

https://dspace.org/

A needs analysis among students at the Potchefstroom campus of the North-West University concerning a primary health care centre

Olivier, Elana

2011-12-15
http://hdl.handle.net/10539/10897

Downloaded from a DSpace repository. https://dspace.org/

A NEEDS ANALYSIS AMONG STUDENTS AT THE POTCHEFSTROOM CAMPUS OF THE NORTH-WEST UNIVERSITY CONCERNING A PRIMARY HEALTH CARE CENTRE

By
Elana Olivier
Student number 0213451 V
Protocol number M060514

RESEARCH REPORT

Submitted in partial fulfillment
of the requirements
for the degree

MPH
Master of Public Health
MMC087 (PT)

In the
FACULTY OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH

At the
UNIVERSITY OF THE WITWATERSRAND
2010

Supervisor
Dr M Hlungwani

DECLARATION

I, Elana Olivier, student number 0213451V, declare that the work presented in this study is my own original work and has not been presented at any other university.

_____ _____

Elana Olivier **Date**

ABSTRACT

An Needs Analysis Among Students at the Potchefstroom Campus of the North-West University Concerning a Primary Health Care Centre

Introduction

No health care services are available for staff or students on the Potchefstroom Campus of the North-West University. Lack of finances and the notion that the health of the campus community is not the core business of a university are reasons for not providing some form of health care service. The Declaration of Alma-Ata was adopted internationally, stating that essential health care must be made universally accessible to all people. South Africa endorses the Declaration of Alma-Ata and commits itself to ensure equitable access to health care. A needs analysis of the Higher Education AIDS Programme (HEAIDS) demonstrated that most South African universities, within reasonable means, respond to their students' health needs by providing some form of primary health care service. The researcher is adopting an ecological approach using the Healthy Campus Model. The model is based on primary health care principles and values which refer to the health needs of people as this would assist in alleviating the burden of disease and the risks thereof. The Healthy Campus Model also explores equal access and utilization of quality health care whereby these principles of primary health care and community participation would guide such a service. This approach determines whether basic human rights of access to health care have been met.

Materials and Methods

In this study the research design was a cross-sectional descriptive survey. The survey is part of a comprehensive health needs assessment, using a mainly quantitative questionnaire as a data collection tool. The study population consisted of full-time students enrolled at the Potchefstroom Campus. It included subgroups on gender, seniority and place of residence and was chosen specifically to identify possible high-risk activities and influences on student health. A sample size of 370 students and confidence interval of 95% were calculated. Both purposive and a volunteer sampling were used.

Results

The most significant finding is the students' need for an affordable and accessible health care facility with a high level of client confidentiality and quality of service. The survey included data of the financial needs of students regarding their primary source of financial assistance as an indication of their financial wealth. Access to finances specifically allocated for health care shows that almost half of the target population (47,54%) do not have the surety of access to a source of finance to cover their medical expenses. However, the majority (74,32%) are willing to contribute towards cost-effective and affordable health care and do not expect free health care. Accessible health care services are also of major concern. The majority of students (68,38%) stay on or within walking distance from campus. The results indicated furthermore that students' have specific health needs and preferences. The highest priority of health care were given to acute care or minor ailments (79,5%) followed by counselling care (70,6%). A need for HIV and Aids clinical programmes (69,8%) and health awareness and prevention programmes (67,6%) was indicated. The majority (83,74%) indicated that the services of the proposed health care centre will be preferred and utilized if available and affordable.

Discussion

The results of the health needs analysis on the Potchefstroom Campus clearly indicate that the students have definite needs for such services. The researcher argues that the institution is at risk by NOT responding to the students' health needs. Absence of a health care service attributes to the inauspicious health environment of the campus. By supporting the ecological approach, the researcher concurs that a healthy environment has the greatest impact on good health and that health and educational success are interdependent.

Conclusion and Recommendation

Educational success is a strategic priority and the core business of all institutions of learning. Establishing a primary health care service and acting on the health needs of the students is a risk abatement strategy to surmise educational success. A follow-up survey to determine the top ten health impediments on campus is recommended to measure and manage academic and health-related successes.

ACKNOWLEDGEMENTS

I express my gratitude to the following for their contribution to this research:

- My Heavenly Father for blessing me with the ability to do a research project like this and the courage, strength and determination He gave me to complete this task
- My loving husband for all his love, support, understanding and all the motivational speeches whenever I was struggling with adversity
- My colleagues for their support and encouragement to complete the report
- My employer, North-West University, for assisting me in to conduct the study on campus
- Prof. Madoda Zibi, my biggest supporter, mentor and motivator to advocate for HIV and AIDS and campus health services
- Prof. Annette Combrink, retired campus rector, for her understanding, support and finalizing the dream to found a health service on campus for staff and students
- Elani Steyn and her fourth-year communication students who co-ordinated the distribution and collection of questionnaires and assisted with analysing of the results
- The MPH programme and the lecturers -— this is an excellent programme and qualification. You broaden my scope of thinking!
- My friends, especially Mercia and Bea, for their interest and continuous support.

LIST OF FIGURES

Figure 3.1: Respondent's gender 48

Figure 3.2: Place of residence 49

Figure 3.3: Seniority of respondent 51

Figure 3.4: Primary source of study finance 52

Figure 3.5: Evaluation of current health care tariffs 55

Figure 3.6: Willingness to pay a minimal fee for medication/consultation 54

Figure 3.7: Distance of residence from campus 57

Figure 3.8: Parents medical aids membership 58

Figure 3.9: Medical expenses covered by parent's medical aid fund 59

Figure 3.10: Frequency of use of a health care centre on or near campus 60

Figure 3.11: Frequency of the need of health services and/or products 61

Figure 3.12: Type of health services most often used 63

Figure 3.13: Proposed health centre operating hours 64

Figure 3.14: Confidentiality of visits to health care centre 65

Figure 3.15: Importance of confidentiality of patient diagnose 66

Figure 3.16: Students most important health care needs and service required 67

LIST OF TABLES **PAGE**

Table 3.1: Cross-tabulation between parents who have a medical aid fund and willingness of the student to pay a minimal fee for medication/consultation ……..... 55

Table 3.2: Amount respondent is willing to pay …….. 56

Table C3: Cross-tabulation between "frequency of the need for health services and/or products" and "parents that have medical aids"…… 104

Table C4: Cross-tabulation between "parents having a medical aid and expenses are covered" and the "utilization of a health care service"…… 108

Table C4: Cross-tabulation between "parents who have a medical aid" and "students' willingness to pay a minimal fee" ……. 109

CONTENTS **PAGE**

DECLARATION i

ABSTRACT ii

ACKNOWLEDGEMENTS iii

LIST OF FIGURES iv

LIST OF TABLES v

1. CHAPTER ONE: INTRODUCTION AND LITERATURE REVIEW, AIMS AND OBJECTIVES……...**Error! Bookmark not defined.**

1.1 Introduction..... **Error! Bookmark not defined.**

1.1.1 Background .....**Error! Bookmark not defined.**

1.1.2 Background to Methodology..... 3

1.2 Literature Review..... 4

1.1.3 Why the Primary Health Care Approach? 5

1.1.4 What are the Health Needs and Risks of Youth in General? 12

1.1.5 What are the Health Needs, Risks, and Services of Students ..... on Campuses Around the World?.....15

1.1.6 What Campus Health Services are Available in South Africa? 21

1.1.7 What is the Health Status of the Potchefstroom Campus of the ..... NWU? 29

1.1.8 Aim 32

1.1.9 Objectives 33

1.1.10 Summary.....33

2. CHAPTER TWO: METHODOLOGY 34

2.1 Introduction..... 34

2.2 Research Team..... 34

2.3 Research Design and Method 35

2.4 Methods and Measurement Tool 36

2.5 Research Population 40
2.6 Study Sample and Sampling Methods 41
2.7 Data Collection 43
2.8 Data Analysis and Interpretation of Research Results 45
2.9 Ethical Considerations 45
2.10 Conclusion 47

3. CHAPTER THREE: RESULTS AND INTERPRETATION 47

3.1 Respondent Subgroups 48
3.2 Health Care Affordability 52
3.3 Health Care Accessibility 57
3.3.1 Geographical Accessibility of the Health Care Centre 57
3.3.2 Financial Accessibility of the Health Care Centre 58
3.3.3 Functional Accessibility of the Health Care Centre 60
3.4 Health Care Availability 61
3.5 Health Care Acceptability (Confidentiality) 65
3.6 Student Health Care Needs 67
3.7 Conclusion 68

4. CHAPTER FOUR: DISCUSSION 69

4.1 Introduction 69
4.2 Limitations 70
4.2.1 Time-Frames and Growth of the Project 70
4.2.2 Growth and Reform of the Primary Health Care Approach 71
4.2.3 Limitations of the Methodology 72
4.2.4 Limitation of Questions 75
4.3 Major Findings in Context of the Literature 76
4.3.1 Need and Utilization of Health Care Service 76
4.3.2 Access to Health Care 77
4.3.3 Finances 79
4.3.4 General Health Needs 81
4.3.5 Health Promotion 83
4.4 Summary 85

5. CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS 86
REFERENCES 95

ADDENDUM A ..... **Error! Bookmark not defined.**
ADDENDUM B ..... **Error! Bookmark not defined.**
ADDENDUM C ..... **Error! Bookmark not defined.**
ADDENDUM D ..... **Error! Bookmark not defined.**

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

ACRONYMS

AIDS: Acquired Immune Deficiency Syndrome

CTP: Committee of Technikon Principals

DoE: Department of Education

HEAIDS: Higher Education AIDS Programme

HCC: Health Concern Checklist

HIV: Human Immunodeficiency virus

HSRC: Human Sciences Research Council

NSFAS: National Student Financial Assistance Scheme

NWU: North-West University

SAACHS: South African Association of Campus Health Services

SAUVCA: South African Universities Vice Chancellors Association

STIs: Sexually Transmitted Infections

VCT: Voluntary HIV Counselling and Testing

WHO: World Health Organisation

1. CHAPTER ONE: INTRODUCTION AND LITERATURE REVIEW, AIMS AND OBJECTIVES

1.1 Introduction

A cross-sectional needs analysis, as part of a multipronged approach, is used to promote a primary health care centre at the Potchefstroom Campus of the North-West University (NWU) as there are no health services available for staff or students.

The Declaration of Alma-Ata (1978) was adopted internationally, stating that essential health care must be made universally accessible to all people. South Africa endorses the Declaration of Alma-Ata and commits itself to ensure equitable access to health care. This is reflected in the Constitution of the Republic of South Africa, which states: "everyone has the right to have access to health care service" (Constitution of the Republic of South Africa, 1996:13).

1.1.1 Background

In 1994, 16 years ago, the university terminated a campus related, privately owned medical service on the Potchefstroom Campus due to financial irregularities. Since then, several attempts were made to convince management to act upon the health needs and consequently the health risks of the campus community. Reasons given for not providing some form of health care service are lack of finances and the notion that the health of the campus community is not the core business of a university. Management also argued that there are numerous private health care services near the campus for students to use.

In 1996, medical practitioners, leasing property from the university, set up a private medical practice near the main entrance of the Potchefstroom Campus. In this lease agreement, the medical practitioners included an exclusion clause compelling the Potchefstroom Campus not to offer the same type (general practitioner orientated) of medical service on campus. Students accessing this medical practice or any other health care facility near the campus or in the greater Potchefstroom have to pay regular consultation fees or make use of their parents' medical aid. Students without financial resources are compelled to make use of the public health care system. The nearest primary health care clinic is 6 km from the residential area on campus and students lack transport. To have a subpopulation residing in a specific area with both difficult access to as well as no formal referral services to health care could violate the fundamental human rights of that subpopulation. The United Nations in 1948 adopted the Universal Declaration of Human Rights which includes a statement that "everybody has the right to a standard of living adequate for the health and well-being of himself and his family" (Beaglehole and Bonita, 1997). A needs analysis of the Higher Education AIDS Programme (HEAIDS, 2008) demonstrated that most South African universities, within reasonable means, respond to their students' health needs by providing some form of primary health care service, thereby creating a healthy environment conducive to learning. The Potchefstroom Campus of the NWU is one of the few universities that do not have an on-site primary health care service.

The merger in 2004 of the University of the North-West and the Potchefstroom University for Christian Higher Education created a window of opportunity to lobby for a health care facility at the Potchefstroom Campus, as the profile and health

needs of students of the new university (NWU) was beginning to change. An influx of more needy students to the Potchefstroom Campus, as shown by the increase in National Student Financial Assistance Scheme (NSFAS) grant applications, as well as the high HIV and AIDS prevalence (16,5%) among youth in South Africa in the 20–4 year group (Pettitfor et al., 2004), create a socio-economical and a health burden to the university.

In 2005, the new rector of the Potchefstroom Campus, Prof. Annette Combrink, received several enquiries regarding the need for health care service on campus. The HIV and AIDS Advisory Committee, students groups, the Student Representative Council, the South African Student Congress, the newly formed peer education service, concerned parents, and certain grades of staff all expressed a need for such a service on or near campus. Taking the evidence presented in consideration, the rector of the Potchefstroom Campus decided to investigate the sustainability of proposed health care services, exploring all alternatives.

1.1.2 Background to methodology

A triangulation of methods compelled the researcher to develop a measurement tool that includes a cross-sectional and a health needs survey. The questionnaire was mostly quantitative and determined the needs and preferences of students and consequently their health risks. This analysis was one of a few investigations, processes, and actions used by different stakeholders to get approval and funding for a sustainable health care centre. In using this kind of survey with regard to setting

up such a service, the university in effect employs a form of community participation (Du Plooy, 2002:170). Community, as referred to on the Potchefstroom Campus, indicates a community of interest as all participants are from the Potchefstroom Campus of the NWU, reside at the university's premises or in private accommodation near campus. However, a quantitative cross-sectional survey and a needs analysis as the only means of evaluating a particular community's needs and expectations have limitations. This is discussed in Section 4.2.3.

In sum, the background serves as a review briefly to describe the history of health services on campus as well as the reasons for the chosen methodology and survey design.

1.2 Literature Review

Engaging with the literature, the researcher needs to locate the research objectives in this field of study. The following sub-headings will guide the flow of information:

- Why the primary health care approach?
- What are the health needs and risks of youth in general?
- What are the health needs, risks, and services of students on campuses around the world?
- What campus health services are available in South Africa?
    - Introduction: HIV and AIDS as a health risk in South Africa
    - Higher education in context of HIV and AIDS
    - Health needs, risks and services other than HIV and AIDS

- What is the health status of the Potchefstroom Campus of the NWU?
- Aim
- Objectives
- Summary

1.1.3 Why the primary health care approach?

South Africa has committed itself to ensuring equitable access to health care (Booysen, 2003:659). This is reflected in the Constitution of the Republic of South Africa, which states: "everyone has the right to have access to health care service" (Constitution of the Republic of South Africa, 1996).

Preceding this statement, the concept of primary health care was developed in the 1940s and 1950s when governments of several countries were urged to rationalize their highly technical approach to health care and to broaden their coverage by providing promotive, preventive and basic health care services (Dennil, King and Swanepoel, 1995).

The Declaration of Alma-Ata (in the former USSR), was adopted in 1978 at the International Conference on primary health care. In this Declaration, it states that primary health care is the key to attain **health for all** as part of overall development. The Conference defined primary health care as "essential health care made universally accessible to individuals and families in the community by means acceptable to them, through their full participation and at a cost that the community

and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination**"** (Alma-Ata, 1978). Primary health care is the central function of a country's health system and an integral part of the overall social and economic development of the community. Dr Jo Asvall, Regional Director for Europe of the World Health Organisation (WHO) said: " '*Health for All* ' through primary health care is an eminently sound, ethically founded and cost-effective way to improve the quality of life of individuals and communities alike"(WHO, 1998).

Despite 30 years since the Declaration of Alma-Ata and enormous progress in health globally, it seems that there is a collective failure to deliver in line with the values of primary health care. The World Health Report (WHO, 2008) revisits the ambitious vision of primary health care as a set of values and principles for guiding the development of health systems. WHO describes primary health care more in detail in the World Health Report of 2008 as: "person-centred, comprehensive and integrated, the continuity of care, with a regular point of entry into the health system so that it becomes possible to build an enduring relationship of trust between people and their health care providers" (WHO, 2008:46).

The principles of primary health care such as equity, accessibility (geographically, financially and functionally), affordability, availability, effectivity and efficiency together with the values of social justice, the right to better health for all, community participation and solidarity, is guiding this study. Through this study, the researcher will attempt to deduce whether students' basic human rights of access to health care have been met, that social justice is imminent and if not, what are the risks thereof.

Furthermore, their needs and preferences for such a service will be explored by designing the survey tool according to these principles.

Building on the basic principles, four sets of reforms are promoted to reform primary health care in future. These reforms are reflecting a convergence between the values and principles of primary health care, the expectations of citizens and the common health performance challenges that cut across all contexts.

Having no primary health care service on campus, the researcher emphasizes the message of Dr Margaret Chan, Director-General of WHO: "In moving forward, it is important to learn from the past and, in looking back, it is clear that we can do better in future" (WHO, 2008:2). Hereby the university should take cognizance of the fact that the best practises and reforms pertaining to primary health care must be taken into consideration in establishing a health care service.

The reforms in the World Health Report (WHO, 2008:27) include universal coverage: Health systems should contribute to health equity, social justice and the end of exclusion, primarily by moving towards universal access and social health protection. The researcher is of the opinion that the university would strive towards aspects of universal coverage as deliverables of transformation and equity are some of the mission elements of the Institutional Plan of the NWU (North-West University, 2009).

According to WHO (2008:xvi) service delivery also needs reforms in order to reorganize health services as primary care, that is around people's needs and expectations, so as to make them more socially relevant and more responsive to the

changing world, while producing better outcomes. The strategy of community engagement pertaining to the students' needs and expectations are well positioned in conducting this survey.

Community participation as a strategy, using a multidisciplinary approach as well as using innovative prevention strategies concerning the specific campus environment, is of concern. The importance of community engagement is underlying the primary health care values to achieve health for all and requires health systems that: "Put people at the centre of health care, harmonizing mind and body, people and systems" (WHO, 2008:43).

Based on the above discussion, it can be said that providers of primary health care in South Africa should employ a form of community participation to achieve greater success in delivering health services. In doing so, they will inevitably contribute to development in their communities. In addition, they will be aiding the government in reaching its goal of equitable access to health care. Therefore, community involvement and consequential poverty alleviation would contribute to more people having access to health care and service utilization (Mubyazi and Hutton, 2003:55).

The researcher arrives at the conclusion that the concepts of primary health care, development and community participation are related, as conceptualized by Crampton (1999:4). Lethbridge (2004:236) discusses how the relationship between users of health services (the public) and service providers in the health sector has changed in the last 20–30 years. This involves a growing recognition that patients require information and support in order to take part in influencing the services and

treatment that they receive, which implies a greater level of participation from these patients. The WHO's statement that "people have the right and duty to participate individually and collectively in the planning and implementation of their health care", as stated in the Declaration of Alma-Ata of 1978, should be recognized. Moreover, WHO stipulated in 2008 that the growing expectations of the population in modernizing societies give evidence of the comparative advances, in terms of effectiveness and efficiency, when health care is organized as "people-centred primary care" (WHO, 2008:46).

The researcher of this study realized that the students are empowered by community-based development to develop community cohesion and confidence; to increase their ability to identify, to analyse and to prioritize their needs; and to organize the resources to meet their health needs. The international community views improved governance through community participation as of central importance in meeting international development targets such as the Millennium Development Goals (Mubyazi and Hutton, 2003:7).

The Declaration of Alma-Ata reaffirms the belief that health is a fundamental human right. Attainment of the highest possible level of health is a most important world-wide social goal, whose realization requires — in addition to the health sector — the action of many other social and economic sectors.

This study relies strongly on the values of primary health care in order to argue that health is indeed a fundamental human right. Social justice and the right for "better health for all" constitute important parameters for governing the health sector (WHO,

2008:vii). Informing the university on the premise of "social justification" to establish health services, information must provide rational, evidence based and anticipatory responses of the students' health needs measured against internationally adopted social expectations for health care.

These expectations resonate with the values at the core of the Declaration of Alma-Ata. They explain the current demand for better alignment of health systems and provide today's primary health care movement with reinvigorated social and political backing for its attempts to reform health systems (WHO, 2008:vix).

People expect the establishment of a health care service on campus to attain social justice that is underpinned by students' health needs and expectations. WHO (2008:42) concludes that as societies modernize, people demand more from their health systems, for themselves and their families, as well as for the society in which they live. Therefore, there is increasingly popular support for better health equity and an end to exclusion; for health services that are centred on people's needs and expectations; for health security for the communities in which they live; and for a say in what affects their health and that of their communities.

Additional to the primary health care values, the researcher argues that in Article 27(2) of the Constitution of the Republic of South Africa (1996), access to health care services is a right under the Bill of Rights. The South African National Health Bill revolves around equity, quality, and access to health care.

Public health practitioners have the responsibility to draw attention to the importance of the link between human rights and public health. They must also develop methods of assessing the impact of health policies, programmes and health reforms on human rights (Beaglehole and Bonita, 1997:591). In sum, it appears that health and human rights are linked inextricably in the struggle to advance human well-being within the context of the closed biosphere.

In this study, the researcher investigates whether students have attained their right to (specifically primary) health care, in addition to their health needs and expectations. These students are in a "closed biosphere" — the Potchefstroom Campus. The researcher also investigates whether social justice has been served. When a confined group of students does not have access to health care and when they lack the ability to pay for the utilization of primary health care services, inequity and inequality are indicated, considering that 86% of all universities are offering such services. The consequent impact on the health of students and the risks thereof could be viewed as a violation of their human rights and therefore as a management risk to the university.

The United Nations in 1996 in an International Covenant on Economic, Social and Cultural Rights stated: "After all primary health care is primary because it is basic, crucial, most important, and it is indeed the basic health care that is a fundamental human right" (Alma-Ata, 1978).

1.1.4 What are the health needs and risks of youth in general?

"Some groups think we are too young to know. They should know we are too young to die" (Ross, Dick and Ferguson, 2006).

Health may be defined as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. Because youth is a relatively healthy segment of the population, their health needs have generally been overlooked, except for their reproductive health. When they do suffer poor health, it is often a result of accidents, injuries caused by armed conflict, violence, substance abuse, HIV/AIDS and tuberculosis. Extreme poverty and malnutrition make some youth vulnerable to disease. Accidents and injuries are major causes of youth morbidity, mortality and disability (United Nations, 2004:16).

If rate of death is a benchmark, the young is a healthy group, and young people of today are healthier than at any time in history. This presents an unprecedented opportunity for further investment and growth. Young people in developing countries have a mortality rate of less than 3%, decreasing significantly over the past 20 years (World Bank, 2007). However, Deutsch (1996:51) stresses the fact that average mortality is a misleading measure, because it does not reflect behaviour that places health at risk later in life. He describes that, amongst Americans under twenty-four years of age, 70% of deaths are caused by motor vehicle crashes, homicide, suicide and other unintentional injuries. These causes are preventable and related to a few behaviours, especially alcohol and drug abuse, failing to use seat belts and motorcycle helmets, and possessing firearms and other weapons. Among all

American age groups combined, three causes — heart disease, cancer, and stroke — account for nearly 70% of all mortality and a large amount of morbidity and expense. These conditions are also preventable and are substantially owing to a few behaviours, especially tobacco use, excessive consumption of dietary fat and calories and insufficient physical activity (Deutsch, 1996:51).

What makes it difficult for the young people of today is the fact that they have access to a much broader range of choices than previously available, in a vastly different environment, which makes it harder to make appropriate choices and to avoid behaviour that threatens their health. Awareness of the consequences of decisions for health, and of ways to avoid ill health, is very low among young people, especially girls, and only a small percentage of those aware of the consequences actually adopt safe behaviour. Young people are therefore likely to make uninformed decisions about behavioural patterns that put their health at risk (World Bank, 2007).

In contradiction to America where youth have access to health care, the World Development Report (World Bank, 2007) declares that good health is not equally available to all young people. Although mortality among young people is low on average, and young people are healthy, the likelihood of premature death is much higher in poor countries. The average 15-year-old boy has a 90% chance of surviving to the age of 60 in western Europe or North America, but only a 50% chance in sub-Saharan Africa, primarily owing to the spread of communicable diseases such as AIDS. In countries hardest hit by AIDS, the probability is only 20%.

The expense of treating AIDS and chronic diseases such as cancers, diabetes, and heart disease is high, and the treatments often ineffective. The best way to avoid future loss of productive human capital and steep increases in future health care expenditure is to modify health behaviour during youth, when habits are still being learned (World Development Report, 2007).

Taking all of the above in consideration, the researcher supports the World Development Report (World Bank, 2007) that promotes better health for young people by suggesting policies that rest on three pillars:

First, give youth the knowledge to help them make informed choices about their behaviour — and the skills to negotiate safe behaviour with peers and partners. Youth organisations recognize their needs by asking for increased access to national and international resources in order to "establish formal and informal educational programmes on HIV/AIDS, substance abuse and sexual, reproductive and mental health series" (United Nations, 2004).

Second, create an environment for the young to practice healthful behaviour, making risky behaviour costly, and limiting the opportunities for it. Policies underpinning an ecological approach to the health issues of youth would answer to this pillar and would assist in alleviating the burden of disease. "This approach focuses on the connections among the determinants of health, education and behaviour of the individual and the physical and social environmental structure" (Sacher et al., 2005). It also explores equal access and utilization of quality health care whereby the principles of primary health care would guide such a service. Eventually this

approach will determine whether the youths' basic human right of access to health care has been met.

Third, for young people harmed by poor health decisions or poor environments, provide health services, treatment, and rehabilitation (World Bank, 2007). Services based on primary health care principles such as equity, accessibility, availability; effectivity and efficiency are answering this need. "This would be an affordable choice and vehicle of service delivery in order to attain basic human rights" (United Nations, 2004).

The researcher takes cognizance of these policy pillars and suggests integrated, comprehensive primary health care services in managing health care services on campus.

1.1.5 What are the health needs, risks, and services of students on campuses around the world?

"Health, in its broadest sense, serves to support students and create learning environments" (Sacher et al., 2005).

The years spent at university are the stage of physical, psychological, and sexual development when young people gradually assume responsibility for their own health (Lee and Loke, 2005). Grizzel (2005) confirms the statement that "health behaviors established during university years are likely to continue in later life".

These health behaviours may have long-term health consequences, such as psychological disorders, cardiac or respiratory diseases, cancer and complicated pregnancies or deliveries.

A profile of risk behaviours is important as universities are in a unique position to implement strategies to address these risk behaviours (Grizzel, 2005). It is the pervasive view of the researcher that these risk behaviours should be managed in a comprehensive manner.

Health risks can have a profound impact on student development and academic success, as highlighted by an online health survey administered by the University of Central Oklahoma from 2008 until 2010. Academic success is, after all, a core function of a university.

Steedhar (2009) states: "Healthy medical students are likely to become healthy doctors who can then model and promote healthy lifestyles with their patients". This underlies the ecological approach of the World Development Report (World Bank, 2007) that health and educational success are interdependent.

Through the investigation of health needs, risks and solutions of different campuses around the world, the researcher deduces some differences and similarities on South African campuses. A feasibility study by the National University of Galway's Health Promotion Research Centre, outlines the fact that young adults are experiencing an "information gap" in areas of alcohol misuse, mental health and sexual health, even

though students use the internet frequently both for study and social networking (Siggins, 2009).

Deutsch and Merseth (2002), using a methodology of case studies, conclude that tobacco use, unhealthy dietary behaviours, inadequate physical activity, alcohol and other drug use, sexual behaviours associated with sexually transmitted diseases and behaviours that may result in intentional or unintentional injuries, are the most frequent health problems in the USA.

These health problems are preventable. The last three of these behaviours are interrelated and the largest contributors to serious health, educational and social problems and even death among 5- to 24-year olds (Deutsch and Merseth, 2002).

The University of California analysed their most common reasons for student medical visits as upper respiratory illnesses, routine examinations for gynaecological health, depression, stress, anxiety and sexually transmitted infection checks. Brad Buchman, the Medical Director of their health services confirms: "In addition, the level of severity and acuteness of illness and injury in both their student and staff populations on campus are progressively increasing. To provide the best possible treatments for our patients, prevention and public awareness must increase and utilization of medical knowledge and technologies must be made available" (University of California, 2008).

Disconnection between perception and reality is also problematic. Survey data indicate that students perceive that a relatively high percentage of their peers

engage in risky behaviour, such as alcohol abuse, smoking, and unsafe sexual activity. This disconnection results in students coming to university and having expectations of what the university experience is supposed to be. Incorrect perceptions of students may result in high-risk behaviour under the false assumption that they are fitting into the university crowd (University of California, 2008).

In a study of the health needs of youth (Taylor et al., 2009) at the University of Prince Edward Island, Canada, about 1,400 young adults were questioned on their health habits, health status, and the need for a special type of clinic. Findings indicate that students engage in a variety of behaviours that increase their risk of serious health problems. Specific risk behaviour relating to nutrition and weight status, episodic heavy drinking, non-use of condoms, and psychological distress were identified (Taylor et al., 2009). Furthermore, an earlier study in Canada elaborated showing that students prefer a youth clinic which provides information and counselling on sex, drugs, sexual transmitted diseases, and alcoholism, manned by a physician with a pleasant personality, who is understanding and informal (Sternlieb and Munan, 1992).

Steedhar (2009) reported that at the Imperial College in London, medical students experience a heavy toll on their health and well-being. This relates mostly to drug and alcohol abuse, depression, deleterious effects of sleep deprivation, homicide, and suicide. As a medical student himself, Steedhar (2009) proposed a "nurturing learning environment" with a dynamic approach in a multiple of domains — physical, mental, emotional and spiritual health. This included development and pastoral care programmes, formal instruction in stress management, peer discussion groups,

regular physical activity, and health promotion with the emphasis on sensible sleeping patterns.

In opposition to the USA, England, and Canada, Israeli adolescents have the lowest rate of health service utilization of any age group, although the students do engage in health-risk behaviour. This could be the result of the absence of health-promotion and health-prevention programmes. Contentious health laws in Israel restrict youth to consult a physician without their parents' consent. In addition, time constraints during routine medical encounters leave little opportunity for professional screening for health-risk behaviour or psychosocial problems (Wilf-Miron et al., 2002).

Professional and financial partnerships with local authorities were established in Israel to help define the particular needs of the community's youth, to reach youth with special health needs and to address the needs of the students, The Sheba Medical Center offered a walk-in Adolescent Health Service to provide diagnosis and short-term treatment, as well as counselling and support. As indicated before, the need for confidentiality was strongly felt in this health service. Neither Israeli law nor the medical community has sufficiently clarified this need. However, progress towards accessibility and confidentiality was made by developing a Health Concern Checklist (HCC). Adolescents were asked to mark each item about which they had concerns or about which they would like to receive further information. This is helpful to approach the teenage patient and initiate productive communication (Wilf-Miron et al., 2002).

Integrating the needs, risks and probable solutions of the above case studies, the researcher endorses the findings of a study done in Hong Kong by Lee and Loke (2005). The objective was to examine students' health-promoting behaviour and psychosocial well-being. University administrators, curriculum planners, and community health professionals who design guidelines for structuring a healthier environment and developing health education programmes that support healthy choices among university students, can make use of the information of this study on gender differences and specific needs of students (Lee and Loke, 2005).

This study of Lee and Loke (2005) offers an insight into critical health-related issues for young people in universities regarding promotion of health, risk reduction, and disease prevention, considering cultural differences and identifying of available resources. The study supports the three pillars of health care of the World Development Report (World Bank, 2007) and the 2008 primary health care reforms.

In sum, viewing student health as a priority, establishing policies and programmes based on evidence-based practice, and assigning adequate resources could help address the worrying health behaviour of our students (Taylor et al., 2009). Brian Neeson of National University of Galway confirms that shared resources for universities would provide a "value for money" method of addressing student health needs (Siggins, 2009).

Finally, Dr Margaret Chan, Director-General of the WHO, proclaimed in the 2008 World Health Report: "United by the common challenge of primary health care, the

time is ripe, now more than ever, to foster joint learning and sharing across nations to chart the most direct course towards health for all" (WHO, 2008:ix).

1.1.6 What campus health services are available in South Africa?

Introduction: HIV and AIDS as a health risk in South Africa

Campus health services should be seen in context of the HIV and AIDS epidemic in South Africa as it is one of the major drivers of health-seeking behaviour, morbidity, and mortality of South African people.

South Africa is experiencing a maturing generalized HIV epidemic in which heterosexual sex is the predominant mode of HIV transmission, followed by mother-to-child and other modes of transmission. Young adults, particularly females, are mostly at risk to acquire HIV (Shisana et al., 2009). The Human Sciences Research Council (HSRC) conducted HIV prevalence, incidence, behaviour, and communication surveys in 2002, 2005, and 2008. These surveys are comparable for the South African population aged 2+ years and similar prevalence levels were found in all three studies — 11,4% in 2002, 10,8% in 2005 and 10,9% in 2008. HIV prevalence in the total population of South Africa has therefore stabilized at a level of around 11%. However, HIV infection levels differ substantially by age and sex and show a very uneven distribution among the nine provinces.

Higher education in context of HIV and AIDS

Given the importance of the higher education sector in driving development and contributing to national human resource development, it is vital to gather and analyse information about the actual and projected impact that HIV/AIDS will have in this respect on higher education institutions as organizations. In addition, it is important to identify factors that advance and inhibit full and appropriate institutional responses to this challenge (Subotzky and Africa, 2006).

HIV infection and AIDS are not simply medical conditions. The epidemic that we see in Southern Africa, and which we see burgeoning in the countries of South and East Asia and Eastern Europe, is one driven by social and economic conditions, social practices and cultural norms (Subotzky and Africa, 2006). In the light of these aspects, it is necessary to understand HIV in the South African context. Subotzky and Africa (2006) ask why South Africa has an epidemic of such proportions when countries such as the USA, UK, Senegal, Chile, and Australia do not. They report that the answer lies in an understanding of the social, political, and economic dimensions, which assist the spread of the epidemic in South Africa. Some factors that have an influence on the youth of our campuses include:

- **Political transition** was the focus of attention in South Africa during the most rapid phase of the spread of HIV. This includes the merger processes of institutions of higher learning.
- **Social, economic, and political instability** result in a lack of long-term vision amongst individuals. Bouare (2009) recognized that some behavioural risk factors act as contextual determinants of HIV and AIDS in South Africa. The

fearlessness/low-perception risk factor of South African youth must be addressed if institutions want to support their students.

- **Cultural practices and social taboos**. Being unable or unwilling to discuss sex, multiple partnerships, etc.
- **High levels of other sexually transmitted infections** resulting in a higher risk of transmission of HIV.

Encouraging signs are reported in the HSRC survey of 2009. The HIV prevalence has decreased among youth aged 15–24 from 10,3% in 2005 to 8,6% in 2008. Using a mathematical approach for the 15–20-year-old age group, it was found that there was a substantial decrease in incidence in 2008 in comparison to 2002 and 2005 (Shisana et al., 2009). Condom use has reached very high levels with 87,4% of males and 73,1% of females reporting the use of condoms the last time they had sex. Awareness of HIV status in individuals of 15 years and older doubled from 2005 to 2008. The survey also found that there has been an increase in exposure to one or more HIV/AIDS communication programmes from 2005 to 2008, with 90,2% of youth aged 15–24 being reached (Shisana et al., 2009).

Institutions of higher education should however implement risk abatement strategies to address the impact of the following disappointing findings of the 2008 HSRC survey:

- The HIV prevalence remains disproportionately high for females overall in comparison to males and it is twice as high as that of the age group studying at universities, the 20–24 age group.

- Early sexual debut is related to entry into sexual relationships, and consequently vulnerability to HIV infection. Transactional sex on campuses is prevalent as more and more students subsidize their study loans and bursaries with this extra income.

This tendency is supported by Shisana et al. (2009) reporting an increase from 18,5% in 2005 to 27,6% in 2008 of female students having partners who were five or more years older. The passive risk factor of "gender dependency" as described by Bouare in 2009 is supporting the HSRC's findings that women are depending on older men and that may induce risky sexual behaviour. This is represented by the HIV prevalence of 21,1% among the 20–24-year-old females and 32,7% among 25–29-year-old females (Shisana et al., 2009).

The researcher argues that while it will not be possible to understand the effects of all these issues in the context of the university, some will be evident. Management of the university needs to understand how these underlying factors impact on the risk posed to the institution, how they influence decision-making and strategy, and how they locate the university and its responses in the context of wider society (Subotzky and Africa, 2006).

Collectively South Africa's 23 public institutions of higher education cater for about 750 000 students and employ some 50 000 full-time personnel. Ideally, HIV/AIDS interventions should reach this entire population of nearly 800 000 people. Several South African universities provide health care services to their students and employees. In 2003, HEAIDS (Higher Education AIDS Programme), a partnership between SAUVCA (South African Universities Vice Chancellors Association), CTP

(Committee of Technikon Principals) and DoE (Department of Education) commissioned an audit to assess the range of HIV and AIDS services, including primary health care services. These activities and interventions of each of the 35 higher education institutions in South Africa was measured against the HEAIDS programme framework and indicators. The findings presented in the audit described in particular the general clinic and health services on the campuses.

Most higher education institutions have on-site primary health care clinics or health services (*n* = 30) although few of these services are free, and many charge fees to both staff and students (*n* = 20). While most clinics offer a variety of counselling services in such areas as Voluntary HIV Counselling and Testing (VCT), Sexually Transmitted Infections (STIs), sexuality, rape, pregnancy, sexual abuse, substance abuse, and family planning, few (*n* = 13) offer an after-hours emergency service (Higher Education HIV/AIDS Programme, 2004). The researcher agrees with the findings of the SAUVCA audit that the Potchefstroom Campus of the NWU has failed dismally in providing any health services to staff and students (Higher Education HIV/AIDS Programme, 2004).

In 2007, the higher education sector, with the guidance and support of the HEAIDS programme funded by the European Union, did an extensive HIV and AIDS gaps-and-needs analysis of the 23 merged South African universities.

Currently the interventions undertaken by institutions include HIV prevention activities, voluntary counselling and testing services, health services relevant to HIV/AIDS including treatment for STIs, HIV prophylaxis after sexual assault as well as

treatment for opportunistic infections. Only a few campuses offer tuberculosis treatment. The range of services offered and the scale of service provision differ among institutions and even among different campuses of a single university such as the NWU.

In sum, the gaps-and-needs analysis suggests that, for the most part, higher education institutions have formally included HIV/AIDS programmes in their work but have not embraced these as part of their lives and as a vital factor in the fulfilment of their mission.

At the Toronto International AIDS Conference of 2006, the slogan "Keeping the Promise" became synonymous with efforts to closing the gap between commitment and delivery at every level of intervention on HIV/AIDS. It is a rallying cry that is still in use today. The survey findings of 2007 enable the higher education sector to answer the question: "How well are we keeping the promise?" Even more so at the NWU, considering some of the negative findings of the SAUVCA analysis of 2004 and the HEAIDS analysis of 2007.

For more than a decade, South Africa has endured one of the highest HIV prevalence rates in the world. It might therefore be expected that higher education institutions, as centres of intellectual leadership and professional development, and reservoirs of young talent, would be dynamically involved in the national HIV/AIDS response. While individual institutions or units within institutions have exemplified this commitment, the sector as a whole has failed to do so (Higher Education HIV/AIDS Programme, 2008).

Health needs, risks and services other than HIV and AIDS: Summary

Various South African universities provide health care services to their students and employees. SAACHS, the South African Association of Campus Health Services, is an association of health services supporting academic activities at tertiary educational institutions in South Africa. This association strives to foster a liaison between members in the interest of campus health care, to promote comprehensive primary health care, to engage in research, and to promote cost-effective excellence of practice management service through ongoing monitoring and evaluation.

The Campus Health Clinic at the University of KwaZulu-Natal offers HIV and AIDS testing, comprehensive primary health care services and treatment, not only to its students and employees, but also to the nearby community (HIVAN, 2002–5).

The Campus Health and Wellness Centre at the University of the Witwatersrand in Johannesburg provide convenient, accessible, and cost-effective services to registered students and university staff. The services offered include minor surgical procedures, treatment of sports and work-related injuries, a sick bay for those too ill to wait in the waiting-room, a dispensary, immediate professional attention for all medical emergencies on campus as well as HIV and AIDS testing (University of the Witwatersrand, 2003).

The Student Health Centre at the University of the Western Cape offers a comprehensive medical service. It houses two full-time and two sessional doctors, as well as two full-time primary health care nursing sisters. Students who have medical

aid schemes are charged accordingly while those who do not, are treated free of charge for certain services. The university also runs a dietetics clinic, a physiotherapy clinic and a student-counselling centre (University of the Western Cape, 2003).

The University of Pretoria's Student Health Services provide free, voluntary, family-medicine-orientated health services with an emphasis on offering preventative medicine and health education to enrolled students. Students are examined and/or educated by skilled staff familiar with the university's environment and demands. Apart from the family medicine services, the Student Health Services also educate students concerning contraception and sexually transmitted diseases, carry out HIV and AIDS testing and provide a comprehensive dietetic service. During the period 2000–5 the percentage of students visiting the Student Health Services remained almost constant at 12,5% of the student population. Forty three per cent of these students do not belong to a medical aid (Van Papendorp, Coetzee and Koorts, 2007:50). Diseases involving the respiratory system are the most common amongst the students while reproductive health services are the most frequently accessed (Van Papendorp, Coetzee and Koorts., 2007:54). Generally, the researcher finds that these findings correlate with the top ten health impediments of the *Healthy Campus 2010* programme implemented in the USA.

Literature confirms that many students have drinking problems. Often it requires sustained consultation, rather than one-shot training, for administrators and faculty members to see that these are also learning problems and that they are responsible for the environment students inhabit and are capable of improving it (Deutsch, 1996).

To make the connection between health, education, and quality of life more visible on campus, an aggressive social marketing and health education agenda needs to be broadly advanced. Further evidence of binge drinking, date rape and car accidents while under the influence of alcohol, forces the university to have a broader look at the campus "environment". How conducive is the campus environment to promoting a healthy lifestyle and thereby successful learning? Campus administrators need to take a first-hand look at the lives of students on campus, to take a late-night tour of the hot spots and to listen to students whose lives are regularly disrupted by the drunken behaviour of roommates. If your business is learning, then it is also health (Deutsch, 1996).

"People need to be healthy and safe in order to learn, and they need to learn how to keep healthy and safe. From preschools to graduate schools, the success of an institution's academic mission depends on the health of its students. That's why it's fair to ask: What is your college doing to create an environment that encourages healthy practices among its own students?" (Deutsch, 1996).

1.1.7 What is the health status of the Potchefstroom Campus of the NWU?

High-risk behaviour of students to be infected with HIV and AIDS, are of great concern. White, conservative Christian students of the Potchefstroom Campus do not perceive that they are at risk for getting infected by HIV/AIDS (Olivier, 2002). In a study on the orientation of values of students of the Potchefstroom Campus, Vreken and Rens (2001) state that students could be at a high risk to be infected with HIV

and AIDS. This study describes high-risk behaviour as "excessive drinking, and having sex without condoms". Strydom supported these findings in 2002. "Alumni, who look back fondly on their own college nights, experimenting with excess, may dislike hearing about drunken behaviour and its impact on the sexual and physical safety of the campus. They lived in different times, when people didn't often die from unsafe sex or a casual altercation, when sexual assault was a woman's shame instead of a man's crime. It is presidents and deans who decide what level of student drunkenness is acceptable" (Deutsch, 1996).

Evidence as stated and the different studies of high-risk behaviours on the Potchefstroom Campus (Vreken and Rens, 2001; Strydom, 2002) imply a definite need for youth-friendly primary health care services. These services should be structured on the American approach that is based on the comprehensive Healthy Campus 2010 ecological model and underpinned by the primary health care reforms of 2008 and the World Development Report of 2007.

Taking the primary health care principles of equity in consideration, the researcher argued that greater effort is necessary to deal with differences in health status and access to health care between campuses of the NWU.

Putting the national tertiary education's response to HIV and AIDS into perspective (Higher Education HIV/AIDS Programme, 2008), justice and fairness need to be strategically visualised to those students of the NWU who are affected and infected by the pandemic. NWU students have the right to HIV/AIDS prevention, treatment, care and support, considering that these services are provided by the majority of

tertiary institutions in South Africa and are supported by legislation. Social justice and the fundamental right to health care need to be honoured.

The NWU's mission to be "sensitive to our environment and the country's social needs, and to promote sustainable development" is a call for responsiveness and engagement with the social and economic factors that are exacerbated by the impacts of the pandemic. This should be visualised as part of the transformation process of this university and accepted through the university's strategic plan. Implementing health care services on campus will not only alleviate the burden of HIV and AIDS but other health and socially related illnesses as well.

The researcher of this study acts as the HIV and AIDS programme co-ordinator on the Potchefstroom Campus and expressed a dire need for a primary health care service to assist in the implementation of the newly adopted HIV and AIDS policy (North-West University, 2006). Currently the programme concentrates on non-clinical activities and refers clinical issues to private health care providers and the public clinic in town. The latter is not readily frequented by the students as it is not geographically and functionally accessible, services such as VCT are not always available as students have to book days in advance and the family planning and STI services are not perceived "youth friendly" by the students. The partial implementation of the HIV and AIDS policy poses a risk to the University for non-compliance of the South African and Higher Education South Africa Strategic HIV and AIDS Plan.

The Mafikeng Campus of the NWU operates a subsidized, fully functional health care service that deals with the scourge of HIV and AIDS and addresses the health needs of the students. The justice of having a growing number of needy students on a geographically confined Potchefstroom Campus, with no support from the university to access and utilize affordable health care, is misleading and a violation of human rights. Taking the primary health care principles of equity in consideration, the researcher urges that greater effort is necessary to deal with differences between campuses in health status and access to health care. Equity in this setting implicates the differences of health status of students and staff, as well as equity in the distribution of benefits (such as equal access or utilization for equal need) and in the distribution of burdens (for example payment based on ability to pay). Equity refers to the fairness in the allocation of health care access, service utilization, or health outcomes across individuals or groups with different levels of socio-economic status (Liu et al., 2004).

1.1.8 Aim

In conclusion, the general aim of this research is to investigate the health needs and preferences of students of the Potchefstroom Campus of the NWU and consequently their health risks as well as to establish a primary health care service as a risk abatement strategy.

1.1.9 Objectives

The specific research objectives are

- to review the principles and values of primary health care
- to examine students' health needs, risks and services
- to recommend appropriate health services based on students' health needs and risks.

1.1.10 Summary

Given the background of health care services on the Potchefstroom Campus in the context of HIV and AIDS, the merger as well as social and political instability and two peer reviewed surveys, the researcher arrives at the following conclusion:

- In the context of social justice, equity and equality as described in the Constitution of the Republic of South Africa, primary health care still remain the core of public health services.
- Youth throughout the world is a healthy population but they are confronted with choices that influence their morbidity and mortality. Appropriate youth-friendly health promotion and prevention, as a community participation strategy, should remain the primary viewpoint of all health-related services.
- Building on primary health care, the ecological approach focuses on the influence of the environment. This must be addressed to alleviate the burden of health risks of students.

- Managing the health risks of the student population would promote student development, academic and, consequently, professional success.

2. CHAPTER TWO: METHODOLOGY

2.1 Introduction

In this chapter, the research methodology used to explore the needs and preferences of students for a primary health care centre on the Potchefstroom Campus is described. The research design, study population, sampling technique, the tool for data collection, and the methods for measuring outcomes used are outlined. The instrument used and the issues of reliability and validity are described. Ethical considerations and measures taken to protect the rights of the participants to the study are presented in this chapter.

2.2 Research Team

The research team for this study consisted of the researcher, a research co-ordinator and five field-workers. Postgraduate students in research methodology at the School of Communication Studies were employed as field-workers. The researcher and the research co-ordinator supervised the research process and gave assistance to field-workers when any difficulties were encountered. Owing to this, the validity and the reliability of the research data were increased.

2.3 Research Design and Method

The research design depends on the problem, the purpose and the objectives of the study, and the desire to generalize the findings. The research design was a triangulation of methods, namely, a *descriptive*, cross-sectional survey and a needs analysis.

The purpose of this design was to provide a picture of the health situation on campus, without any experimental intervention (Burns and Grove, 2009:237–45). This design has the advantage of measuring attitudes, needs or practises in a short amount of time, such as the time required for administering the survey and collecting the information (Creswell, 2008:389). The survey was mostly quantitative in nature, using only one qualitative question on students' health needs.

Campbell and Fiske first used triangulation in 1959. It is used to describe the combined use of two or more theories, methods, data sources, investigators, or analysis methods in the study of the same phenomenon. Triangulation is increasing the overall validity of the study (Burns and Grove, 2009:231).

In 1978, Denzin broadly defined triangulation as "the combination of methodologies in the study of the same phenomenon" (Todd, 1979:603). The two methods used in this study are mainly quantitative in nature and are described as the within-method triangulation. This is used when the phenomenon being studied is multidimensional and complex (Burns and Grove, 2009:232). This method essentially involves cross-checking for internal consistency or reliability (Todd, 1979:603). A limitation therefore

is the absence to test the degree of external validity. A triangulation design also helped to uncover the deviant or off-quadrant dimension of a phenomenon, highlighting different elements, which do not fit a theory or model (Todd, 1979:609). This dimension was realized by the researcher as an ecological dimension was uncovered that was not specifically included in the questionnaire. The questionnaire was grounded only in the principles of primary health care.

2.4 Methods and Measurement Tool

A cross-sectional survey was developed to collect data about the students' situation in one point in time during 2006 (Creswell, 2008:389). The data collection tool used is a self-administered, mostly quantitative questionnaire. The questions included in the questionnaire related to the aim of this research study; that is to explore the health needs and preferences of all full-time students, given the specific context of the Potchefstroom Campus, to establish a primary health care service.

The development of the questionnaire was based on the principles of primary health care. Questions assessed students' health needs, preferences and current utilization of health services in terms of equity, accessibility (geographically, financially and functionally); affordability; availability; effectivity and efficiency (Dennil, King and Swanepoel, 1995). The principle of equity was endorsed throughout this study and outcomes were subsequently measured against it. Other strategies to implement a primary health care centre were also acknowledged in developing the questionnaire. Such strategies are community participation, using a multidisciplinary approach,

planning to implement appropriate technology especially pertaining to monitoring and evaluation, and using innovative prevention strategies concerning the specific campus environment.

The strategy of community participation was of particular interest to the researcher. In using a needs based questionnaire, the university is in effect employing a form of community participation (Du Plooy, 2002:170). Community, as referred to on the Potchefstroom Campus, indicates a community of interest as all participants are from the Potchefstroom Campus of the NWU, are resident on the university's premises or reside in private accommodation nearby campus. This should contribute to the successful implementation and running of this centre — a means for the university to contribute to community development in terms of equitable access to and utilization of health care.

The two methods of the survey, a needs analysis and a cross-sectional questionnaire, was a triangulation design that contributed to a more complete understanding of the study. The questionnaire (Addendum B) measured students' needs of health care services including access, availability, acceptability, and affordability of services on or near campus. These questions were captured as Questions 1, 2, 3, 4, 5, 6, 8, and 9 of the profile information as well as in the needs evaluation section of the questionnaire. The needs evaluation, in particular the scope of the health care services and medication, would assist the researcher and assist in recommendations for priority setting. This tool also assessed the attitudes, opinions, and practices of the students in using a primary health care service. Practices included the different types of health care services the students used at that point in

time, the frequency of using such services and the students' geographical and financial accessibility to health care services. (Refer to Questions 7, 10, 11, 12, 13, 14, and 15.) The questionnaire also included demographical information that played an important part in the sampling technique, as certain health risk factors were contributed to the demographics of the students on campus. (Refer to Part A, B and C of the questionnaire.) Question 18 is the only qualitative open-ended question offering the students an opportunity to participate in the development of the proposed health care centre according to their health needs. Addendum B is an example of the described questionnaire.

Taking these principles and strategies into consideration, a range of health professionals were asked to suggest possible questions related to the areas of Primary Health and Social Care. This was done based on current care provision and possible future developments such as the primary health care centre. An important reason for this top–down approach to develop the questionnaire was to overcome the difficulty of users' limited knowledge of potential or available services

The questionnaire was developed in Afrikaans, as Afrikaans is the home language of the research team. This questionnaire was then translated into English and Tswana. All questionnaires were tested in a pilot study. The English and Tswana questionnaires were translated back into Afrikaans to ensure reliability and validity. All questionnaires were accordingly changed and adopted.

The close-ended questions have a number of options from which the respondent chose one or more options that best describe their situation or express their

viewpoint. One open-ended question, characteristic of a qualitative design, was used in the questionnaire (Du Plooy, 2002:83).

The questionnaire was piloted by means of interviews with ten students chosen at random. They experienced some problems in understanding certain concepts of service delivery, for example, the specific structure of services such as the wellness clinic in town. Based on this pilot study, adjustment was made before it was used in the actual data collection process. It was finally confirmed with the students that the questionnaire was comprehensible and comprehensive.

This questionnaire's limitation is embedded in the fact that it is only part of a comprehensive health needs assessment, using a mostly quantitative questionnaire as a data collection tool. The questionnaire, as a structured or systematic means of data collection, allows information to be collected from a large sample of respondents and allows the relation between variables to be examined. This method is most appropriate when the issues relevant to the topic being investigated are already known in some detail (Jordan et al., 1998:1669). The researcher acknowledges the inadequacy of this method, keeping in mind the limitations of quantitative methods. Using the principles of primary health care to design the questionnaire, the scope could especially be broadened by further across-method triangulation, using more qualitative questions in the needs analysis. Information gained through public consultation and community participation may either be marginalized or incorporated according to the personal priorities of a health professional. According to Jordan et al. (1998:1670) inequalities in health should rather be responded to through citizens' juries, user consultation panels, focus

groups, qualitative questionnaire surveys, and opinion surveys of local knowledge. Such a comprehensive range of need assessment tools would enhance the outcome of this study. However, financial and time constraints as well as the scope of work required for the partial completion of this degree permitted the researcher to use the described data collection tool, as attached in Addendum B.

2.5 Research Population

The research population consisted of all full-time, contact students enrolled at the Potchefstroom Campus in 2006 (*n* = 10 811). It included the following subgroups:

- 4 578 full-time male students subdivided into:
  - 521 first-year students who stay in campus residence;
  - 730 first-year students who do not stay in campus residence;
  - 1 194 senior students who stay in campus residence; and
  - 2 133 senior students who do not stay in campus residence

- 6 233 full-time female students subdivided into:
  - 812 first-year students who stay in campus residence;
  - 759 first-year students who do not stay in campus residence;
  - 1 910 senior students who stay in campus residence; and
  - 2 752 senior students who do not stay in campus residence

These subgroups; gender, seniority and place of residence, were chosen specifically to identify possible high-risk activities and influences on student health. Female students in their first year after school probably are the most at risk of being infected

with HIV when not staying in a structured, very controlled environment such as the residences on the Potchefstroom Campus. These students are mainly from a very conservative, rural background and most of them are living away from home for the first time. There could be a higher need for health care in this group and specific interventions should be structured and implemented to alleviate their health needs (Strydom, 2002:104).

2.6 Study Sample and Sampling Methods

Probability sampling in the type of stratified sampling is used to claim that the sample is representative of the campus student population, and can generally be applied to the population (Creswell, 2008:154). With a proportionate, stratified, random sample, a smaller sample size was used to achieve the same degree of representativeness as a large sample required through simple random sampling. Sampling error decreases, power increases, data collection time is reduced, and the cost of the study is less if stratification is used. "Proportionate" means the numbers of the subjects were selected in proportion to their occurrence in the population (Burns and Grove, 2009:351).

The stratification procedure consists in stratifying the campus population in subgroups of gender (male and female), and then further stratifying them into place of residence and seniority. It is important for the researcher to know what the male students' needs and preferences are regarding a health care centre, as they tend not to visit health care facilities on a regular basis. The importance of seniority plays a role in health prevention and promotion strategies as first-year students are more

prone to be at risk, entering a high-risk environment for health-related impediments. Stratification ensures that the stratum desired (females, accommodation, and seniority) would be represented in the sample in the proportion to that existing in the population (Creswell, 2008:154).

Simple random sampling was used to select participants from each subgroup of the population. This guarantees that the sample will include specific characteristics, which the researcher wants included in the sample (Creswell, 2008:153). This sampling was done by selecting residences randomly on or off campus. On the Potchefstroom Campus, students in private accommodation participate in the activities of "off-campus residences". Therefore, residences represent them.

Data collection was done among the representative sample of students and was executed by means of the questionnaire. Convenience sampling was used. In convenience sampling, subjects are included in the study because they happen to be in the right place at the right time (Burns and Grove, 2009:353). The field-workers enter the available subjects into the study until they have reached the desired sample size.

Although convenience sampling is a weak form of sampling it was found to be most suitable for selecting subjects at the formal hostel meetings on Monday nights. Convenience sampling, also called accidental sampling, provides little opportunity to control for biases (Burns and Grove, 2009:353).

The sample size was determined in consultation with a statistician. The statistician estimated that the level of students in need of health care could be as high as 85%. To estimate this prevalence, the conservative route is followed where a prevalence of 50% is assured and the health needs are to be estimated within 10% of accuracy. A sample size of 370 students will provide a confidence interval of 95% (Du Plooy, 2002:104).

To ensure that the sample drawn was proportionally representative of the target population and subgroups, it included the following:

- 18 first-year male students who stayed in campus residences;
- 28 first-year female students who stayed in campus residences;
- 25 first-year male students who did not stay in campus residences;
- 26 first-year female students who did not stay in campus residences;
- 40 senior male students who stayed in campus residences;
- 66 senior female students who stayed in campus residences;
- 72 senior male students who did not stay in campus residences; and
- 95 senior female students who did not stay in campus residences.

TOTAL: 370 respondents (*n* = 370)

2.7 Data Collection

Data collection was done by means of questionnaires and, as described, convenience sampling was used.

The research team asked representatives of men and women's residence committees for permission to hand out questionnaires during their weekly Monday night meetings. During those meetings the researcher explained the purpose of the questionnaire and handed out the information sheets to those who volunteered to participate. The questionnaire was a 10-minute, self-administered questionnaire and was to be put in a box on completion. The research team had approached different men's and women's residences until the required and specified amount of questionnaires from the different subgroups were collected.

The students residing in town were approached through the house committees. Appointments were made with students residing in some of the bigger private communes, student houses, complexes or flats. The researcher and field-workers visited these residences until the required amount of questionnaires in the different subgroups was entered. The research team first approached those students living in large communes as this sped up the processes.

The anonymity of respondents and the confidentiality of information provided were ensured at all times. The research team was received with enthusiasm and anticipation, as different student groups were keen to get accessible health care services. Students supported the study in a very positive manner. Most of the respondents expressed concerns for accessible and affordable health care while the researcher was explaining the "letter of information for research" (Addendum A).

2.8 Data Analysis and Interpretation of Research Results

Once the data were collected, it was captured in and processed by a computer software program, *Statistica*. The research co-ordinator supervised the process of double capturing to ensure accuracy of the data presented.

Responses to close-ended questions were processed into frequency tables, graphs and cross-tabulations and interpretations were made accordingly (Du Plooy, 2002:50, 83). Responses to the open-ended question were interpreted and a summary made according to the analysis (Du Plooy, 2002:50, 84).

With *Statistica,* quantitative analysis established percentage ratings for all specified variables, whereas bivariate X^2 analysis identified significant cross-tabulations (Addendum C). Conclusions and recommendations were made according to these interpretations.

2.9 Ethical Considerations

Ethical approval was obtained from the Human Research Ethics Committee of the School of Public Health of the University of the Witwatersrand before the study was conducted. The Committee sent a letter of approval (Addendum D). The researcher obtained approval from the relevant authorities of the NWU, where the research was conducted.

As described, the quantitative and qualitative data sampling were both purposive and voluntary. Hereby the researcher concluded that the respondents participated without any coercion.

The research team gave an information sheet to each of the participants. This information sheet reconfirmed the voluntary participation and confidentiality of the research process. Only verbal informed consent was required as no drugs were administered and no blood or tissue samples were taken for future testing. The participant voluntarily completing the questionnaire and handing it back to the research team implied consent. Participants were further assured that the decision not to participate or to withdraw from the study will be respected and that they will not be penalized in any way.

This information sheet described the purpose of the research as well as the method of completion of the questionnaire by explaining it in Afrikaans, English or Tswana. The questionnaire was designed to answer the core values and principles of the vision of primary health care. The questionnaire was subjected to a pilot survey and the final form was adapted and refined based on the results of the pilot study.

The researcher guaranteed the anonymity of all records by identifying the respondent of the survey questionnaire only by sex, by place of residence (living on campus or living in town) and by year of study (a first-year or a senior student).

The results are reported as accurately and objectively as possible to abide by the university's ethical considerations.

2.10 Conclusion

In this chapter, the research design and methods, study population, sampling technique, and the procedure used for data collection are outlined. The instrument used and some limitations to the study are presented. The ethical considerations are addressed. In the next chapter data analysis and the findings of the study are presented.

3. CHAPTER THREE: RESULTS AND INTERPRETATION

The results indicated the students' health needs and preferences as well as their current utilization of health care services in Potchefstroom. It also indicated that a primary health care centre on campus would be of value to them and that they will utilize the services provided.

The discussion of the results is presented in categories according to the principles of primary health care. The principle of equity is underlying the argument and the outcome of the survey and the results are interpreted in this context. According to Liu et al (2004), equity refers to the fairness in the allocation of health care access, service utilization, or health outcomes across individuals or groups with different levels of socio-economic status.

The aim of this research is to investigate the health needs and preferences of students and consequently their health risks to establish a primary health care centre as a risk abatement strategy.

The following categories are used to present the survey results:

- Respondent subgroups
- Health care affordability
- Health care accessibility
    - Geographical accessibility of the health care centre
    - Financial accessibility of the health care centre
    - Functional accessibility of the health care centre
- Health care availability
- Health care acceptability
- Student health care needs
- Conclusion

3.1 Respondent Subgroups

Subgroups of gender, place of residence and seniority are used as these indicators play an important role in accessing and utilizing health care services. The results showed that the research was successful in reaching the population required to obtain representative and reliable results.

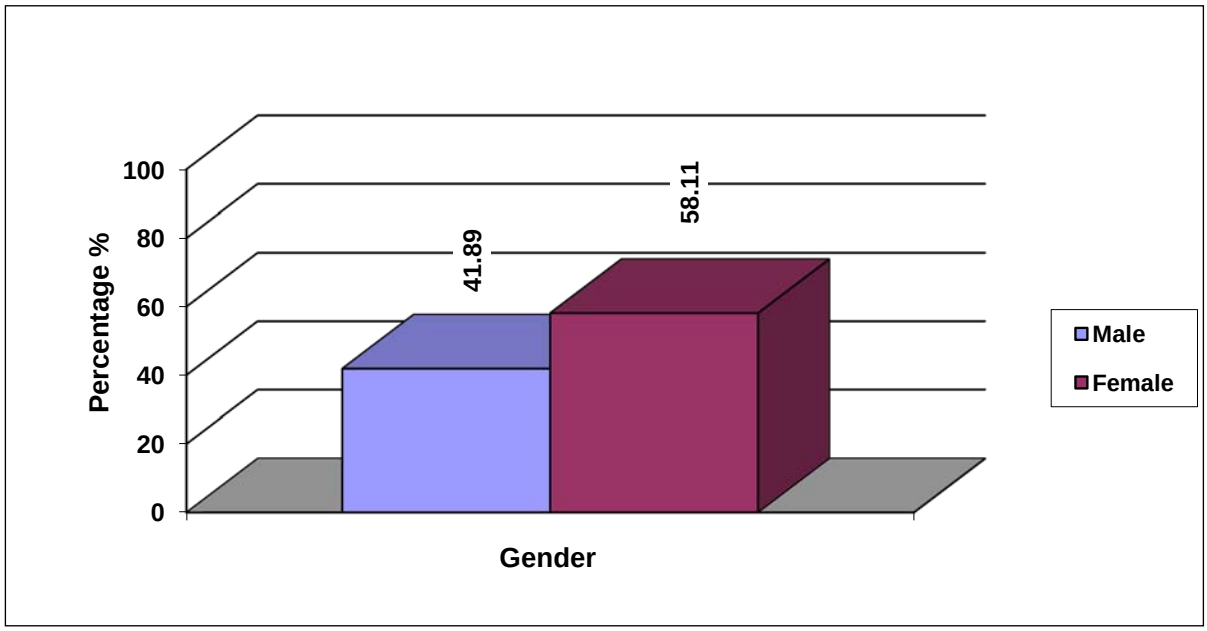

Figure 3.1 Respondent's gender

The results indicated that the proportion of male and female students reached through the survey was representative of the proportion of male and female students who study full-time at the Potchefstroom Campus. Of the 10 811 full-time students studying on the Potchefstroom Campus, 42,35% (*n* = 4 578) are male students and 57,65% (*n* = 6 233) are female students. Of the 370 full-time students that responded through the survey, 41,89% (*n* = 155) were male students and 58,11% (*n* = 215) were female students.

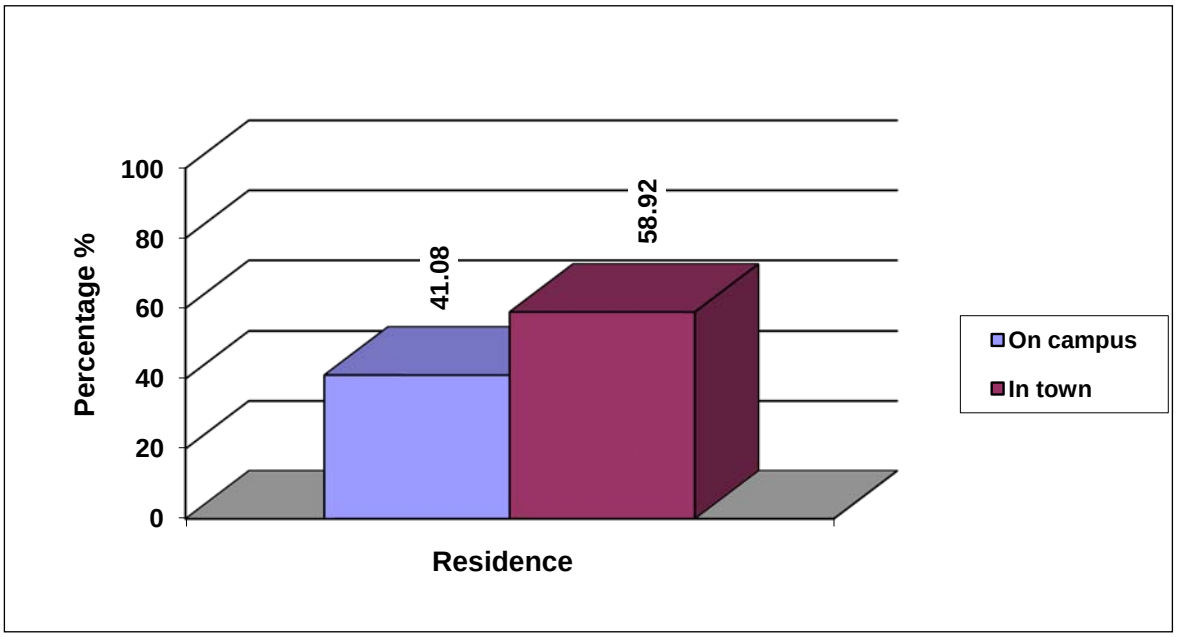

Figure 3.2 Place of residence of respondent

Figure 3.2 indicated that the student respondents who stay on campus and those who stay in town were of the same proportion as in the target population. Of the 10 811 full-time students studying at the Potchefstroom Campus, 41,04% (*n* = 4 437) stay on campus and 58,96% (*n* = 6 374) stay in town.

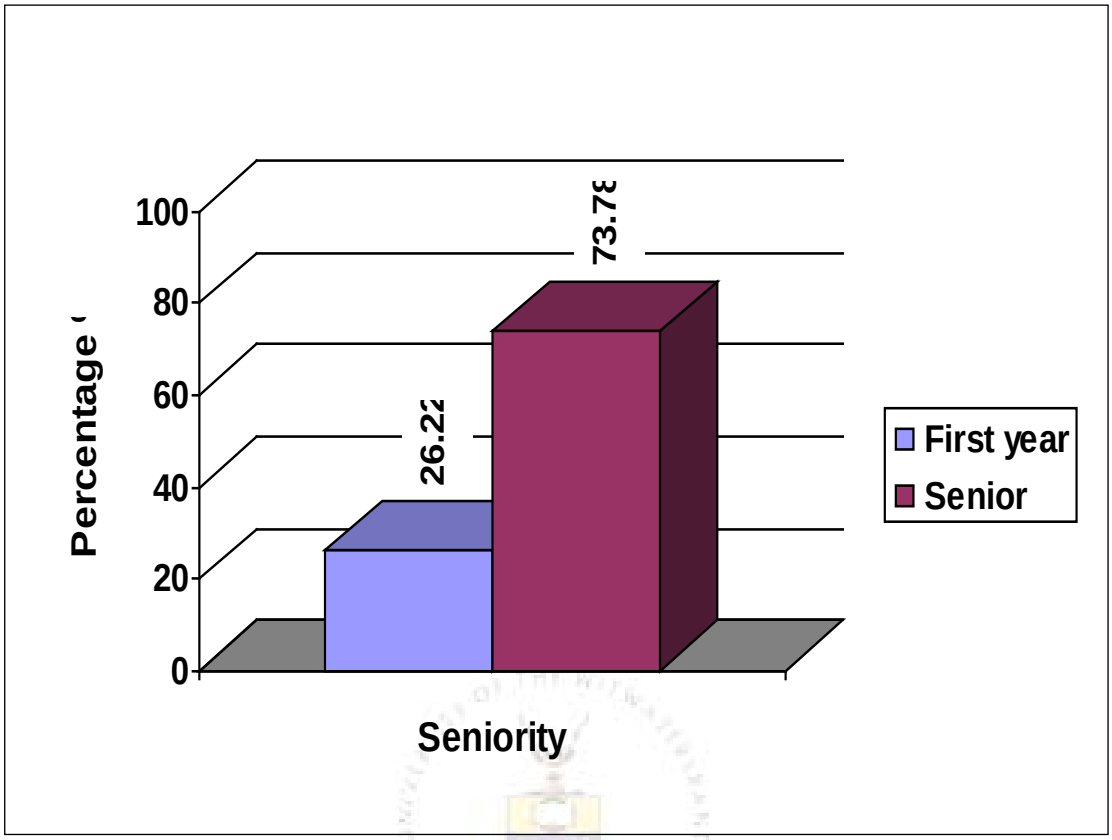

Figure 3.3 Seniority of respondent

Figure 3.3 indicated that the number of first-year students and the number of senior students who responded through the survey were of the same proportion as in the target population. Of the 10 811 full-time students studying on the Potchefstroom Campus, 26,10% (*n* = 2 822) are first-year students and 73,90% (*n* = 7 989) are senior students.

3.2 Health Care Affordability

Equity also implicates the differences between students in the distribution of burdens, for example payment for health care based on ability to pay. The survey looked at the student's primary source of financing their studies as an indication of financial wealth and consequently, financial need.

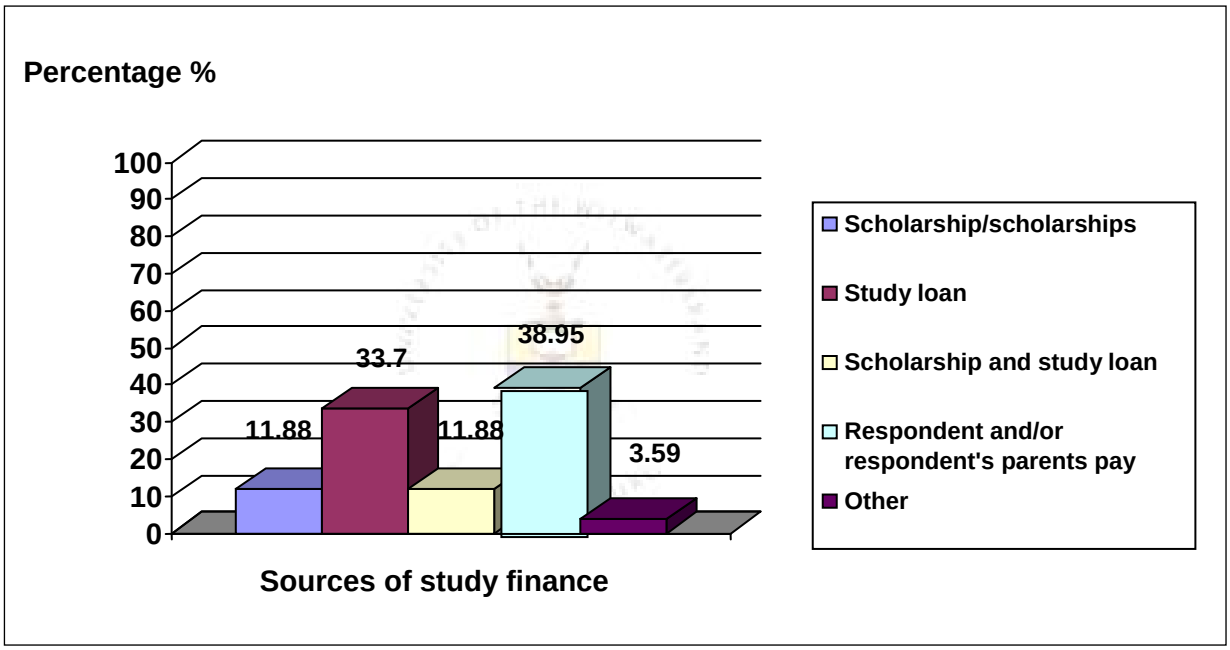

Figure 3.4 Primary source of study finance

These results indicated that the greatest singular form of primary finance is the respondents themselves and/or their parents (38,95%, *n* = 141). However, the primary source of study finance for the majority of students (57,46%, *n* = 208) does not come directly from their own or their parents' means. For these students funding is derived from scholarships, study loans or a combination of both.

These findings are significant in that they indicate the ability and/or willingness of the students and/or their parents to spend money in general. Therefore, that a student's study finances do not come directly from their own or their parents may indicate that they do not have sufficient funds for this and thus may have a need for cost-effective and affordable health care.

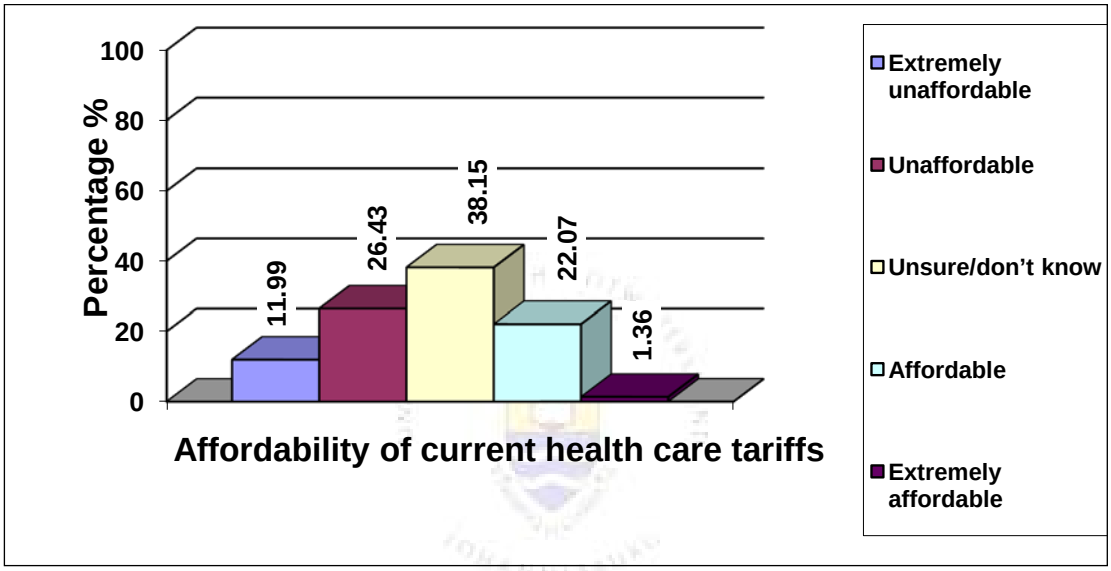

Figure 3.5 Evaluation of current health care tariffs

The survey investigated the cost of health care to students at the time of the survey. The majority of students (70,99%, *n* = 252) use doctors' services more often than pharmacy, clinic or hospital services. A significant number of these students (63%, *n* = 200) primarily use doctors' services close to campus (for example the Bult or Cachet Park).

Making use of these doctor's services do not necessarily indicate a preference of curative care instead of primary health care. The current situation of having no

choice between accessible primary health care and curative care services nearby or on campus, would rather explain this phenomenon. The affordability of these services are perceived by a larger number of students (38,42%, *n* = 141) to be (to some degree) unaffordable. The number of students who consider current health care tariffs to be (to some degree) affordable are 23,4% (23,43%, *n* = 86). Students who's parents have medical aid, can possible explain that 38,14% of students are unsure or do not know what the current health care tariffs entail. This confirms earlier suggestions that there is a need among students for more affordable health care.

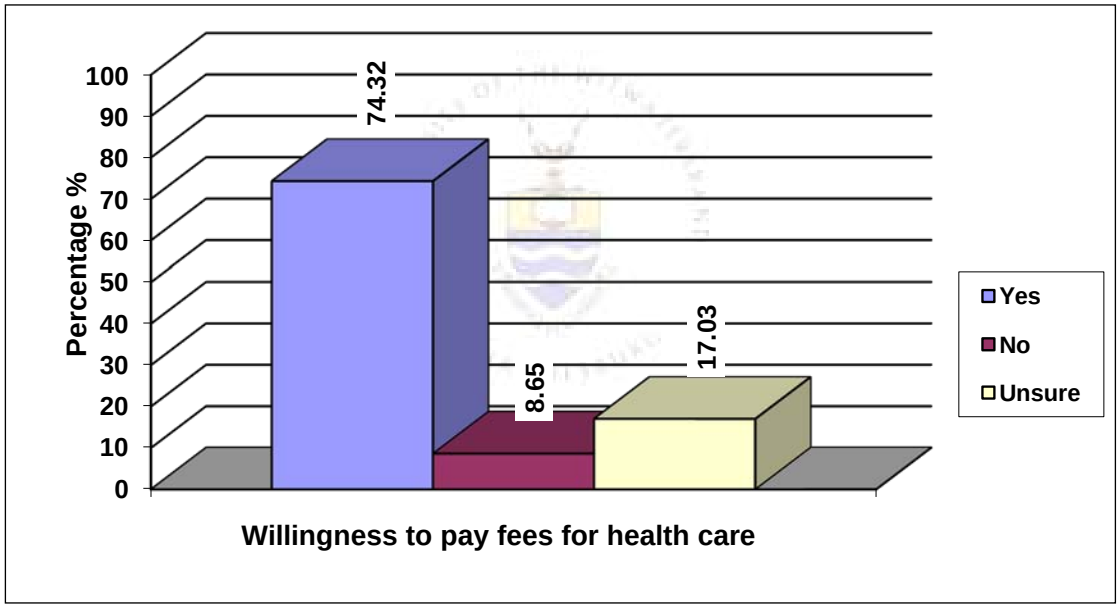

Figure 3.6 Willingness to pay a minimal fee for medication/consultation

Students are however willing to contribute towards health care as seen in Figure 3.6. The majority of students (74,32%, *n* = 275) are willing to pay a minimal consultation fee and/or fee for medication that they receive at the proposed health centre.

Table 3.1 Cross-tabulation between Questions 1 and 13				
Parents have medical aid fund (Question 1) ▼	**Willingness to pay a minimal fee for medication/consultation (Question 13) ▼**			**Row Total**
	Yes	**No**	**Unsure**	
Yes	171	19	39	229
No	99	10	19	128
Unsure	5	3	5	13
All groups	275	32	63	370

Table 3.1 indicated that 77,34% of those whose parents do not have a medical aid (*n* = 128), the majority (*n* = 99) are also willing to pay a minimal fee for medication and/or consultation received at the centre.

Thus, it is not simply students who are funded by a medical aid fund who are willing to pay for products and services received from the proposed health centre, but also those whose medical expenses are not covered by a medical aid fund who expect cost-effective health care and not free care. What students regard as "affordable" is determined by the results in the following table.

Table 3.2 Amount respondent is willing to pay

	Frequency	%
Less than R50	120	32,70
R50	55	14,99
More than R50	9	2,45
Depends on care/service	123	33,51
Not applicable	60	16,35

These results indicated that a significant number of students (32,7%, *n* = 120) were willing to pay less than R50 for health consultations and/or medication. It also suggested that these students considered the above to be a cost-effective health care fee. Slightly more students than those just mentioned (33,51%, *n* = 123) indicated that the amount they are willing to pay depends on the type of care or service they receive. Thus, they did not specify a definite amount. However, of those who did specify the amount they were willing to pay, it was apparent that few students (14,99%, *n* = 55) were willing to pay more than R50 for health care. Thus, a reasonable fee, from the perspective of the students, would be R50 or less — preferably less.

The majority of students expect cost-effective and affordable health care rather than free health care. This includes the majority of those whose medical expenses are not covered by a medical aid fund. R50 or less — preferably less — is considered a reasonable consultation and/or medication fee.

3.3 Health Care Accessibility

In this section results will be discussed according to the following sub-categories of accessibility:

- Geographical accessibility of the health care centre
- Financial accessibility of the health care centre
- Functional accessibility of the health care centre

3.3.1 Geographical accessibility of the health care centre

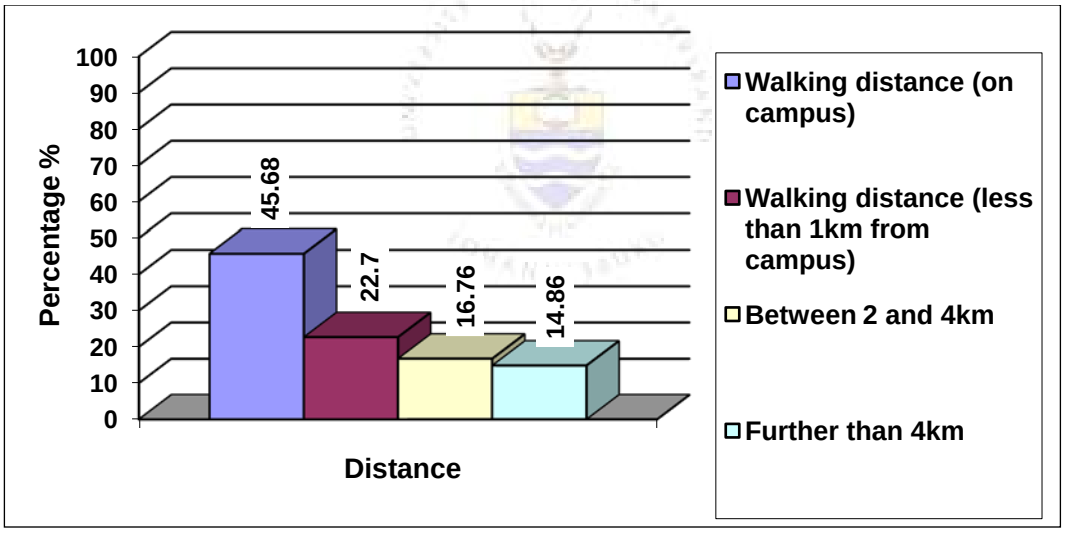

Figure 3.7 Distance of place of residence from campus

These results indicated that the majority of students (68,38%, *n* = 253) stay within walking distance from campus. This group included both students who stay near the campus and those who stay in residences on campus. This indicated that if the proposed health centre were established on or near campus, it would be within

walking distance for the majority of students' place of residence. In addition, the majority of students (71,58%, *n* = 257) regarded the distance between the location of the health centre and the campus to be important or absolutely important.

3.3.2 Financial accessibility of the health care centre

The survey looked into the matter of access to finances specifically allocated for health care. The results indicated that there was a significant number of students whose parents do not have a medical aid fund (34,59%, *n* = 128). This number represented approximately 3 740 students of the target population. It is likely that these students will seek affordable and cost-effective health care. This implies that the university need to assist those students who do not have access to a medical aid or means of other funding to make health care services financially accessible.

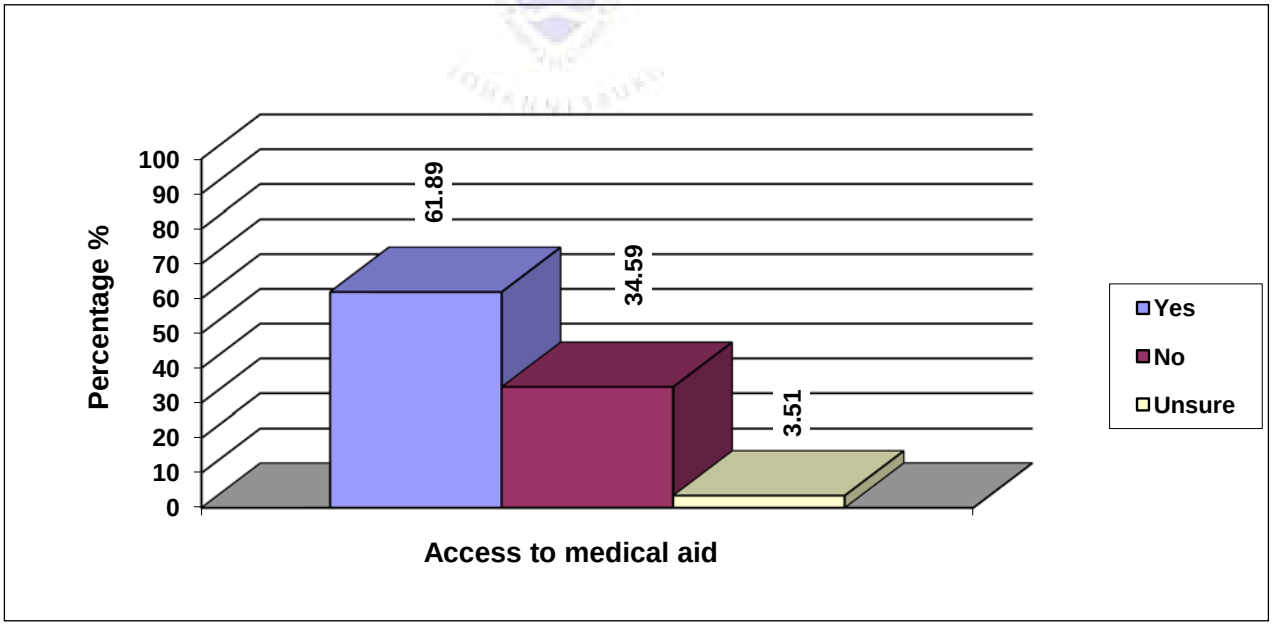

Figure 3.8 Parents medical aid membership

The parents of the majority of full-time students do have a medical aid fund (61,89%, *n* = 229). However, this does not necessarily mean that these medical aid funds cover these students' expenses. This issue is investigated further in Figure 3.9.

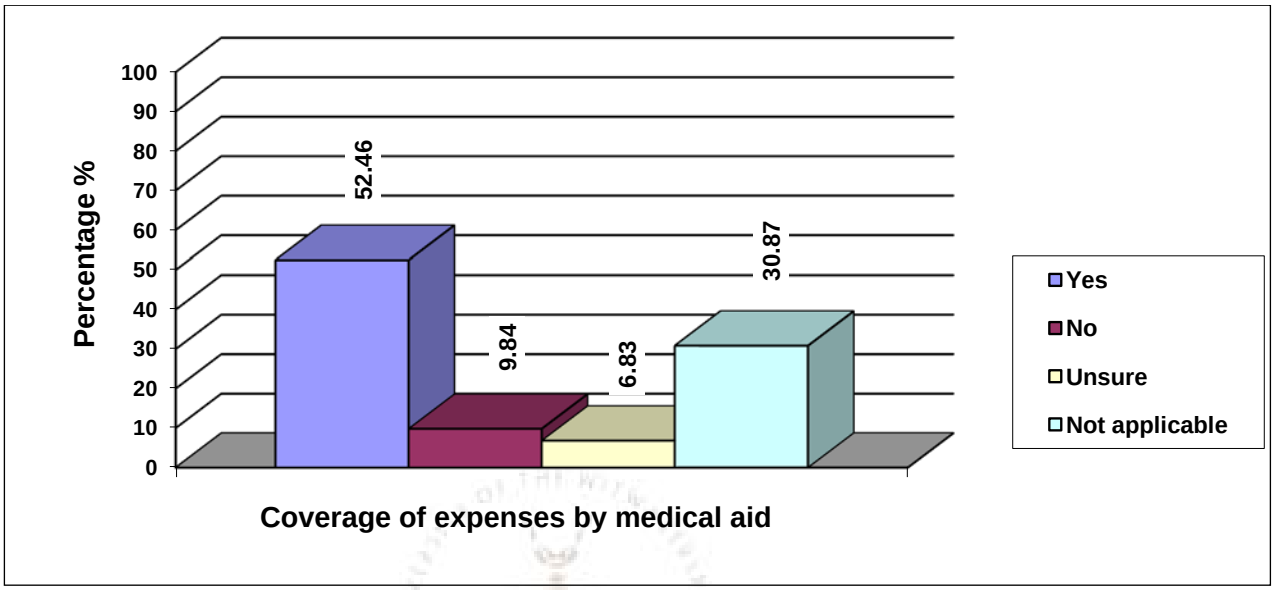

Figure 3.9 Medical expenses covered by parent's medical aid fund

The majority of students whose parents have a medical aid fund are covered by this fund (52,46%, *n* = 192). There are however a number of students, whose parents do have a medical aid fund, who are not covered by this fund or are unsure if they are covered by it (16,67%, *n* = 61). These students do not have the surety of access to finances to cover their medical expenses.

By combining the number of respondents (30,87%, *n* = 113) to this question who indicated that it is not applicable to them (in other words, that their parents do not have a medical aid fund) with those whose medical expenses are not covered or are unsure if they are covered by their parent's medical aid fund (16,67%, *n* = 61), it can

be determined that almost half of the target population (47,54%, *n* = 174) do not have the surety of access to a source of finances to cover their medical expenses. This suggests that almost half of the students will find value in the proposed health centre if it provides affordable and cost effective medical care.

It should be added that those students whose parents' medical aid funds do cover their medical expenses could not be dismissed from those who are likely to find the proposed health centre of value simply due to this fact. There are other factors involved, such as availability and health care acceptability, which are investigated by this study and are analysed further in this report. In addition, this research does not investigate the extent to which these respondents' medical expenses are covered by their parents' medical aid fund. There were possibly students in this group who had a similar lack of medical financing as those in the above-mentioned groups and had a need for cost-effective and affordable medical care.

3.3.3 Functional accessibility of the health care centre

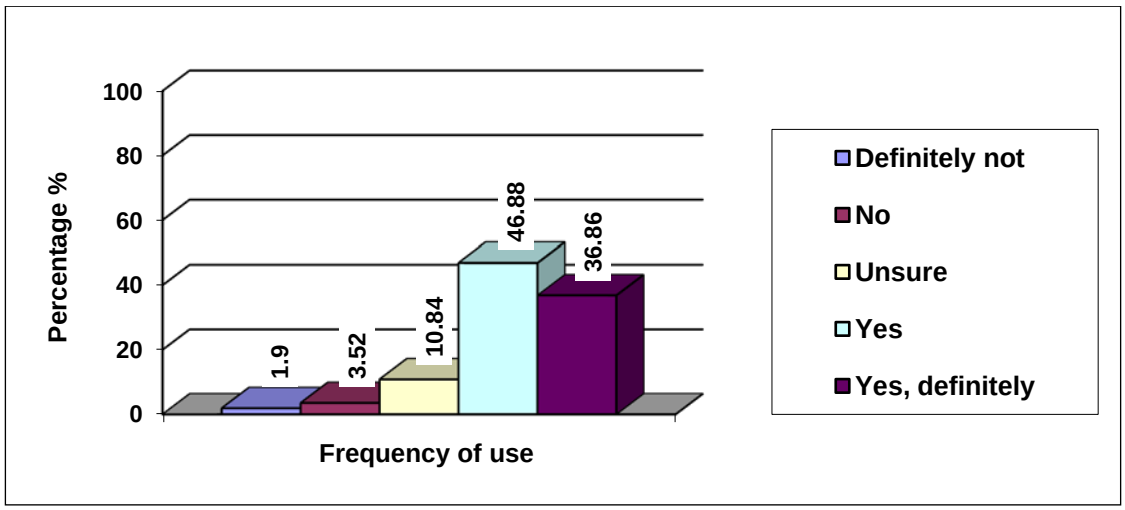

Figure 3.10 Frequency of use of a health care centre on or near campus

The results indicated that the majority of students (83,74%, *n* = 309) will, if available and necessary, use the proposed health care centre. By comparing these results with the results from Figures 3.8 and 3.9, it can be stated that 92,25% of those students whose medical expenses are not covered by a medical aid fund will use these services (see Addendum A, Section 2.). The health service here in question will therefore meet a health need among students on the Potchefstroom Campus of the NWU.

3.4 Health Care Availability

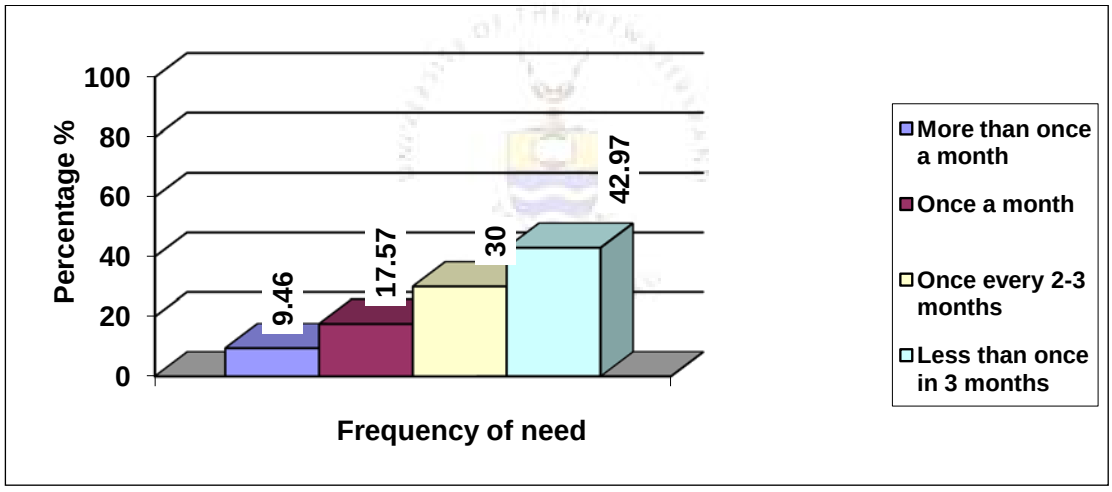

Figure 3.11 Frequency of the need of health services and/or products

The majority of respondents (57,03%, *n* = 211) require health care at least once in three months. Almost a third of these students (65 of the 211), need health care once a month. These results can be analysed in more detail, as follows.

Although the number of students who need health care more than once a month (9,46%, *n* = 35) is small in comparison to the numbers obtained for the other variables in this question, this number is representative of 1 023 students in the target population (10 811 full-time students). It can therefore be determined that 34 of these students need medical care on a single day, should they need medical care at the minimum of once a month.

17,57% (*n* = 65) of the students need medical care once a month. This number is representative of 1 900 students in the target population (10 811 full-time students). On a single day 63 of these students need medical care.

Students who need medical care once every two to three months represented 111 (30%) of the respondents. This percentage is representative of 3 243 students in the target population (10 811 full-time students). It can therefore be determined that 36 of these students need medical care on any single day.

42,97% (*n* = 159) of the students need medical care less than once in three months. This number is representative of 4 646 students in the target population (10 811 full-time students). It can be determined that 13 of these students need medical care on any single day.

By adding the above-determined numbers together, it can be concluded that an average of 180 students (34+97+36+13) would potentially need medical care on any single day. It should be kept in mind that this is a minimum number, since the students who need medical care more than once a month were included in the

calculations as needing medical care only once in a month. In addition, the students who need medical care less than once in three months were included in the calculations as needing medical care only once annually. It is possible that these students need medical care or service more than once a year. This indicates that there is a definite need for medical care on campus. See Addendum B Section 1 for more detail concerning which of these students do not have medical aid coverage.

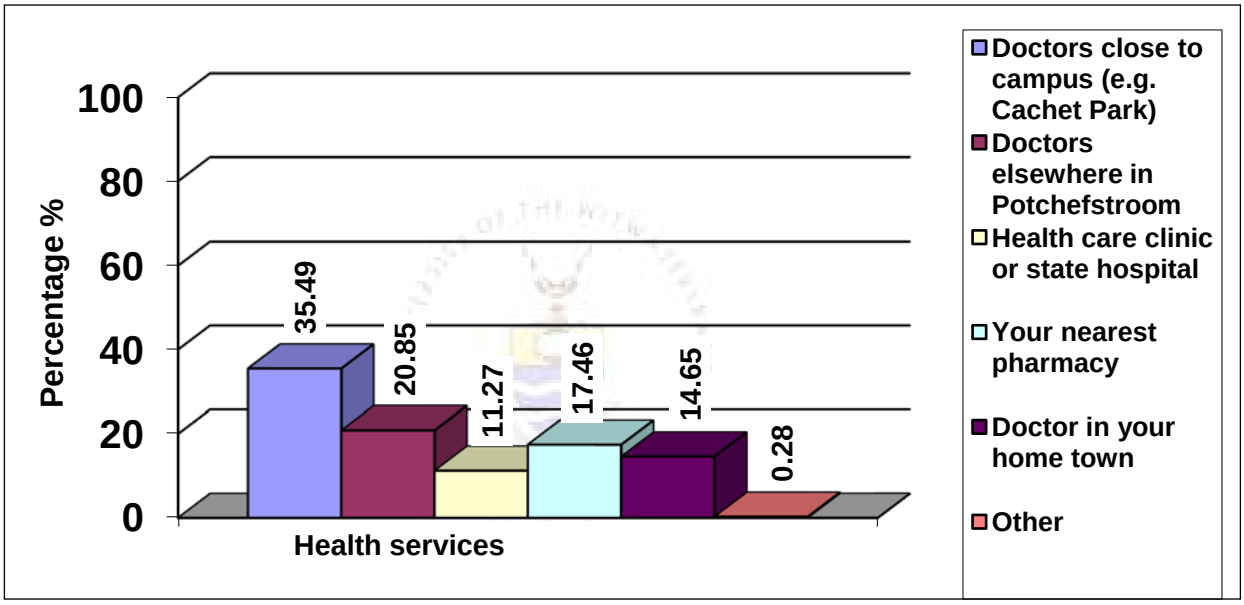

Figure 3.12 Type of health services most often used

These results indicated that the majority of students (85,07%, *n* = 302) most often use medical services located in Potchefstroom. Also, the majority of students (70,99%, *n* = 252) use doctors' services more often than pharmacy, clinic or hospital services. Fifty six percent of students (56,34%, *n* = 200) use doctors' services in town more often than the pharmacy, clinic or hospital services located in

Potchefstroom. A significant number of these students (63% of the 200) primarily use doctors' services close to campus (for example the Bult or Cachet Park).

Despite the likelihood that Potchefstroom is not the hometown for the majority of students, many of respondents indicated that they use the local health services. This could be an indication that students consider medical care as an important aspect associated to life on campus. If a health centre therefore were established on or near the campus, this aspect could be used in the marketing of the campus to prospective students. It is likely that parents will also feel less worried if they know that their children's medical needs could be taken care of within close proximity of campus activities.

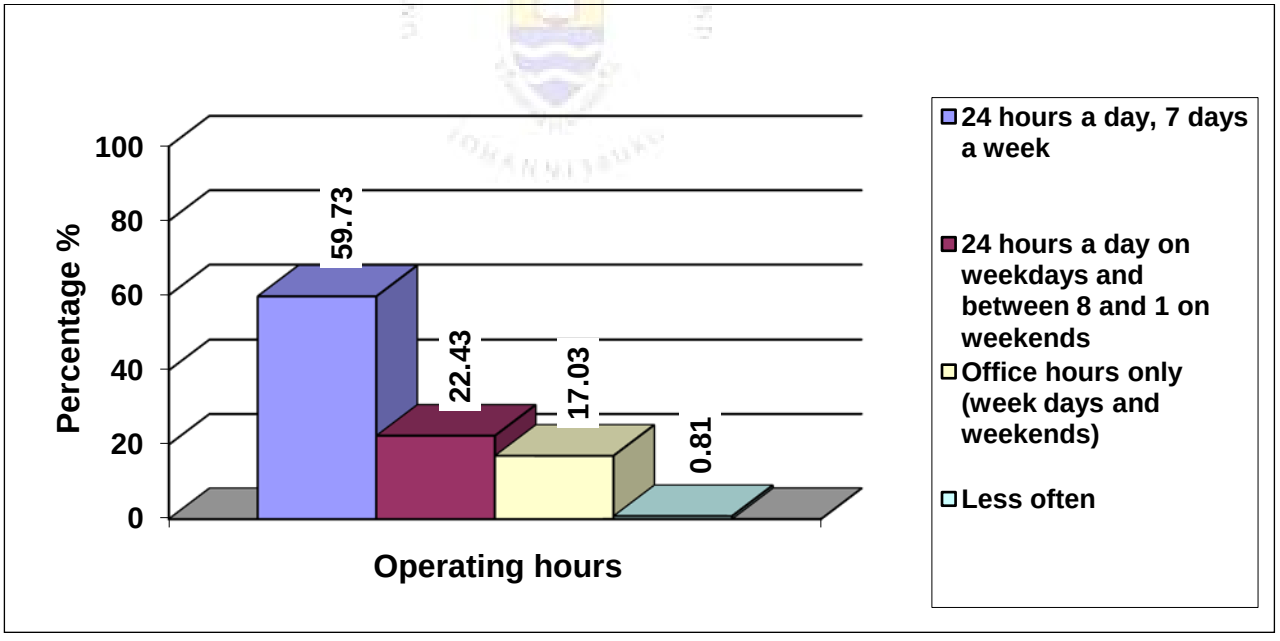

Figure 3.13 Proposed health centre operating hours

These results indicated that the majority of students (82,16%, *n* = 304) are of the opinion that health care services should be available seven days a week.

Of these students, 72,70% (*n* = 221 of 304) are of the opinion that the proposed health care services should be available for 24 hours during week days. These results suggest that, in order to provide effective service to the students, the health care services should be available as often as possible and on the most regular base possible. The ideal would be 24 hours a day, seven days a week.

3.5 Health Care Acceptability (Confidentiality)

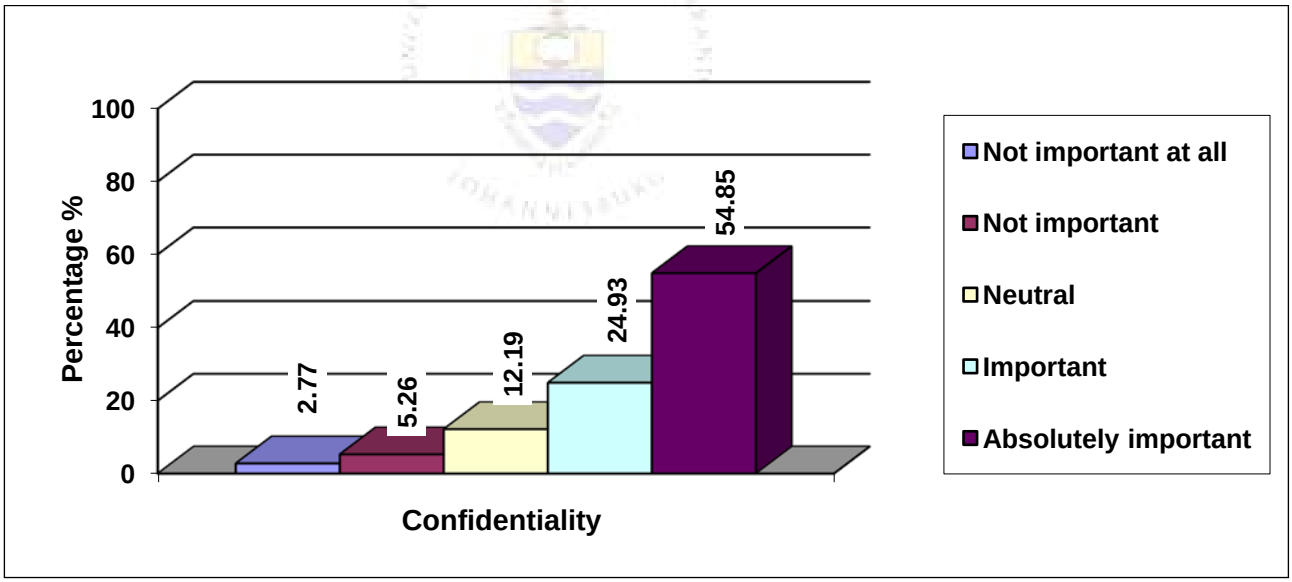

Figure 3.14 Confidentiality of visits to health care centre

These results suggested that a significant number of students (79,78%, *n* = 288) feel that privacy regarding their visits to the health centre should be upheld. This is an

important factor to consider when deciding on the location of the centre, since these results suggest that the students do not want other people to know that they are going to or have been to the centre. The centre should therefore be near to or on campus, yet situated in such a location that it does not attract much attention to the students visiting it.

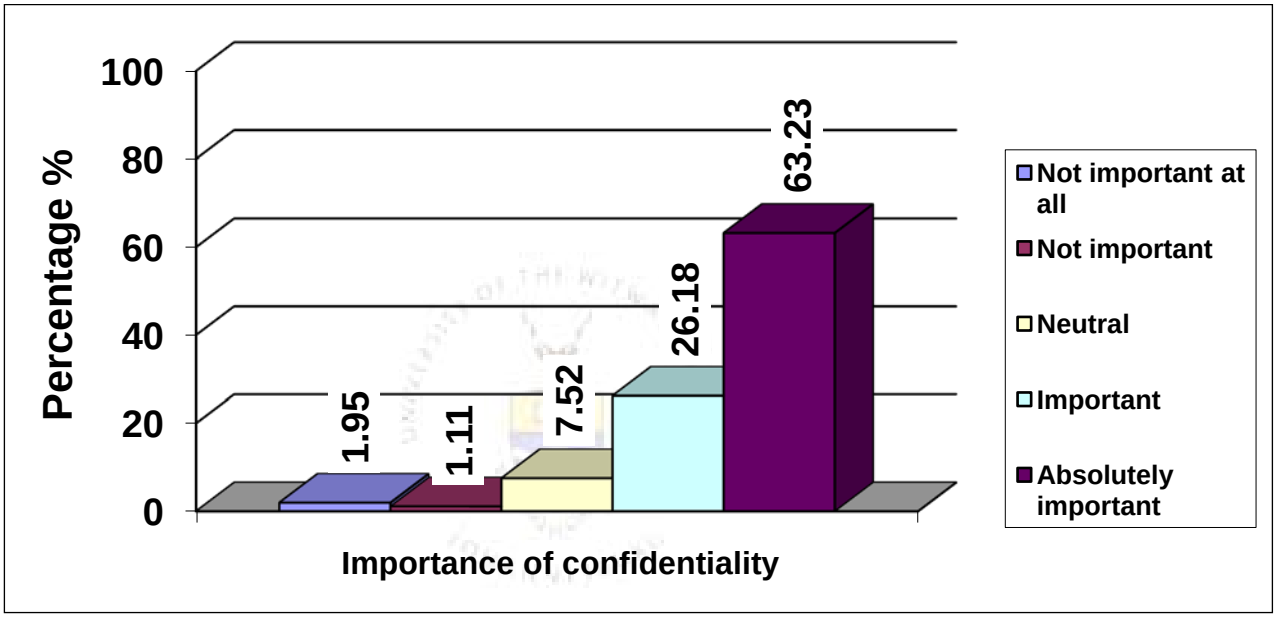

Figure 3.15 Importance of confidentiality of patient diagnosis

These results indicated that the majority of students (89,41%, *n* = 321) consider the confidentiality of their diagnosis at the health centre to be important or absolutely important. They even consider it more important than confidentiality with regard to visits to the centre. This suggested that staff working at the health centre should uphold this confidentiality at all times and that policies regarding the confidentiality of diagnoses should be strictly implemented and should be regarded of utmost importance.

3.6 Student Health Care Needs

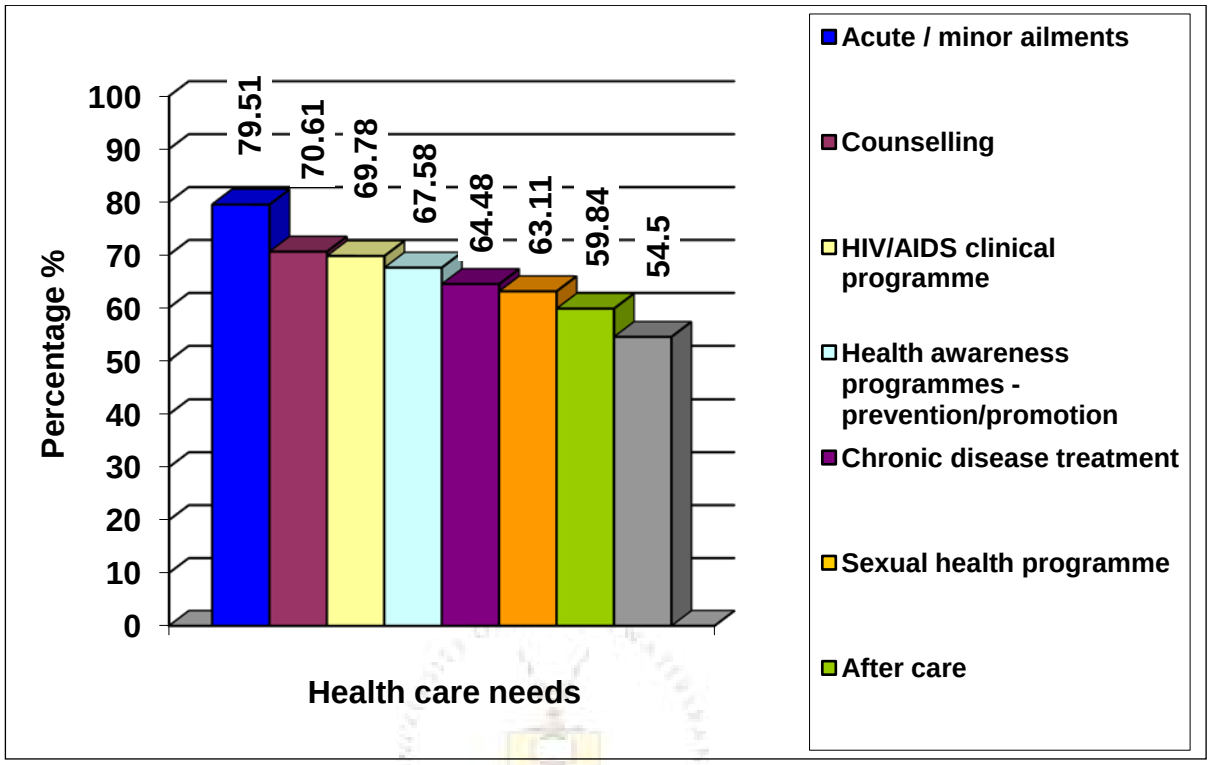

Figure 3.16 Students' most important health care needs and services required

The above figure compared the health care services and medication that students regard as important or absolutely important. This will help in prioritizing the scope of services and medication the health centre is to provide and the attention given to each in terms of budgeting, etc. In other words, the highest priority should be given to acute illness services and medication, followed by counselling services, HIV/AIDS programmes, and so forth.

3.7 Conclusion

The most significant finding is the students' need for an affordable and accessible health care facility with a high level of client confidentiality and quality of service. The survey included data of the financial needs of students regarding their primary source of financial assistance as an indication of their financial wealth. Access to finances specifically allocated for health care shows that almost half of the target population (47,54%) do not have the surety of access to a source of finances to cover their medical expenses. However, the majority of students (74,32%) are willing to contribute towards cost-effective and affordable health care and do not expect free health care.

Accessible health care services are also of major concern. The majority of students (68,38%) stay on or within walking distance from campus. No public health care service is near the campus.

The results indicated furthermore that students' have specific health needs and preferences. The highest priority of health care were given to acute care or minor ailments (79,5%) followed by counselling care (70,6%). A need for HIV and AIDS clinical programmes (69,8%) as well as health awareness and prevention programmes (67,6%) was indicated by the survey.

The majority of students (83,74%) indicated that the services of the proposed health care centre will be preferred and utilized if it is available and affordable. It is

estimated that an average of 180 students would potentially need primary health care on any single day.

4. CHAPTER FOUR: DISCUSSION

4.1 Introduction

"When health is absent; wisdom cannot reveal itself, art cannot become manifest, strength cannot fight, wealth becomes useless and intelligence cannot be applied" Herophilus of Chaledon (Greek physician 335 BC — 280 BC) (Williams and Buck, 1917).

The aim of this research is to investigate the health needs and preferences of students on the Potchefstroom Campus of the NWU and consequently their health risks to establish a primary health care service as a risk abatement strategy.

The findings of the study reveal that students have indeed a need for health care services that are affordable, accessible, available, and acceptable. Based on the principles of primary health care, this confirms their need for a primary health care service. Students are not only in need for curative care but also a broad spectrum of health awareness, prevention, and promotion programmes. Their HIV, AIDS, and sexual health needs indicate that students are indeed at risk for sexual transmitted diseases, unwanted pregnancies and other related conditions and illnesses. A definite need for counselling services are indicative of risks students perceive

dealing with personal, social, and academic growth that can be expected of any young developing person.

4.2 Limitations

In considering the findings, it is important to bear in mind some limitations of the study.

4.2.1 Time-frames and growth of the project

The researcher, in the capacity as HIV and AIDS co-ordinator of the campus, was actively involved in the needs analysis, the motivation for services, the setting up, and building of a new health centre and finally, the implementation of comprehensive primary health care services early in 2007. Taking in consideration that the needs analysis was done in 2005, it is a logical assumption that there was enormous and exiting development from the original concept until today, the beginning of 2010.

This process of being actively involved from "input" to "output/outcomes" as in a dynamic Logic Model could be seen as a kind of participatory action research but it was never intended as such.

4.2.2 Growth and reform of the primary health care approach

As such, the growth and reforms of the initial approach to the primary health care services could not really be seen as a limitation, but for the participating researcher, it created quite a problem in writing up the research report. What was perceived as pressing needs in 2005 became a reality in 2007, and in 2010 the primary health care centre will be operational.

In 2008, the World Health Report revisits the ambitious vision of primary health care as a set of values and principles for guiding the development of health systems. The World Health Report describes primary health care more in detail as "person-centred, comprehensive and integrated, the continuity of care, with a regular point of entry into the health system so that it becomes possible to build an enduring relationship of trust between people and their health-care providers" (WHO, 2008).

Guiding the planning, implementation, operating processes, growth, and consequently several success stories, are pertinent stakeholders such as the campus rector and the campus Health and Wellness Advisory Committee. Contributions from the National HEAIDS programme such as comparative audits as well as norms and standards of campus health services, were crucial determinants for success.

The opportunity of writing a funding proposal for a European Union Grant, through means of the HEAIDS programme, was an honour for the researcher as it resulted in a contribution of R3,3 million to the NWU. This was used specifically as seed funding

for the integration and mainstreaming of HIV and AIDS into the core business of the university, including comprehensive Health and Wellness services based on primary health care on all three campuses.

4.2.3 Limitations of the methodology

A mainly quantitative health needs and cross-sectional survey as the only means of evaluating a particular community's needs and expectations have limitations. There are several methods for conducting a comprehensive needs assessment particularly to incorporate users' views and to comply with the primary health care strategy of community participation. Population surveys offer the potential to obtain a representative sample of views and experiences of non-users as well as of users of services and are being widely used in the assessment of health needs and in priority setting. Assessing "needs" is difficult, as most variables identify "demand", which may in turn alter with supply of services (Wright, Williams and Wilkinson, 1998). There are however several important methodological criticisms of surveys of users' views, their needs and preferences (Hopton and Dlugolecka, 1995:1237).

Firstly, an uncritical social marketing approach may lead to more services for the healthy majority, with those most in need being least able to influence findings. Equity, implicating the differences of health status of students, as well as equity in the distribution of benefits and burdens, would pose a great challenge. Looking at minority subgroups within a sample has been proposed as one way of addressing this issue (Fitzpatrick, 1991:1130). There is however a prior issue of

comprehensiveness. Both the method and the content of the questionnaire may exclude people with important needs, and the danger exists that only the needs that have been formally assessed are considered in the planning process (Hopton and Dlugolecka, 1995:1237). A definite distinction should have been made in the study's questionnaire between "healthy" and "unhealthy" students to evaluate their different needs and preferences.

Discussing the outcomes of the survey from an equity point of view poses great challenges. Methodological efforts to ensure equal participation in the processes of assessing health needs and of priority setting do not promote equity. To promote equity some opinions may need to be given greater weight (Hopton and Dlugolecka, 1995:1237). This issue was not investigated in great depth, as the survey was mostly quantitative.

Secondly, the respondents may not understand the nature of the services on which they are asked to comment or the key issues in evaluating or prioritizing service provision. Research has pointed to the difficulties patients may have in evaluating service provision if they have no knowledge of how things could be different (Hopton and Dlugolecka, 1995: 1237). This scenario could be very true to the period when the survey was done on campus. At that point in time, there were no public health care services except for several private medical practices, pharmacies and a private hospital near the campus. The nearest public primary health care clinic is ten km from campus and transport is not readily available. Furthermore, the generally white student population of the Potchefstroom Campus has no culture of accessing public clinics for their health care needs. In addition, for the university to provide free health

care to students in context of the transformation process and the subsequent financial constraints is a contentious issue.

Reviewing the limitations of the measurement tool, the researcher finds a probable solution in participatory action research. This research method could have given more qualitative results and could have enhanced the outcome of the survey.

The rapid participatory appraisal method provides a unique means of involving the community in identifying its own health-related needs, important both as a democratic goal and as a potentially useful means of achieving improvements in health (WHO, 2002). It can provide timely, relevant information, placing such needs within the community's social, economic, and cultural context. As an action research method it can facilitate change more than traditional methods of health needs assessment can, and a dynamic process of community health promotion can be achieved through both intervention and evaluation (Brown, Lloyd and Murray, 2006).

This method would have included focus group discussions and semi-structured interviews with key informants, a discourse analysis of relevant minutes and processes of stakeholders' meetings and finally a cross-sectional and descriptive needs survey.

However, time and financial constraints as well as the limitations of the scope of a research report for degree purposes confined the researcher to the triangulation of methods, namely, a cross-sectional descriptive survey and needs analysis as data collection tool. The researcher wants to emphasize that the data collection tool used

in this study was only part of a comprehensive investigation to give crucial evidence of students' health needs and preferences. The results were used as one of the driving forces to motivate the NWU to invest in a primary health care centre with comprehensive services.

4.2.4 Limitation of questions

In retrospect, taking in consideration the growth, re-evaluation and implementation of findings, the researcher finds the design of the questions as too restrictive and poses certain current limitations.

This tool focused only on the principles underlying primary health care and a more in-depth analysis would provide results that are more valuable. As the project of setting up a primary health care service developed during the past four years, the quest for more comprehensive questions arose. However, one of the recommendations of the study is to conduct an in-depth needs assessment, based on an ecological approach, which is aligned with the 2008 World Health Reports' primary health care reforms.

4.3 Major Findings in Context of the Literature

4.3.1 Need and utilization of health care service

The HEAIDS programme's needs analysis shows that 86% of all universities in South Africa offer primary health care services to their students. The most important finding of the researchers' health needs analysis is that the majority of students (83,74%) will use, if available and necessary, the proposed health care centre. Furthermore, it can be stated that 92,25% of those students whose medical expenses are not covered by a medical aid, will use these services.

The researcher was concerned that the respondents would not understand the full concept of primary health care services, but by structuring the questions around the principles of primary health care, this was not a valid concern. Another interesting fact is that the majority of students (70,99%) use doctors' services more often than pharmacy, clinic, or hospital services. A significant number of these students primarily use doctors' services close to campus (for example the Bult or Cachet Park). Students do not have a real choice to visit primary health care services, as there is no such service near campus. Potchefstroom, as a small town, have very limited public transport and the mostly white student population generally do not make use of public transport or public health clinics. These are perceived as not reliable and of inferior standard.

The researcher argues that the student population between the ages of 18 and 23 is a very "healthy segment of the population" (United Nations, 2004) and therefore

does not need to visit a doctor for minor ailments and reproductive health services. Giving the accessibility to primary health care as described, the respondents were therefore unaware that a different, more cost-effective type of service could answer their health needs.

When students do suffer poor health, it is often a result of the effects of accidents, injuries caused by armed conflict, violence, alcohol abuse and substance use, HIV and AIDS and tuberculosis (United Nations, 2004). This statement is supported by Deutsch (1996) and the Centre for Disease Control by adding that among Americans under twenty-four years of age, almost 70% of deaths are caused by the above-mentioned health impediments (Deutsch, 1996).

4.3.2 Access to health care

Another important finding that is a continuation for the argument of the need for a health service is the accessibility of the services in question. The Declaration of Alma-Ata (1978) states that essential health care must be made universally accessible to all people. South Africa endorses the Declaration of Alma-Ata and committed itself in particular in the Constitution which states: "… everyone has the right to have access to a health care service" (1996).

The study shows that the majority of students (68,38%) either stay within walking distance from or on campus. This indicates that if the proposed health centre is established on or near campus, it will be within walking distance for the majority of

students. In addition, the majority of students (71,58%) regard the distance between the location of the health centre and the campus to be important or absolutely important. The nearest primary health care public clinic is nearly 10 km from the campus and not readily accessible to most students.

The researcher argues that the university is at risk for not providing any means of access to basic health care services. Accessibility does not need to be in the form of a physical health facility but can be arranged transport or special financial arrangements with the medical practitioners in the vicinity, including a fund for needy students.

In addition, the researcher debates that, according to Article 27(2) of the South African Constitution, access to health care services is a right under the Bill of Rights. The South African National Health Bill revolves around equity, quality and access to health care (1996).

Social justice and the right of "better health for all" constitute important parameters for governing the health sector (WHO, 2008). Informing management of the university about the risks is based on the premise of "social justification" as the findings of the study is rational, evidence based and an anticipatory response to the students' health needs. This is measured against internationally adopted social expectations for health care.

The researcher confirms that students' basic human rights of access to health care have not been met and this implies inequity.

4.3.3 Finances

Equity also implicates the differences between students in the distribution of burdens, for example payment for health care based on ability to pay. The students' primary source of financing their studies as an indication of financial wealth and, consequently, financial need, is surveyed. The survey results indicate that the greatest singular form of primary finance is the respondents themselves and/or their parents (38,95%). However, for the majority of students (57,46%) the primary source of finance does not come directly from their own or their parents' means. For these students funding is derived from scholarships, study loans or a combination of both.

These findings are significant in that they indicate the ability and/or willingness of the students and/or their parents to spend money in general. Thus, that a student's study finances do not come directly from their own or their parents' means may indicate that they do not have sufficient funds for this and thus may have a need for cost-effective and affordable health care. However, taking in consideration the proposed new reforms of the World Health Report (WHO, 2008), universal coverage strives towards fair and effective systems which all people must have access to, according to need and regardless of ability to pay.

Access to finances specifically allocated to health care shows that almost half of the target population (47,54%) does not have the surety of access to a source of finances to cover medical expenses. This figure includes students who do not belong to a medical aid scheme or who are unsure whether their medical aid scheme will cover all medical expenses. This suggests that almost half of the students will find

value in the proposed health centre if it provides affordable and cost-effective medical care.

The finding that the majority of students (74,32%) are willing to contribute towards cost-effective and affordable health care and do not expect free health care is significant. This includes the majority of those whose medical expenses are not covered by a medical aid scheme. R50 or less, preferably less, is considered a reasonable consultation and/or medication fee.

Currently, in 2010, all services and medication is free of charge at the health care centre on the Potchefstroom Campus. This situation emanate from the fact that it is a new service that began in March 2008 with 50 clients a month and ended in 2009 with an average of 600 clients per month. It was decided to implement the service at no charge to determine the real needs and to do costing of services retrospectively. There could be a breakdown for certain services that include laboratory costs such as Pap smears, but the idea is to charge students an administration fee only for certain interventions. Needy students will be evaluated by the social worker and will have access to free health care irrespective of laboratory fees and doctor's consultation fees.

The method of payment is also posing a problem for various reasons and from 2010 students can pay with their student cards as they do for food at the cafeterias on campus. The management of the health care centre compared administration fees with other campuses and concluded that the amount is very particular to circumstances of specific campus populations. Fees vary from R10 administration

fee at the Mafikeng Campus to R200 at the University of the Free State that includes medication and a visit to a private doctor.

4.3.4 General health needs

The results indicate that students have specific health needs and preferences. The highest priority of health care is given to acute care or minor ailments (79,5%) followed by counselling care (70,6%). The survey indicates a need for HIV and AIDS clinical programmes (69,8%), sexual health services (63,1%), as well as health awareness and prevention programmes (67,6%).

Specific reasons for consultation at the new Health Care Centre were health problems such as depression, stress and anxiety, minor ailments such as upper respiratory tract infections, all aspects of reproductive health, HIV and AIDS testing (this implies pre-test and post-test counselling), and treatment of STIs. These findings correlate with the report van the University of Pretoria (Van Papendorp, Coetzee and Koorts, 2007). Moreover, in Canada, specific risk behaviours relating to nutrition and weight status, episodic heavy drinking, use of condoms, and psychological distress were identified (Taylor et al., 2009).

This is very similar findings from the latest data from the National College Health Assessment (NCHA), an on-line health survey at the University of Central Oklahoma. This survey highlighted a number of health risks encountered on their campus: 29% of students report no vigorous exercise during the week, 6% of students report having driven a vehicle after consuming five or more servings of alcohol, 11% of

students have had unprotected sex as a consequence of alcohol consumption, 41% of students have felt so depressed they found it difficult to function, and 28% of students report never using a condom during sexual intercourse. In this survey, students reported having experienced negative academic consequences such as receiving a lower grade, dropping a course, or receiving an "incomplete" as a result of the above-mentioned health-related issues (University of Central-Oklahoma, 2009).

Focussing on young student's health risks and lack of health responsibility, is a similar study in Hong Kong (Lee and Loke, 2005:215). This study was done to examine health-promoting behaviours and psychosocial well-being of university students in Hong Kong. Relatively few university students had a sense of health responsibility (6,5%–27,1%), engaged in any form of physical activity (31,2%) or exercised regularly (13,8%). Less than half ate fruit (35,2%) and vegetables (48,9%) every day. Positive personal growth was reported by 50,6% of the students; 42,5% used stress-management skills and 74,1% rated their interpersonal relationships as meaningful and fulfilling.

Globally reviewing the health-related needs and associated risks, the conclusion can be drawn that substance abuse (alcohol, drugs, and tobacco); counselling needs pertaining to anxiety, depression, and relationships; reproductive health needs; health needs pertaining to HIV, AIDS, and STIs; injuries and accidents are the most frequent in a "healthy" young population. These are the most relevant health needs and risks that the health care centre at the Potchefstroom Campus should address.

4.3.5 Health promotion

A number of students (67,6%) at the Potchefstroom Campus indicated that health awareness, including health promotion and prevention activities, was important to them.

Young people are at a dynamic transition period of growth and development that bridges childhood and adulthood. This is characterized by rapid, interrelated changes of body, mind, and social relationships (United Nations, 2004). At this stage of physical, psychological, and sexual development, young people gradually assume responsibility for their own health. Their health-promoting practices and psychosocial well-being not only affect their immediate health status but also have long-term health consequences. Many young people engage in a wide range of unhealthy habits (such as inadequate nutritional intake, rest, and exercise) and risk behaviours (such as tobacco and drug use) that lead to adverse health outcomes. Many of these are associated with serious health problems such as cardiac or respiratory diseases, cancer, complicated pregnancies or deliveries, and psychological disorders in later life (Walker and Townsend, 1999:170).

It is far more difficult for adults to change unhealthy habits adopted in their youth. If health professionals are to enhance health-promoting behaviours and well-being in the community, then health-promoting efforts should be targeted at young people. Many of the factors that contribute to health risks in older adults are preventable if identified and changed at an early stage. Early interventions can alter behaviour patterns that would place young people at health risk in later life (Lee and Loke,

2005:218). Promotion of healthy behaviours among young people is therefore essential. Young people should be challenged to take responsibility for their personal health and well-being (Lee and Loke, 2005:219). The researcher supports these challenges and agrees with Lee and Loke that health-promoting behaviours are activities that are an integral part of an individual's lifestyle and determinants of health status. It includes taking charge of personal health responsibilities, taking part in physical activities, and maintaining good nutritional habits. A healthy individual should also have a balanced development in physical, emotional, and social well-being besides cognitive, moral, and aesthetic dimensions. Components of psychological well-being include spiritual behaviour, interpersonal relations, and stress management. For the researcher it is of uttermost importance that this holistic view should be upheld in health promotion activities on campus.

Students of the Potchefstroom Campus, as most youth worldwide, are engaging in risk behaviour that is detrimental to their health and, consequently, to their academic performance. Recognizing health awareness, promotion and prevention as a need is indicative of some sense of self-awareness and an awareness of some negative influences of the campus environment in which they live, learn and play. Setting up a "people centred service" as the World Health Report (WHO, 2008) recommends, more resources should be spent on prevention and promotion. This investment could cut 70% of the burden of disease. The researcher concludes that in a relatively healthy campus community, the return on investment could be even more impressive when implementing such programmes extensively.

4.4 Summary

The HEAIDS programme's needs analysis shows that 86% of all universities in South Africa offer primary health care services to their students. The results of the health needs analysis on the Potchefstroom Campus clearly indicate the students' need (83,74%) for an affordable and accessible health care facility with a high level of client confidentiality and quality of service. The analysis also indicates a need for treatment for minor ailments, counselling services, HIV and AIDS as well as promotion programmes.

Limitations of the study were that the time-frame and growth of the project exceeded the expectations of the researcher. Reforms in the philosophy of primary health care took place, thus implicating a need for a more applicable, comprehensive questionnaire. The methodology is also limited to mostly quantitative questions but it should be taken into consideration that it is within the scope of practise of a research report.

The researcher concludes that, based on the major findings, the proposed solution to the students' health needs and risks are based on the formulation of the three pillars of health policy World Development Report (2006) and the World Health Report (WHO, 2008). The solution would include a comprehensive, integrated primary health care programme that promotes behaviour change, the making of informed choices, negotiating safe behaviour and including the influence of environmental determinants on health. "This would be an affordable choice and vehicle of service delivery in order to attain basic human rights" (United Nations, 2004).

5. CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

"Health, in its broadest sense, serves to support students and create learning environments" (Sacher et al., 2005). What can institutions of higher education do to become more effectively engaged in the well-being of youth, in the community and on campus?

When the survey was conducted, there were no health care services available for staff or students on the Potchefstroom Campus of the NWU. In the past, several attempts were made to convince management to act upon the health needs and consequently the health risks of the campus community. The lack of finances and the notion that the health of the campus community is not the core business of a university are reasons for not providing some form of health care service.

The first research objective of reviewing the principles and values of primary health care directs and locates the structure of the research measurement tool and the findings of the study.

What emerge from the literature, especially the World Health Report (WHO, 2008), is that the students' environment and socio-economic status play a crucial role in their general health and consequently in their academic success. The study's findings substantiate the role of accessibility and affordability in rendering health care services. The primary health care reforms (WHO, 2008) promote the concept that health goes well beyond a narrow medical model. This report recognizes that many

root causes of ill health and disease lie beyond the control of the health sector. A broad whole-of-society approach must tackle these causes. Doing so would meet several objectives: better health, less disease, greater equity, and vast improvements in the performance of health systems. The World Health Organization (2008) believes that all policies throughout governments should integrate health. This would result in a comprehensive, integrated primary health care programme that promotes behaviour change and includes the influence of the environmental determinants on health. At the NWU, health-related policies must be aligned with and mainstreamed into the core business to maintain service of excellence and to remove inequity and inequalities between health-care services on different campuses of the NWU and other universities.

The researcher is also of the opinion that the sustainability of campus health services requires leadership from the university to negotiate and steer a health system that is fair, efficient and effective (WHO, 2008). A committed management structure is required by all multidisciplinary and transdisciplinary stakeholders.

The values of social justice, the right to better health for all, community participation, and solidarity guide this study. Participation of the student community through the completion of questionnaires strengthens the notion of adhering to the values of primary health care. The researcher of this study realized that "community-based development empowers the students to develop community cohesion and confidence, increase their ability to identify, analyse, and prioritise their needs, and organize the resources to meet their health needs" (Mubyazi and Hutton, 2003).

The implementation of the findings of the study confirms that social justice and better health for all are met. For the first time in the history of the Potchefstroom Campus of the NWU, primary health care services are available from March 2008 to the campus community.

The second research objective was to examine students' health needs, risks and services. Because youth is a relatively healthy segment of the population, their health needs have generally been overlooked, except for their reproductive health. When they do suffer poor health, it is often because of the effects of accidents, injuries caused by armed conflict, violence, substance abuse, HIV/AIDS and tuberculosis. Extreme poverty and malnutrition make some youth vulnerable to disease. Accidents and injuries are major causes of youth morbidity, mortality, and disability (United Nations, 2004).

The assessment of health needs is a contentious area. Considerable confusion exists about the meaning of needs. This confusion stems from the different imperatives that influence the relationship between "needs" and the provision of health care services.

The public health imperative is concerned with total population needs and the development of strategies based on prevention and health promotion (Bowling, 2002:55). The primary health care reform of 2008 that advocates "people-centred services" with health systems reoriented to respond better to "people's needs through delivery points embedded in communities", confirms this imperative (WHO, 2008).

The economic imperative is concerned with marginally met needs and the most efficient ways of meeting needs (Bowling, 2002:55). Universal coverage is described as fair and efficient health systems where all people must have access to health care according to need and regardless of ability to pay (WHO, 2008). The argument of the management of the NWU, that health care is not their core business, needs to be addressed. Recommending the implementation of a primary health care centre from an ecological viewpoint, the researcher suggests measuring the return of investment of health services rendered. The premise of "a healthy environment has the greatest impact on good health and health and education success is interdependent" (Barnes et al., 2004), is crucial in arguing that student health is indeed the core business of an institution of higher learning. Academic success is, after all, a core function of a university. More research is needed to generate better evidence as a basis for health economic decisions.

Bowling (2002:55) supports Jones' description that a political imperative is one of reconciling a welfare system to the demands of free-market ideology. It is also important to distinguish between the need for health and the need for health care services. Health care services are one way of satisfying the need for health. Arguments by several researchers and supported by Bowling (2002:56), state that need is not an absolute concept, but is relative and dependent on socio-economic, cultural, and political factors as well as supply side factors. Post-apartheid South Africa endorses the Declaration of Alma-Ata and commits itself to ensure equitable access to health care. This is reflected in the Constitution, which states: "everyone has the right to have access to health care" (Constitution of the Republic of South Africa, 1996). The researcher recommends an ecological viewpoint of primary health

care as ecological studies aim to assess exposure (for example "risk") and disease or mortality (Bowling, 2002:68). This survey clearly indicates that the university is at risk for not having accessible health care services for students.

In South Africa, campus health services should be seen in the context of the HIV and AIDS epidemic, as it is one of the biggest drivers of health-seeking behaviour, morbidity, and mortality of South African people. The findings of this study describe that nearly 70% of students indicate a need for a HIV and AIDS programme. Vreken and Rens (2001), in a study on the orientation of values of students, describe students at a high risk to being infected with HIV and AIDS. This study describes high-risk behaviour as "excessive drinking, and having sex without condoms". Strydom supported these findings in 2002.

The researcher concludes that students either are aware of their own high-risk behaviour or they perceive that their peers are engaging in high-risk behaviour, as they request that the proposed health care centre should execute HIV and AIDS services. Students of the NWU have the right to HIV/AIDS prevention, treatment, care, and support, taking in consideration that these services are given by the majority of tertiary institutions in South Africa and are supported by legislation. Social justice and the fundamental right to health care need to be honoured.

The third research objective was for the researcher to recommend appropriate health services based on student health needs and risks. Evidence from the SAUVCA audit in 2003 confirms that most higher education institutions have on-site primary health care clinics or health services. The researcher agrees with the findings of the audit

that the Potchefstroom Campus of the NWU has failed dismally in providing any health services to staff and students (Higher Education HIV/AIDS Programme, 2004).

The findings of this study indicate without doubt that the university is in need of health services based on primary health care principles such as equity, accessibility, availability; effectivity, and efficiency."This would be an affordable choice and vehicle of service delivery in order to attain basic human rights" (United Nations, 2004).

The researcher also argues that the university needs to create an environment for the students to practice healthful behaviour, to make risky behaviour costly, and to limit the opportunities for risky behaviour. Policies underpinning an ecological approach to the health issues of youth would assist in alleviating the risks thereof. "This approach focuses on the connections among the determinants of health, education and behaviour of the individual and the physical and social environmental structure" (Sacher et al., 2005). It also explores equal access and utilization of quality health care whereby the principles of primary health care would guide such a service. Eventually this approach will determine whether the youths' basic human rights of access to health care have been met (Constitution of the Republic of South Africa, 1996).

Aligning the outcomes of the study with the arguments of the university regarding "core business and student health", the researcher used the concepts of primary health care from an ecological viewpoint to imply that students, who are unwell, are a management risk to the university. Most important Barnes et al. (2004) argues that health and learning is interdependent, where health is influenced both by individual

and environmental influences. This importance is further substantiated by Deutsch (1996) summarizing that health is participatory and profoundly social, with important emotional, mental, moral, and spiritual dimensions.

The researcher recommends using the successful Healthy Campus Model (University of Central-Oklahoma, 2009) that is based on an ecological approach, in order to strengthen the core business of the university. Health, through its influence on learning, advances student success.

The Healthy Campus Model is based on primary health care principles and values, which in turn refer to the health needs and expectations of people. Answering to these would assist in alleviating the burden of disease and the risks thereof.

Primary health care and the Healthy Campus Model are related in supporting the millennium development goals and the wider goal of universal access to health through acceptable, accessible, appropriate, and affordable health care also including equity, availability, effectivity and efficiency. Over and above, the Healthy Campus Model also focuses on the non-medical determinants of health such as behavioral choices, social circumstances, environmental conditions and the physical environment. This ecological viewpoint implies that if implemented optimally, the medical and non-medical determinants of health could measure and manage academic mortality and morbidity (Grizzel, 2005). By not only focusing on "put people at the centre of health care" (WHO, 2008), the ecological model with its non-medical health determinants, measure the impact on academic success. This is the core business of an Institution of Higher Education**.**

The researcher argues that it is a management risk by NOT responding to the students' health needs. The absence of a health care service attributes to the inauspicious health environment of the campus. This may have a negative influence on the throughput rate of students with a spread of consequences on the financial income of the NWU.

Taking the higher education sector response to HIV and AIDS into perspective, justice and fairness need to be strategically visualised to those students of the NWU who are affected and infected by the pandemic. Implementing health care services on campus will not only alleviate the burden of HIV and AIDS but other health and socially related illnesses as well.

The researcher is of the opinion that by establishing a health care centre on the Potchefstroom Campus will address equity and transformation and assist the merger process of the former universities.

The significance of this study is further expanded by the implementation of the notion of community participation. The researcher of this study realized that 'community-based development empowers the students to develop community cohesion and confidence, increase their ability to identify, analyse, and prioritise their needs, and organize the resources to meet their health needs' (Mubyazi and Hutton, 2003). The process of students participating in the needs analysis to determine their health needs and service preferences, in order to set up a youth friendly health service, is a risk reduction practise.

The significance of this study will go beyond the health needs and risks of the student community. By providing health care services, the university will reap the benefits in terms of their marketing value for prospective students ensuring their position as a value driven institution based on quality of care, efficiency and equity (North-West University, 2009).

The researcher perceive the significance in this study from an ecological viewpoint stating a healthy environment has the greatest impact on good health and that health and educational success are interdependent. By addressing these health and safety problems openly and consistently, the university can deliver a competent graduate that can face the challenges of the workplace in a holistic manner.

In sum, educational success is a strategic priority and the core business of all institutions of learning. Establishing a primary health care service and acting on the health needs of the students is a risk abatement strategy to surmise educational success.

Further recommendations would be a follow-up survey to determine the top ten health impediments on campus in order to measure and manage health and academic related challenges and successes.

REFERENCES

ALMA-ATA. 1978. Declaration of Alma-Ata. Alma-Ata, USSR: World Health Organisation. (International Conference on Primary Health Care, 6 - 12 September 1978.)

BARNES, A.J., GORDON, K.A., SAMUELS, S., LOGATTO, L. AND POORE-BOWMAN, B. 2004. Healthy campus 2010: putting concepts into practice. (Presention to the Mid-Atlantic College Health Association, Pennsylvania.)

BEAGLEHOLE, L. AND BONITA, R. 1997. Public health at the crossroads: achievements and prospects. Cambridge: Cambridge University Press. 305 p.

BOOYSEN, F.R. 2003. Urban-rural inequalities in health care delivery in South Africa. *Development Southern Africa*, 20(5):659-674, Dec.

BOUARE, O. 2009. Modeling contextual determinants of HIV/AIDS prevalence in South Africa to inform policy. *African journal of reproductive health,* 13(3), Sept. Available at SSRN: http://ssrn.com/abstract=1395698

BOWLING, A. 2002. Research methods in health: investigating health and health services. 2nd ed. Philadelphia: Open University Press. 486 p.

BROWN, C.S., LLOYD, S. AND MURRAY, I.S.A. 2006. Using consecutive rapid participatory appraisal studies to access, facilitate and evaluate health and social change in community settings. *Biomedcentral public health,* 6(68).

BURNS, N. AND GROVE, S.K. 2009. The practise of nursing research: appraisal, synthesis and generation of evidence. 6th ed. London: Elsevier Saunders. 750 p.

CENTRE FOR HIV/AIDS NETWORKING. 2002-2005. Campus health clinic (PMB) - University of Natal. http://www.hivan.org.za/details.asp?id=864&netid=426 Date of access: 9 June 2005.

CRAMPTON, P. 1999. Third sector primary health care. Wellington, New Zealand: Department of Public Health, Wellington School of Medicine Health Services Research Centre. (Report prepared for the New Zealand National Health Committee). 39 p.

CRESWELL. J.W. 2008. Educational research: planning, conducting and evaluating quantitative and qualitative research. 3rd ed. London: Pearson Education. 670 p.

DENNILL, K., KING, L. AND SWANEPOEL, T. 1995. Aspects of primary health care. Halfway House: Southern Book Publishers. 146 p.

DEUTSCH, C. 1996. Higher education & the health of youth. *Liberal education,* 82(5):50-54.

DEUTSCH, C. 2000. Common cause: school health & school reform. *Educational leadership,* 57:8-12.

DEUTSCH, C. AND MERSETH, K.K. 2002. Beyond the curriculum: preparing teachers for student health issues. Atlanta: American Association of Colleges for Teacher Education and Centres for Disease Control and Prevention. (Classroom teacher guides.)

DU PLOOY, G.M. 2002. Communication research: techniques, methods and applications. Lansdowne: Juta. 384 p.

FITZPATRICK, R. 1991. Surveys of patient satisfaction: II. Designing a questionnaire and conducting a survey. *British medical journal,* 302:1129-32.

GRIZZEL, J. 2005. The university learning mission, college health and the health agenda. http://www.naspa.org/ Date of access: 9 June 2005.

HIGHER EDUCATION HIV/AIDS PROGRAMME. 2004. HIV and AIDS audit: interventions in South African Higher Education. Pretoria. http://www.heaids.org.za/ publications/download_audit.htm Date of access: 28 October 2004.

HIGHER EDUCATION HIV/AIDS PROGRAMME. 2008. Keeping the promise on HIV/AIDS - the higher education sector takes stock. Pretoria: HEAIDS Programme, Higher Education South Africa.

HIVAN. 2002–5. Centre for HIV/Aids networking, HIVAN [Online]. University of Natal. Available: http://www.hivan.org.za/details.asp?id=864&netid=426 Accessed: 9 June 2006.

HOPTON, J.L. AND DLUGOLECKA, M. 1995. Patients' perceptions of need for primary health care services: useful for priority setting? *British medical journal,* 310:1237.

JORDAN, J., DOWSWELL, T., HARRISON, S., LILFORD, R.J. AND MORT, M. 1998. Health needs assessment: whose priorities? Listening to users and the public. *British medical journal,* 316:1668-1670, May.

LEE, R.L.T. AND YUEN LOKE, A.J.T. 2005. Health-promoting behaviors and psychosocial well-being of university students in Hong Kong. *Public health nursing,* 22(3):209-220.

LETHBRIDGE, J. 2004. Combining worker and user interests in the health sector: trade unions and NGOs. *Development in practice*, 14(1&2):234-247, Feb.

LIU, X., HOTCHKISS, D.R., BOSE, S., BITRAN, R. AND GIEDION, U. 2004. Contracting for primary health services: evidence on its effects and a framework for evaluation. Bethesda, Md.: Abt Associates.

MUBYAZI, G. AND HUTTON, G. 2003. Understanding mechanisms for integrating community priorities in health planning, resource allocation and service delivery: results of a literary survey. Harare: NIMRI, STI and EQUINET. (*EQUINET* discussion paper number 13.) 55 p.

NORTH-WEST UNIVERSITY. 2006. North-West University HIV and AIDS policy. Potchefstroom: North-West University.

NORTH-WEST UNIVERSITY. 2009. North-West University institutional plan 2010 - 2012. Potchefstroom: North-West University.

OLIVIER, E. 2002. MIV/Vigs: die navorsingsuitdaging vir universiteite. (Presentation as part of the HIV/AIDS in the Workplace Seminar delivered on 15 June 2002.) Potchefstroom. 10 p.

PETTITFOR, A.E., REES, H.V., STEFFENSON, A., HLONGWA-MADIKIZELA, L., MACPHAIL, C., VERMAAK, K. AND KLEINSCHMIDT, I. 2004. HIV and sexual behaviour among South Africans: a national survey of 15-24 year olds. Johannesburg: Reproductive Health Research Unit, University of the Witwatersrand.

ROSS, D., DICK, B. AND FERGUSON, J., *eds*. 2006. Preventing HIV/AIDS in young people: a systematic review of the evidence from developing countries. Geneva: World Health Organization. (UNAIDS Interagency Task Team on Young People. WHO technical report series 938.) 348 p.

SACHER, L., MOSES, K., FABIANO, P., HAUBENREISER, J., GRIZZELL, J. AND MART, S. 2005. College health: stretch your definition of the core concepts, assumptions and practices. (National Association of Student Personnel Administrators Conference.)

SHISANA, O., REHLE, T., SIMBAYI, L.C., ZUMA, K., JOOSTE, S., PILLAY-VAN-WYK, V., MBELLE, N., VAN ZYL, J., PARKER, W., ZUNGU, N.P. AND PEZI, S. 2009. South African national HIV prevalence, incidence, behaviour and communication survey 2008: a turning tide among teenagers? Cape Town: Human Sciences Research Council. 98 p.

SIGGINS, L. 2009. Students in need of a dedicated health site. *Irish times:* 15, 3 March.

SOUTH AFRICA. 1996. Constitution of the Republic of South Africa as adopted by the Constitutional Assembly on 8 May 1996 and as amended on 11 October 1996. (B34B-96.) (ISBN: 0-260-20716-7.)

STEEDHAR, K. 2009. Students' health matters. *Journal of holistic healthcare,* 6(1):51-52.

STERNLIEB, J.J. AND MUNAN, L. 1992. A survey of health problems, practices, and needs of youth *Pediatrics,* 49(2):177-186.

STRYDOM, C. 2002. Evaluation of an HIV/AIDS programme for students at a tertiary institution with emphasis on peer education group involvement. Potchefstroom: Potchefstroom University for Christian Higher Education. (Thesis - PhD.)

SUBOTZKY, G. AND AFRICA, L. 2006. A cost-risk analysis of the impact of HIV/AIDS on human resources at 11 South African higher education institutions. Pretoria: Higher Education South Africa. 191 p.

TAYLOR, J.P., MCCARTHY, M.J., HERBERT, R.J. AND SMITH, P.B. 2009. A comprehensive profile of health risk behaviors among students at a small Canadian University. *College student journal,* 43(2):255-267, June.

TODD. D.J. 1979. Mixing qualitative and quantitative methods: triangulation in action. *Administrative science quarterly*, 24(4):602-611.

UNITED NATIONS. 2004. General Assembly Economic and Social Council, World Youth Report, 2005. Report of the Secretary-General General. 36 p. New York: United Nations.

UNIVERSITY OF CALIFORNIA. 2008. University health services, strategic plan. Berkeley, Calif.: University of California.

UNIVERSITY OF CENTRAL-OKLAHOMA. 2009. Health report & healthy campus initiative, 2008-2010. Oklahoma: University of Central Oklahoma.

UNIVERSITY OF THE WESTERN CAPE. 2003. Student services: health services and counselling. Bellville: University of the Western Cape. Available: http://www.uwc.ac.za/ students/indexr.htm Date of access: 10 June 2006.

UNIVERSITY OF THE WITWATERSRAND. 2003. Campus health and wellness centre. http://www.wits.ac.za/depts/wcs/health.html Date of access: 6 June 2005.

VAN PAPENDORP, D.H., COETZEE, M. AND KOORTS, A.M. 2007. The student health services at the University of Pretoria from 2000 to 2005. *Health SA Gesondheid,* 12(1):48-54.

VREKEN, N.J. AND RENS, J.A. 2001. Bestuursopsomming van die ondersoek na die waardeoriëntering van studente aan die PU vir CHO. Potchefstroom: Potchefstroom University of Higher Christian Education.

WALKER, Z. AND TOWNSEND, J. 1999. The role of general practice in promoting teenage health: a review of the literature. *Family practice,* 16:164-172.

WILF-MIRON, R., SIKRON, F., GLASSER, S. AND BARELL, V. 2002. Community-based adolescent health services in Israel: from theory to practice. *International journal of adolescence medical health,* 14(2):139-144.

WILLIAMS, W.C. AND BUCK, A.H. 1917. The growth of medicine from the earliest times to about 1800. New Haven: Yale University Press.

WORLD BANK. 2007. Development and the next generation. Washington, D.C.: International Bank for Reconstruction and Development / World Bank. (World Development Report.)

WORLD DEVELOPMENT REPORT. 2006. Equity and development. Washington, D.C.: World Bank. http://www.worldbank.org Date of access: 25 August 2008.

WORLD HEALTH ORGANIZATION. 1998. Life in the 21st century: a vision for all. Geneva, Switzerland: World Health Organization. (World Health Report.) 232 p.

WORLD HEALTH ORGANIZATION. 2002. Health systems: improving performance. Why do health systems matter? Geneva, Switzerland: World Health Organization. (World Health Report.)

WORLD HEALTH ORGANIZATION. 2008. Primary health care now more than ever. Geneva, Switzerland: World Health Organization. (World Health Report.) 119 p.

WRIGHT, J., WILLIAMS, R. AND WILKINSON, J. 1998. Health needs assessment: development and importance of health needs assessment. *British medical journal,* 316(7140):1310-1312.

ADDENDUM A

YUNIBESITI YA BOKONE-BOPHIRIMA
NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT

Office of the Dean of Students
Tel (018) 018 2994038
Fax (018) 018 2990510
Email vrpeo@puk.ac.za

8 May 2006

Dear students

LETTER OF INFORMATION FOR RESEARCH

I am Mrs Elana Olivier, a member of the PUK campus health initiative and an MPH student of the School of Public Health, Faculty of Health Sciences, University of Witwatersrand..

I would like to explore the needs and preferences of all full-time students, given the specific context of the Potchefstroom Campus, so that a primary health care service can be established.

Several South African universities provide health care services to their students and employees. In 2003, HEAIDS commissioned an audit to assess the range of HIV and AIDS services, including primary health care services. The findings presented in the audit described in particular the general clinic and health services on the campuses. Thirty of the thirty five Higher Education institutions have on-site primary health care clinics or health services. This audit illustrated that the North-West University has failed in providing health services to staff and students. The Mafikeng Campus of the NWU operates a subsidised, fully functional health care service that addresses the health needs of the students.

The fairness of having a growing number of needy students on a geographically confined campus, with no support from the university to access and utilize affordable health care, needs to be investigated.

The attached questionnaire is designed to assess the needs and preferences of the PUK students regarding the needs and preferences of a primary health care centre. The information will be used to assist in the planning and implementation of a comprehensive primary health care centre. This project is fully supported by the campus rector, prof. Annette Combrink, and she believes that the centre will be functional by early 2006.

I would greatly appreciate you taking approximately 10 minutes of your time to complete an attached questionnaire. You are completely free to take part or not to take part in the study. If you decide that you do not want to be part of the study, this will not be held against you. All information obtained will be strictly confidential.

Kindly return the completed questionnaire in the box provided.

If you have any questions or queries or would like more information about the study please contact Mrs Elana Olivier on telephone number (018) 299 4038; fax (018) 293 0510; e-mail vrpeo@puk.ac.za or after hours on 0828058705.

Thank you for your co-operation

Yours sincerely

Mrs Elana Olivier
HIV and AIDS Programme co-ordinator

ADDENDUM B

QUESTIONNAIRE
NEEDS ANALYSIS AMONG STUDENTS AT THE POTCHEFSTROOM CAMPUS OF THE NWU – CENTRE FOR PRIMARY HEALTH SERVICES

FOR OFFICE USE ONLY		
A: Is the respondent ...		
Male		**01**
Female		**02**
B: Does the respondent stay ...		
On campus		**01**
In town		**02**
C: Is the respondent ...		
A first year student		**01**
A senior student		**02**

PROFILE INFORMATION

Mark the <u>one</u> option which best describes your situation/perspective

1. Do your parents have a medical aid fund?

Yes		01
No		02
Unsure		03

2. If yes, are your medical expenses covered by this fund?

Yes		01
No		02
Unsure		03
Not applicable		04

3. How is the **majority** of your studies financed?

Scholarship/scholarships		01
Study loan		02
Scholarship and study loan		03
You and/or your parents pay		04
Other (specify)		05

4. How far do you stay from campus?

Walking distance (stays on campus)		01
Walking distance (stays less than 1 km from campus)		02
Between 2 and 4 km		03
Further than 4 km		04

5. How do you **most often** get to campus?

Walk		01
Ride bicycle		02
Use your own motor vehicle		03
Public transport		04
With friends/parents		05

6. How often do you need health services and/or products?

More often than once a month		01
Once a month		02
Once every 2-3 months		03
Less often than once in 3 months		04

7. If you do need health services, where do you go **most of the time**?

Doctors close to campus (e.g. Cachetpark/Bult)		01
Doctors elsewhere in Potchefstroom (e.g. Medicross or Mediclinic)		02
Health care clinic or state hospital		03
Your nearest pharmacy		04
General practitioner in your home town		05
Other (specify)		06

8. Have you experienced difficulty **this year** with transport to reach health care facilities?

Yes, often		01
Yes, sometimes		02
Never		03

9. How will you evaluate current tariffs of the health care services available to you?

Extremely unaffordable		01
Unaffordable		02
Unsure/Do not know		03
Affordable		04
Extremely affordable		05

10. Will a health care centre on or near campus make health care services more accessible to you?

Yes		01
No		02
Unsure		03

11. If necessary, will you use such a service on or near campus?

Definitely not		01
No		02
Unsure		03
Yes		04
Yes, definitely		05

PLEASE TURN THE PAGE

12. If such a health care centre is established, on which basis should health care services be available?

24 hours a day, 7 days a week		01
24 hours a day on weekdays, between 8 and 1 on weekends		02
Office hours only (weekdays and weekends)		03
Less often		04

13. If such a health care centre is established, would you pay a minimal consultation fee and/or fee for medication received?

Yes		01
No		02
Unsure		03

14. If yes, which **one** of the following amounts would you be willing to pay?

Less than R50-00		01
R50-00		02
More than R50-00		03
It depends on the type of assistance you receive		04
Specific services must be free of charge		05

NEEDS EVALUATION

Indicate on a scale of 1 to 5, **(where:**

1 = not important at all [NIAA]
2 = not important [NI]
3 = neutral [N]
4 = important [I]
5 = absolutely important [AI])

what **your** needs are in terms of the following aspects as they relate to the proposed health care centre

15. Accessibility

	NIAA	NI	N	I	AI
A. Distance from campus	1	2	3	4	5
B. Distance from where you stay	1	2	3	4	5

16. Confidentiality

	NIAA	NI	N	I	AI
A. Confidentiality about visits to the health care centre	1	2	3	4	5
B. Confidentiality about diagnosis	1	2	3	4	5

17. Scope of health care services and medication

	NIAA	NI	N	I	AI
A. Acute illness (e.g. colds, cuts, fractures)	1	2	3	4	5
B. Sexual aspects (e.g. family planning, contraceptives)	1	2	3	4	5
C. Chronic conditions (e.g. diabetes, tuberculosis)	1	2	3	4	5
D. Aids programmes (e.g. voluntary HIV testing)	1	2	3	4	5
E. Mental health and counselling services (with additional support by means of referrals)	1	2	3	4	5
F. Other referral services (e.g. Hospice, biokinetics)	1	2	3	4	5
G. After care services (e.g. follow-up therapy, counselling)	1	2	3	4	5
H. Health awareness or health promotion	1	2	3	4	5

18. Is there any other need with regard to the proposed health care centre you would like to bring to our attention?

.....

.....

.....

.....

.....

.....

THANK YOU VERY MUCH FOR YOUR COOPERATION. YOUR REACTION WILL MAKE A VALUABLE CONTRIBUTION TO THE RESEARCH.

ADDENDUM C

Cross-tabulations: 1.1

Table C3: Cross-tabulation between "frequency of the need for health services and/or products" and "parents that have medical aids"

Parents have medical aid fund (frequency table 4) ▼	Frequency of the need for health services and/or products (frequency table 9)▼				Row
	More often than once a month	Once a month	Once every 2-3 months	Less often than once in 3 months	
Yes	16	41	78	94	229
No	18	22	30	58	128
Unsure	1	2	3	7	13
All groups	35	65	111	159	370

Using the above cross-tabulation, the relationship between the number of students whose parents do not have medical aid and are thus not covered by this fund and the frequency of their need for health services and/or products can be determined.

The parents of 18 of the 35 respondents that need medical care more than once a month do not have medical aid. These 18 students are 4,86% of the research sample (*n* = 370), which represents 525 students in the target population (10 811 full-time students). Thus, there are 525 students that need medical care more than once a month and whose parents do not have medical aid — implying that they do not have medical aid coverage.

By dividing 525 by 30 days (the average number of days in one month), it can be determined that 18 of these students need medical care on one day, if they need medical care at the minimum of once a month.

The parents of 22 of the 65 respondents that need medical care once a month do not have medical aid. These 22 students are 5,95% of the research sample (*n* = 370), which represents 643 students in the target population (10 811 full-time students). Thus, there are 643 students that need medical care once a month and whose parents do not have medical aid — implying that they do not have medical aid coverage.

By dividing 643 by 30 days (the average number of days in one month), it can be determined that 21 of these students need medical care on one day.

The parents of 30 of the 111 respondents that need medical care once every two to three months do not have medical aid. These 30 students are 8,11% of the research sample (*n* = 370), which represents 877 students in the target population (10 811 full-time students). Thus, there are 877 students that need medical care once every two to three months and whose parents do not have medical aid — implying that they do not have medical aid coverage.

By dividing 877 by 90 days (the average total number of days in three months), it can be determined that 10 of these students need medical care on one day.

The parents of 58 of the 159 respondents that need medical care less than once every three months do not have medical aid. These 58 students are 15,68% of the research sample (*n* = 370), which represents 1 695 students in the target population (10 811 full-time students). Thus, there are 1 659 students that need medical care less than once every three months and whose parents do not have medical aid — implying that they do not have medical aid coverage.

For calculation purposes, it is assumed that these students need medical care once a year. By dividing 1 695 by 365 days (the number of days in a year), it can be determined that 5 of these students need medical care on one day.

By adding the above-determined numbers together, it can be concluded that there are an average of 54 students (18 + 21 + 10 + 5) whose parents do not have medical aid and are thus not covered by their parent's medical aid that need medical care on one day. It should be remembered that this is a minimum number, since the students who need medical care more than once a month were included in the calculations as needing medical care only once in a month. Also, the students who need medical care less than once in three months were included in the calculations as needing medical care only once in a year. It is possible that these students need medical care more than once a year.

Note: This calculation excludes those students who are not covered by a medical aid, although their parents do have a medical aid. It also excludes those students who are unsure if they are covered by their parents' medical aid.

Table C4: Cross-tabulation between "parents having a medical aid and expenses are covered" and the "utilization of a health care service"							
Parents have medical aid fund	Medical expenses covered by parent's medical aid fund	A health care service on or near campus will be used					Row
		Definitely not	No	Unsure	Yes	Yes, definitely	
Yes	Yes	7	10	27	85	62	191
Yes	No	0	1	3	8	7	19
Yes	Unsure	0	2	3	8	5	18
Yes	N/A	0	0	0	0	0	0
Total		7	13	33	101	74	228
No	Yes	0	0	0	0	0	0
No	No	0	0	0	9	7	16
No	Unsure	0	0	0	0	1	1
No	N/A	0	0	7	51	49	107
Total		0	0	7	60	57	124
Unsure	Yes	0	0	0	0	0	0
Unsure	No	0	0	0	1	0	1
Unsure	Unsure	0	0	0	3	3	6
Unsure	N/A	0	0	0	5	1	6
Total		**0**	**0**	**0**	**9**	**4**	**13**
Column Total		**7**	**13**	**40**	**170**	**135**	**365**

1.2

The above cross-tabulation indicates that of the students who are not covered by a medical aid fund (N = 19 + 16 + 107 = 142), the majority (N = 8 + 7 + 9 + 7 + 51 + 49 = 131) will use a health care service on or near campus. This amounts to 92,25% of those who do not have medical aid coverage.

Table C4: Cross-tabulation between "parents who have a medical aid" and "students' willingness to pay a minimal fee"				
Parents have medical aid fund	**Willingness to pay a minimal fee for medication/consultation**			**Row**
	Yes	**No**	**Unsure**	
Yes	171	19	39	229
No	99	10	19	128
Unsure	5	3	5	13
All groups	275	32	63	370

1.3

The above cross-tabulation indicates that of the students whose parents do not have a medical aid fund and whose medical expenses are thus not covered by this medical fund (*n* = 128), the majority (*n* = 99) are willing to pay a minimal fee for medication and/or consultation received at the centre. This amounts to 77,34% of those whose parents do not have a medical aid fund.

ADDENDUM D

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Olivier

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER M060514**
PROJECT	A Needs Analysis among Students at the Potchefstroom Campus of the North-West University Concerning a Primary Health.....
INVESTIGATORS	Ms E Olivier
DEPARTMENT	School of Public Health
DATE CONSIDERED	06.05.26
DECISION OF THE COMMITTEE*	APPROVED UNCONDITIONALLY

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 06.06.26 **CHAIRPERSON** .....
(Professor A Dhai)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : Dr M Hlungwani

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10005, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES