

**NAME OF RESEARCHER/INVESTIGATOR:
Dr OO Sanyaolu**

**Student No:
15012829**

PROJECT TITLE: Access barriers to campus health services amongst University of Venda students in Limpopo Province.

PROJECT NO: SHS/16/PH/13/0508

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Dr K Kyei	University of Venda	Supervisor
Ms JT Mabunda	University of Venda	Co-Supervisor
Dr OO Sanyaolu	University of Venda	Investigator - Student

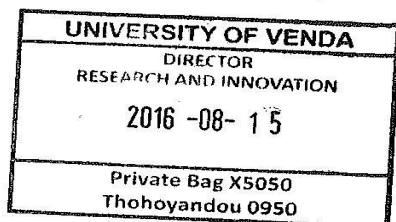
**ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE**

Date Considered: August 2016

Decision by Ethical Clearance Committee Granted

Signature of Chairperson of the Committee:

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



University of Venda

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

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

APPENDIX 5: LETTER OF PERMISSION TO CONDUCT THE STUDY



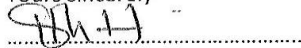
University of Venda

Enquiries: Dr Tshitangano TG. Tel: 015 9628006. E-mail: Takalani.tshitangano@univen.ac.za

To whom it may concern

This letter serves to confirm that Sanyaolu OO (15012829) has obtained UHDC approval and ethical clearance to collect data from UNIVEN students residing in campus regarding the topic "Access barriers to campus health services among university of Venda students". He is an MPH second year student in the department of Public Health. Kindly assist him.

Yours sincerely



Dr Tshitangano TG: HOD Department of Public Health

APPENDIX 6: EDITOR'S LETTER

SCHOOL OF HUMAN AND SOCIAL SCIENCES

20 February 2017

School of Health Sciences
University of Venda
Private Bag X5050
Thohoyandou
0950

Dear sir/madam

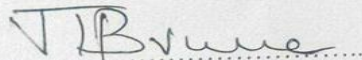
This letter serves to certify that I have proof-read Mr.O.O. Sanyaolu's mini-dissertation, titled, "Access Barriers to Campus Health Services among University of Venda Students".

The proof-reading entailed editing some parts of it, where I felt it would make the document more understandable; for example, to avoid wordiness, redundancy, sub-dividing long sentences into shorter ones, for clarity, etc. However, I have not tempered with the content of the mini-dissertation, except where I found that this constituted repetition or made the content confusing.

The mini-dissertation is presently ready for examination/presentation.

Thank you for your time.

Sincerely



V.T. Bvuma

Mobile: 083 423 9227



University of Venda

UNIVERSITY OF VENDA

PRIVATE BAG X5050, THOHOYANDOU, 09501. LIMPOPO PROVINCE, SOUTH AFRICA
TELEPHONE (015) 962 8172 FAX (015) 962 8416
E-mail: Vincent.Bvuma@univen.ac.za

"A quality driven, financial sustainable, rural-based comprehensive University"