

**EXPLORING PROMOTION OF PRIMARY HEALTH CARE PHILOSOPHY IN A  
COMMUNITY-BASED NURSING EDUCATION PROGRAMME AT A SELECTED HIGHER  
EDUCATION INSTITUTION IN KWAZULU-NATAL: THE STUDENTS' PERSPECTIVE**

**A research project submitted to the College of Health Sciences**

**School of Nursing and Public Health**

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**partial fulfilment of the requirements for the course work Master's degree in Nursing**

**(Nursing Education)**

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**Howard, March 2013**

## DECLARATION

I, Innocent NDATEBA, declare that this dissertation titled “**Exploring Promotion of Primary Health Care Philosophy in a Community-Based Nursing Education Programme at a Selected Higher Education Institution in KwaZulu-Natal: The Students’ Perspective**”, is my original work. It has never been submitted before for any other purpose or at any other University. I also declare that the sources of information used in this work have been acknowledged by means of reference.

This research project has been read and approved for submission by supervisor, Professor Fikile Mtshali

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Date

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Professor Fikile Mtshali

Date

**(Research supervisor)**

## **DEDICATION**

This work is dedicated to you, my late parents, Béatrice MUKANDOLI and Oswald MUBERA, for your love, education and advice. It is also dedicated to you, Veronica BAGARIRAYOSE, for your affective support and to you, my little brother, Emmanuel NDAGIJIMANA, for your understanding and your patience.

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## ABSTRACT

**Background:** There is a high advocacy for community-based education (CBE) as a tool to implement primary health care (PHC) philosophy. CBE affords students the opportunity to learn through providing services to under-resourced communities, allowing them to engage in PHC linked activities. Various educational institutions implemented CBE with the purpose to align the educational approach to PHC. This study aimed to explore how PHC philosophy is promoted through the CBE Nursing programme.

**Methodology:** This study used a quantitative approach, a non-experimental survey and non-probability convenience sampling technique in KwaZulu-Natal. Kolb's experiential learning cycle framework informed the study. The self-report questionnaire was used to collect data from sample size of 118 participants excluding 6 who participated in the pilot study. The response rate was 73.3% with  $n=91$ . Ethical clearance was obtained from University of KwaZulu-Natal Ethics Review Board and ethics principles were observed during the study. Data were analysed using the Statistical Package for Social Sciences (SPSS), Version 19

**Results:** It was revealed that 80.2% of the participants were female and 19.8% were male. The participants reported exposure to community-based learning from first to fourth year in the programme.. About overall 69.9% of participants involved community members in their learning activities. The findings indicated that 98.9% had positive perceptions about CBE and overall 79.5% of participants strongly perceived CBE as a tool that promotes PHC philosophy which increase as they progress up to third year while decrease in the fourth year.

The factors mostly promoted implementation of the PHC philosophy included support by community members, support from lecturers and intensive preparation for community-based learning while accessibility of community site emerged as slightly negative factor. The most focus of community based learning projects which promoted PHC philosophy ranged from prevention of illness, injuries

and social problems; health promotion and engaging communities in CBL activities to promote their self-reliance and self-determination.

**Conclusion:** The findings of the study revealed that the participants strongly perceived CBE as tool that promotes PHC philosophy and the community-based learning experiences promoted PHC philosophy.

It was recommended that the curriculum be reviewed to include CBL in the fourth year and informal settlements be used as learning environments.

**Key words:** Nursing Education, Community-Based Education, Primary Health Care Philosophy, Community-Service learning

## SIGLES AND ABBREVIATIONS

<b>AIDS:</b>	Acquired Immuno-Deficiency Syndrome
<b>ABD:</b>	African Bank of Development
<b>CBE:</b>	Community-Based Education
<b>CBL:</b>	Community-Based Learning
<b>CBSL:</b>	Community-Based Service Learning
<b>HIV:</b>	Human Immuno-deficiency Virus
<b>NEPAD:</b>	New Partnership for Africa Development
<b>WHO:</b>	World Health Organisation
<b>UN:</b>	United Nations
<b>UNDP:</b>	United Nations Development Programme
<b>PBL:</b>	Problem-Based Learning
<b>PHC:</b>	Primary Health Care
<b>SANNM:</b>	Southern Africa Network of Nurses and Midwives
<b>SPSS:</b>	Statistical Package of Social Sciences

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## CHAPTER ONE

### INTRODUCTION

#### 1.1. Introduction and background

The World Health Organisation, the American College of Nursing, the International Nursing Council and the 1997 White Paper on Transformation of the Health System in South Africa recommend that the training of health professionals must be responsive to the needs of the population (WHO, 2011; WHO, 2011; International Council of Nurses, 2009; International Council of Nurses, 2009; American Association of Colleges of Nursing, 2005; McIntosh and McCormack, 2000; Department of Health, 1997; WHO, 1987; WHO and UNICEF, 1978). That training, should be based in the community, in any of the variety of community health settings, where students will work towards achieving better health for all, as advocated in the 1978 WHO declaration from the International Conference on Primary Health Care, held at Alma Ata, USSR, Russia (WHO, 2011; WHO, 2011; International Council of Nurses, 2009; International Council of Nurses, 2009; American Association of Colleges of Nursing, 2005; McIntosh and McCormack, 2000; Department of Health, 1997; WHO, 1987; WHO and UNICEF, 1978)

These organisations stipulate that the curriculum of health personnel must include and should focus on primary health care principles and, therefore, emphasises should be on community and outcome based education. The term community-based education is also known as community-based service-learning, service-learning, community-based learning and community-learning, which are all used interchangeably (Elwell and Bean, 2011). According to Reising, Shea, Allen, Laux, Hensel and Watts (2008), community-based education is a powerful option of teaching nurses as it not only teaches nurses the skills they

need to provide care, but also teaches them to become agents of change while providing service care to a vulnerable population. The nursing students become agents of social change, therefore challenging social injustice. Bentley and Ellison (2005) found that out of 20 students engaged in community service learning, 18 (90%) became aware of the needs of the disadvantaged and underserved community who they served during their learning activities.

Community-based education has been adopted by Higher Health Education Institutions as an alternative way of teaching because the traditional way of teaching was accused of not equipping the students with sufficient skills needed to address the social, economic and political factors affecting health and was not responsive to the needs of the population, especially in rural and under-resourced settings (Mtshali, 2009; WHO, 1993; WHO, 1987). The traditional teaching method trained students in sophisticated and technological ways, which was different from the way they were required to work and was, therefore, an inappropriate instructional method to train responsive health professionals to the needs of the community (Mtshali, 2009; WHO, 1993). Community based education has its roots in Dewey's progressive educational philosophy and Kolb's experiential learning theory (Kielsmeier, 2011; Felten, Gilchrist and Darby, 2006).

Theodore Brameld and George Counts, cited in Cohen (1999) and Noddings (1995), stated that the purpose of education is to change society in order to overcome oppression. Hence, a responsive education system must be relevant to the real problems of the social context, such as hunger, disease, inequality and other population needs (Bazile and Nauman, 2004; Cohen, 1999; Noddings, 1995). Freire (1921), in his pedagogy of the oppressed, stated that education must be transformative, rather than maintaining the status quo of inequality in society, by raising the consciousness of the students through active participation in solving the social problems in partnership with the community members. Freire argued that education must be

relevant to the reality of the society and work towards the change of social inequality (Freire, 1921). Nokes et al., (2005), view community-based service learning as an instrument that may be used to promote social awareness as it helps the students develop civic engagement.

For John Dewey, education and a democratic society are intimately linked (Neill, 2005). Dewey, as cited in Neill (2005), stated that a learner should be placed in the community to learn from everyday life, experience the real life problems of that community and be allowed to practice by solving those problems, insisting that the learner learns best through direct personal experience (Walters, 2005; Neill, 2005). Dewey argued that the education should be linked to, and integrated into, the society where the students participate in meaningful projects, learning by doing and solving problems society is encountering, while they develop unselfishness, helpfulness, critical intelligence, individual initiative and creativity in dealing with social inequity and becoming responsible members of society (Ornestein, Levine, Gutek and Vocke, 2010; Walters, 2005; Neill, 2005).

Community-based education (CBE) is underpinned by a primary health care (PHC) approach which, according to WHO (1978); Mtshali (2005) and Larkins, Sen Gupta, Evans, Murray and Preston (2011), is used as a tool to open access to health care. According to Daniels (2008), access to health care is a human right, but in South Africa, access to health care is also a constitutional right (Republic of South Africa, 1996). Community-based education prepares nurses to work in a primary health care setting and focuses on health promotion, illness prevention, health maintenance and health restoration. It is therefore relevant to the population needs and aligned to the primary health care system (WHO, 1987). Although primary health care was adopted as a means to promote access to health care for those from rural, poor and marginalised areas (Larkins et al., 2011), several studies have revealed that the majority of people, especially disadvantaged people, in many countries, including South

Africa, do not have access to health care due to various reasons, such as irrelevant training and the misdistribution of health professionals (Reid and Cakwe, 2011; Larkins et al., 2011; Nteta, Mokgatle-Nthabu and Oguntibeju, 2010; Rawaf, Maeseneer and Starfield, 2008). Moreover, the studies revealed that the training of health professionals within the communities and the recruitment of the rural-origin students have a positive influence on graduates to choose a rural practice career and work in primary health facilities (Williamson, Wilson, Mckechnie and Ross, 2012; Larkins et al., 2011; Henry, Edwards and Crotty, 2009; Dalton, Routley and Peek, 2008; Orpin and Gabriel, 2005; Curran and Rourke, 2004).

In addressing the social issues of inequity in health care service access, it has been recommended that higher education institutions of South Africa introduce community-based education into their programmes in order to enhance the relevance of education in responding to the needs of the population and educating the community, as stipulated in the Education White Paper of 1997, which emphasised the social responsibility and transformation of higher education through community service learning (Ministry of Education, 2001). This is in line with the recommendation of the 1997 Department of Health White Paper on transformation of health education in South Africa, which stipulated community-based education as a key curriculum approach to train health professionals who are responsive to the health needs of the population (Department of Health, 1997).

In response, the South African Nursing Council, the regulating body of nursing education and training in South Africa, called on the higher education nursing institutions to align their curriculum to the philosophy of primary health care in accordance with the framework of the 1997 White Paper of the Department of Health (South African Nursing Council, 1999 in Mtshali, 2003). It is understood that these recommendations respond to those of international organisations such as the World Health Organisation and the American College of Nursing

that recommend the community-based education approach of health profession education and training to ensure the relevance and quality of training and competence of health professionals who are able to solve the health problems of the society and promote health by a collaborative approach (WHO, 2011; WHO, 2011; American Association of Colleges of Nursing, 2005).

In response to the call of national and international organisations, a number of higher education nursing institutions in South Africa (Walter Sisulu University in the Eastern Cape, Universities of Western Cape, KwaZulu-Natal, Witwatersrand, Limpopo, Cape Town, Stellenbosch, Free State and Pretoria) have adopted the community-based education approach to serve the needs of the population and promote equity in health care services (Mpofu, Daniels, Adonis, Daniels and Mashingaidze, nd; Iputo, 2008). The studies by Mtshali (2009; 2003); revealed that students became involved in a number of activities in community settings which support the primary health care philosophy underpinning community-based education. These include involvement in GOBIFFFF strategies (Growth monitoring, oral rehydration, breastfeeding, immunisation, family planning, first aid at home, food supplementation to prevent malnutrition and female literacy as women empowerment).

The learning experiences of the students in community-based learning are congruent with the activities of selective primary health care which are based on GOBIFFFF strategies aimed to promote and improve the health of population, especially in disadvantaged groups. It is understood that the community-based education approach responds to the primary health care principles. The overall objectives of community-based education in the health profession, and nursing education in particular, are to produce a sufficient number of highly qualified health professionals who can serve the community and meet the health needs of the nation at community level and produce community-oriented health professionals who are able and

willing to serve their communities and deal effectively with the health problems at primary, secondary and tertiary levels (Frank, Adams, Edelstein, Speakman and Shelton, 2005; Omotara, Padonu and Yahya, 2004). Although community-based education has been implemented by various higher health education institutions in South Africa for the purpose of orienting the educational approach to the health system (Mpofu et al., nd), little is known whether this approach is promoting primary health care philosophy.

## **1.2. Problem statement**

At the International Conference on Primary Health Care held at Alma Ata, Russia, former USSR, in 1978, the World Health Organisation promoted achievement of better health for all by 2000 (WHO and UNICEF, 1978). The primary health care model was adopted as means to achieve this global goal by many countries, including South Africa, but this goal was not achieved due to the irrelevance of the health profession education and training and misdistribution of health care providers (Reid and Cakwe, 2011; Reid, 2011; Nteta et al., 2010; Rawaf et al., 2008).

To address this problem, various institutions recommended implementation of community-based education curricula as a means of promoting primary health care principles concerned with equity and social justice principles (WHO, 2011; International Council of Nurses, 2009; International Council of Nurses, 2009; American Association of Colleges of Nursing, 2005; Ministry of Education, 2001; Department of Health, 1997; WHO, 1987) in the belief that community-based education and primary health care should be at the core of the curriculum of the health profession education in South Africa (Gumbi and Muller, 1996). In response to this call, higher education institutions, and nursing education institutions in particular, introduced community-based education to ensure that the nurses are well prepared to work in

the community. There is overwhelming endorsement for community-based education as a tool for implementing primary health care (Mtshali, 2009; McIntosh and McCormack, 2000; Department of Health, 1997). According to McIntosh and McCormack (2000), however, changes that have occurred in education, practice and research have not been organized around the principles of primary health care and this delay has had an impact on achieving health for all citizens of the world. The study by Mtshali (2009) reflected that although a number of PHC related activities had been undertaken by students in community-based nursing education programmes in South Africa, it was noted that these activities were college-based and not university-based schools of nursing. This skewed picture could not be explored further as it was not the purpose of that study. This study therefore intends to explore this matter deeper by investigating whether PHC philosophy is being promoted in a CBE programme in a university-based School of Nursing.

### **1.3. Purpose of the study**

The purpose of this study was to explore whether primary health care philosophy is being promoted in a community-based education programme in a selected nursing education institution in KwaZulu-Natal to inform the basic nursing curriculum review process.

### **1.4. Objectives of the study**

The objectives of this study are to:

- a) Describe community-based learning activities that promote primary health care philosophy
- b) Identify factors affecting promotion of primary health care philosophy in community-based learning activities

- c) Describe the perceptions of students about community-based education as tool that promotes primary health care

### **1.5. Research questions**

- a) Which community-based learning activities in a CBE programme promote primary health care philosophy?
- b) What are the factors that facilitate promotion of PHC philosophy in community-based learning activities?
- c) What are the factors that hinder promotion of PHC philosophy in community-based learning activities?
- d) How do students view community-based education as a tool that promotes PHC philosophy?

### **1.6. Significance of the study**

Grady (2006) and Polit and Beck (2008) argue that the ultimate goal of nursing research is to change the practice and improve the well-being and the health of people in the community. This current study aimed to explore whether primary health care philosophy is being promoted in a community-based nursing education programme at a selected School of Nursing in KwaZulu-Natal from the students' perspective. This is significant to nursing practice, nursing education, the community and to the nursing profession as a whole.

**Nursing practice:** The findings of this study may have an impact on nursing practice as it may be used as evidence in daily nursing activities for health promotion and illness prevention focusing on primary health care principles. This may result in a relevant

curriculum in which nurses are trained in primary health care philosophy, which may have an impact on nursing practice focusing on health promotion and illness prevention

**Nursing education:** The findings of this study may help nurse educators understand how their teaching strategies promote health care of the population and their relevance to the needs of the community, especially to underserved areas so, when reviewing the curriculum, they may develop and implement teaching strategies that enhance the responsibility of students in solving the health problems in the community in which they live.

**Community:** The community may benefit from the findings of this study because all stakeholders working in the field of education and health may develop good partnerships in order to educate the community in promoting health for all. The students may find the relevance of their training as they embrace a teaching approach that is linked to the needs of the population and take part in solving the problems of the community.

**Nursing profession:** The current study may generate a new body of knowledge in nursing and therefore contribute to the development of the nursing profession in general. Improved health services might be rendered to the communities due to relevant training and education of nurses who are socially responsible, thus promoting better health for all.

## **1.7. Operational definitions**

### **1.7.1. Community- Based Education (CBE)**

CBE is an educational approach that is used to link community service to the students' learning (Mtshali, 2009; Salmon and Keneni, 2004). The students are put in the community and given the opportunity to apply their theoretical knowledge in assessing, planning and participate in solving the health problems in the community, while they achieve their learning objectives (Mtshali, 2009; Salmon and Keneni, 2004). According to the WHO (1987),

community-based education is a method of education that is relevant to the needs of the community and is a way of implementing a community-oriented educational programme where the students use the community as a learning environment. This organisation states that the community learning activities are carried out wherever people live and work and wherever they can be organized, and involve not only students, but also teachers, community members and other multidisciplinary and multisectoral teams.

### **1.7.2. Community Based Service Learning (CBSL)**

Community-based service learning is the teaching and learning approach where students provide organized service activities that meet the needs of the community as they learn (Vogt, Chavez and Schaffner, 2011; Lazarus, Erasmus, Hendricks, Nduna and Slammat, 2008). This educational approach is based on experiential learning, where the students reflect on their service activities during community-based learning and thus develop a broad understanding of the content course and appreciate the relevance of the discipline as they enhance social responsibility (Vogt et al., 2011; Lazarus et al., 2008). In community-service learning, the students provide services to the community while they satisfy their learning needs.

### **1.7.3. Primary Health Care (PHC)**

PHC is essential health care based on practical, scientifically sound and socially acceptable methods and technology, which is accessible to all in the community through their full participation at affordable cost and geared towards self-reliance and self-determination (WHO and UNICEF, 1978). PHC aims to eradicate social injustice in health care delivery and involvement of community participation by using health technology that is accessible, acceptable, affordable and appropriate to individuals and the community as a whole.

#### **1.7.4. Primary health care philosophy**

Primary health care philosophy refers to the holistic understanding of health as wellbeing, rather than the absence of disease. Central to this philosophy is a holistic understanding of health, recognition of multiple determinants of health, community control over health services, health promotion and disease prevention, equity on health care, research-based methods and accessible, acceptable and affordable technology (Australian Capital Territory, 2010).

#### **1.7.5. Student**

In this study, a student refers to a person who is studying at a nursing education institution and is registered as a nurse student in a programme leading to a bachelor qualification in nursing and who are registered in 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year.

#### **1.7.6. Community**

A community refers to people living together in some form of geographical organization and social cohesion, sharing common values, beliefs, norms and culture and being aware of belonging in such group identity, sharing the common needs, interests and commitment towards same goal of meeting their needs (WHO, 1987). In this study, a community reflects a geographical area where it includes various learning settings and agencies (hospitals, schools, prisons, child care centres, clinics, families, homes, etc).

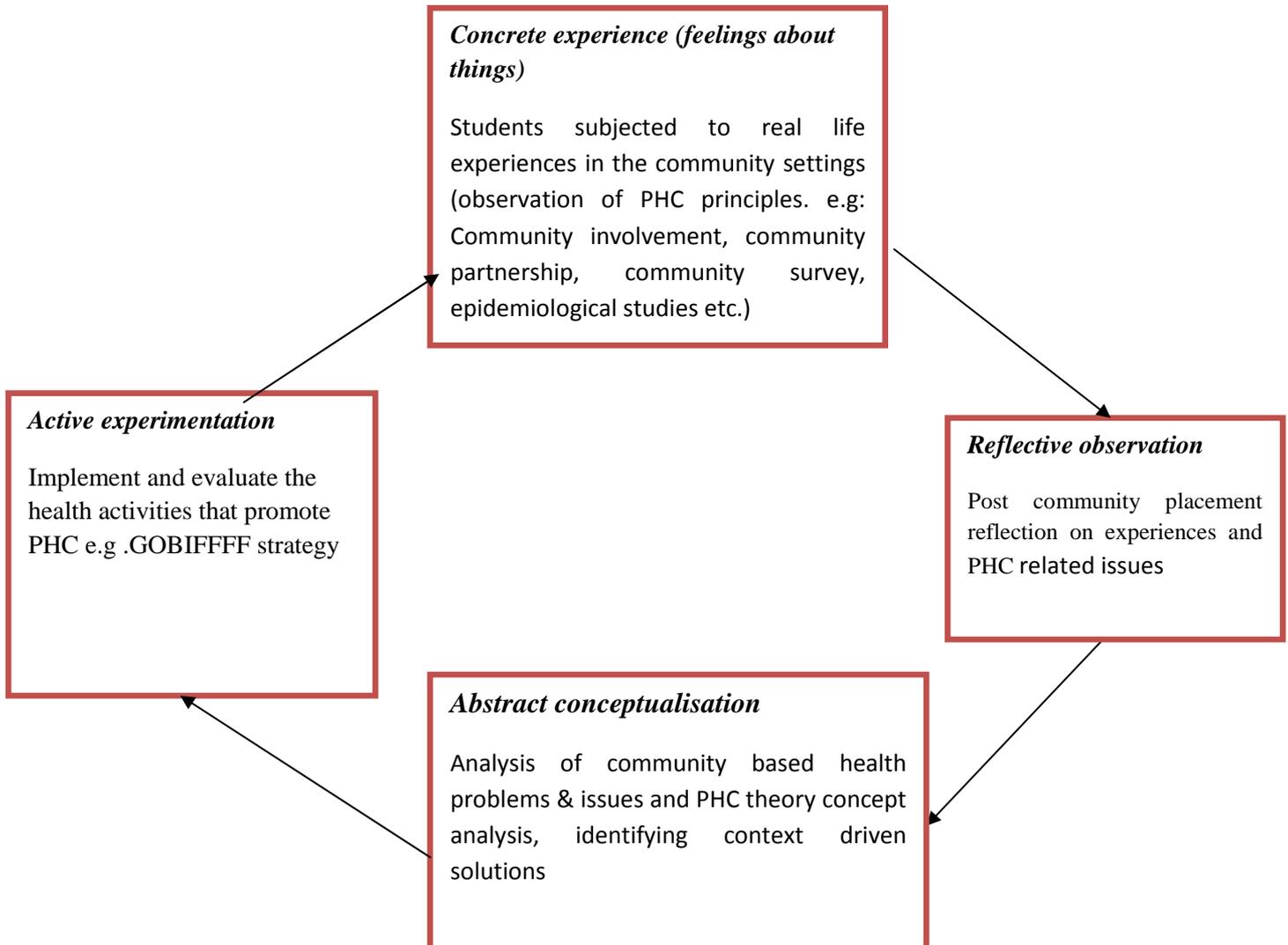
### 1.7.7. Theoretical Framework

The conceptual framework of this study is adopted from the Kolb's Experiential Learning Model (Mtshali, 2005). According to Kolb, (1984), learning is "*process whereby the knowledge is created through transformation of experience*". Dewey states that learners learn best through active involvement in real life situations (Walters, 2005), and that learning through self-reflection and personal involvement in real life experience contributes to new understanding (Henry, 1993; Weil and McGill, 1993). Kolb explained the experiential learning process as a cycle of four stages, though learning may begin at any stage.

Immediate or concrete experience is the basis of observations and reflection, from which reflection is assimilated into abstract conceptualisation through thinking, thus creating new implication for action to be actively tested into active experimentation and producing new experiences (Kolb, Boyatzis and Mainemelis, 2000; Kolb, 1984). In a community-based nursing education programme, the nurse students are exposed to these phases of Kolb's experiential learning cycle through various learning activities. This framework (See Figure 1) is used in this study to explore how PHC philosophy is promoted in a CBE programme.

1. **Concrete experience** refers to in hand experiences (feelings). In this phase, the students use all their senses while being actively involved in real activities (Kolb et al., 2000; Kolb, 1984). In this study, the students use all their senses (hearing, taste, smelling, touch, and sight) while they are involved in real life experiences, such as entering the community, conducting epidemiological studies, family studies, community surveys and various other activities. They also interact with members of the community while they are carrying out their learning activities and experience real community health problems and the cultural, socio economic and political factors affecting the health of the population.

Immersion in real situations in the community forms the basis of reflecting on what is happening in the community, which is the second phase.



**Figure 1: An adapted version of Kolb's Experiential Learning Model**

2. **Reflective observation:** Meaningful learning takes place through reflective processes (Abdulwahed and Nagy, 2009; Fowler, 2008). Learning is the product of reflection upon the experience and this reflection depends on internal factors, such as the student's behaviour or activity and external factors that aid the student to reflect and think about his/her activity (Fowler, 2008). Dewey states that doubt, perplexity and confusion are

created in the mind of a learner when he encounters a situation that he doesn't understand, and he therefore tries to make meaning of it for better understanding (Rodgers, 2002; Bringle and Hatcher, 1999). In this study, the students observe, analyse and think about what they experienced when providing services to the community by conducting family and community assessment and epidemiological studies.

During debriefing, the teacher, supervisor or mentor provides assistance and guidance and helps the students to reflect on their learning experience by asking questions that stimulate thinking and motivate information seeking. The interaction of the students themselves regarding the experience, enhance the reflective process. Through the process of reflection, they make conclusions on community status with regard to health, and the health problems of the community are identified. They reflect on PHC issues, discover gaps in their knowledge and identify their learning needs, which form the basis of abstract conceptualisation in the third stage. Thereafter, they decide to search for more information to provide the best possible service

3. **Abstract conceptualisation:** This phase is related to constructing theories and applying a logical hypothesis, but this is still in the mind and not yet in action (Lalonde, 2010) as the learner's symbolic representation and systematic planning of actions is targeted to solve certain issues (Kolb et al., 2000). This phase is mainly done in class and other learning environments where the students explore the theories and learn their application to specific contexts, in order to get a deep understanding of the concepts. In this study, the learners build theories and concepts in their minds on how to solve the health problems identified in community and plan the activities that need to be implemented to solve those problems. They look for various strategies that may be used to solve the problems, such as community involvement and other sector representation. The students

search for information about health promotion and illness prevention activities aimed to solve the problems they find in the community, which are mainly based on GOBIFFFF strategies and other health interventions reflecting PHC philosophy.

4. **Active experimentation:** This is the time for the learner to implement his theories in order to test them and solve the problems (Kolb et al., 2000). The success of this phase depends on the degree of student involvement, relevance of the experience and other factors (Fowler, 2008). The learner implements the health promotion and illness prevention activities planned in the abstract conceptualisation phase to solve the identified health problems. This phase requires skills, knowledge and competence to carry out such activities. The students mainly implement GOBIFFFF strategies and other health interventions reflecting PHC philosophy, which are based on community-based learning experiences and primary health care strategies.

## **1.8. Conclusion**

Community-based education is used in various health disciplines, including nursing education, to ensure adequate and relevant nursing training and education and to produce nurses who are able and willing to solve the community health problems, especially in rural, poor and underserved areas, as they achieve their learning objectives. Community-based education was adopted in response to recommendations of the WHO and the South African government in the promotion of primary health care. The literature showed that community-based education is very important in health promotion and illness prevention, where the students provide the different health services in under-resourced and underprivileged areas while they are learning and thus become competent nurses who are responsive to the needs of the population.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Introduction**

Chapter two presents the literature review related to the community-based education approach in promoting primary health care. The review covers an overview of community-based education, community service learning activities and perceptions of students regarding community-based education. It also covers factors affecting community-based education, problem-based learning as teaching strategies, an overview of primary health care and the Millennium Development Goals in South Africa. Information was obtained from the website, “Google”, books from the library and various databases from electronic resources, such as ERIC, Education full Text, CINAHL, Health Source-Consumer Edition, Health source: Nursing/Academic Edition, MEDLINE, and PubMed. The key words that were used are: community-based education, community-based learning, community service-learning, community-based service-learning, service-learning, service-learning activities, primary health care and Millennium Development Goals in South Africa.

#### **2.2. Overview of community-based education (CBE)**

The term community-based education is also known as community based service-learning, service-learning, community based-learning, community-learning, and these terms are used interchangeably (Elwell and Bean, 2011). Community-based education (CBE) is the teaching and learning approach where the students provide structured learning service activities that respond to community needs (Vogt et al., 2011; Lazarus et al., 2008). This educational approach is based on experiential learning where the students are actively immersed in real situations, reflect on their service activities during community service-learning and thus

develop a deep understanding of the content course, while at the same time appreciating the relevance of the discipline as they enhance social responsibility (Vogt et al., 2011; Taggart and Crisp, 2011; Lazarus et al., 2008). Community-based nursing education is seen as a means of achieving educational relevance to the community health needs and a way of implementing a community-oriented educational programme (Mtshali, 2005; WHO, 1987). The community is extensively used as the learning environment in which the students, teachers, community members, and other sector representatives operating in community are actively engaged throughout the educational experience (Mtshali, 2005; Fichardt and du Rand, 2000).

According to Vasuthevan and Viljoen (2003); Mtshali (2005), in community-based education, 50% or more of all learning activity programmes are conducted in a community and students are constantly exposed to community learning experiences to familiarise them with primary health care philosophy. This learning experience is provided wherever people live and work, such as urban, suburban, rural, informal settlement or industries, and at all levels of the healthcare system of the country, such as community, district and general hospitals, primary health care facilities and even in tertiary hospitals (WHO, 1987). The approach provides comprehensive learning experiences focusing on health promotion, illness prevention, and treatment and rehabilitation, which is linked with the re-orientation of health care systems towards primary health care systems for the attainment of the global goal of better health for all by 2000 (Fichardt and du Rand, 2000; WHO, 1987; WHO and UNICEF, 1978). It is a pedagogical approach that puts the students in a rich learning context, bringing together theory and practice, for the attainment of students' learning outcomes, thus contributing to the good of the community (Reising et al., 2008).

It is obvious that learning experiences that take place in all levels of the health care system make the students more knowledgeable of the structure of the health care system and its function relationships and makes them develop the necessary skills and competences needed in every level to provide adequate health services to the population, with a holistic view of the individual and the whole community. Extensive use of the community as a learning environment facilitates application of theory in a real context, links theory and practice and makes learning more meaningful for the students, which may motivate them to learn more, therefore increasing their sense of responsibility in solving community health problems.

According to Reising et al., (2008), community-based education is a powerful option of teaching nurses while at the same time providing service care to the diverse and vulnerable population with multiple unmet needs. It trains the nursing students to become agents of social change, therefore challenging social injustice by promoting equity in accessibility of healthcare services, which is a constitutional and individual right (Daniels, 2008; Republic of South Africa, 1996). It is comprehensible that the provision of health services to the vulnerable population by the students reduces the inequality of health care services and promotes its accessibility to disadvantaged people, regardless their resources. Furthermore, students may choose to practice in the rural and marginalised health settings upon their graduation due to the sensitivity developed during the community-based learning, which may reduce misdistribution of the health care professionals, hence promoting health care service accessibility, quality health care service delivery and social justice in the health care delivery system.

Community-based nursing education provides the opportunity for the nurse students to learn how to address the social, economic, political and cultural factors that affect the health of the population (Mtshali, 2011). It is obvious that by using the community as a learning

environment, students learn the complexity of health and how various factors are linked to determine the health status of individuals, families and the community as a whole, and develop skills of involving multidisciplinary team members to solve health problems of the population and which skills are needed in dealing with complex individual and community health problems.

This approach has been adopted by higher education institutions to replace the traditional way of teaching that was criticized for not equipping students with sufficient skills to address the social problems and for not being responsive to the population needs, especially in rural and under-resourced settings. Students were being trained in sophisticated and technological ways, which were different from the way they were required to work (Mtshali, 2009). The purpose of community-based nursing education is to produce a sufficient number of highly knowledgeable, skilled and competent nurses, who are able and willing to effectively respond to the needs of the population in primary health care system delivery in primary, secondary and tertiary levels (Mtshali, 2009; Frank et al., 2005; Omotara et al., 2004; Fichardt and du Rand, 2000), thus promoting independent and self-confident learners and bringing high quality services to vulnerable people (Vasuthevan and Viljoen, 2003).

Students who are learning in community settings, especially poor settings, will learn how to adapt to shortages of staff and equipment and develop their ability to work with fewer resources and become competent and efficient nurses in assisting individuals and the population as a whole to control their lives. This approach of teaching has its roots in Dewey's progressive educational philosophy and Kolb's experiential learning theory (Kielsmeier, 2011; Felten et al., 2006). For Dewey, students learn better by active involvement in a real context (Neill, 2005) and learn from the consequences of their own actions (Gwele, 2005). Gwele (2005) states that the teaching and learning process in

progressive educational philosophy is driven by constructivism and Kolb's experiential learning theories through student-environment interactions for knowledge construction. Paulo Freire, Theodore Brameld and George Counts stated that the purpose of education is to change society in order to overcome oppression and therefore a responsive educational system must be relevant to the social context in real problems such as hunger, diseases, inequality and other population needs (Bazile and Nauman, 2004; Cohen, 1999; Noddings, 1995). Freire (1921), in his pedagogy of oppressed, argued that education must be transformative, rather than maintaining the system of inequality in society, by raising the consciousness of the students through active participation in solving the social problems in partnership with the community members.

According to Freire, education must be relevant to the reality of the society and work towards the change of social inequality (Freire, 1921). The purpose of education for Freire is to bring about social, economic and political changes in society through preparation of learners to participate in social life and its construction. This education takes place in a real context where questions will be raised about existing inequality. The students will work in the community upon their graduation so that they may take actions to change oppressive conditions in a collaborative and co-operative manner. Dewey argued that knowledge is generated through the process of problem-solving and that learners should be placed in the community to learn the problems of that community from everyday life and experiences and be allowed to practice solving those problems, insisting that the learner learns best through direct personal experience (Walters, 2005; Neill, 2005).

Dewey maintained that education should be linked to, and integrated into, the society in order to be socially beneficial. The students participate in meaningful projects, learning by solving the problems encountered by the society while they develop unselfishness, helpfulness,

critical intelligence, individual initiative and creativity in dealing with social inequity and working towards a democratic society of which they become responsible members (Ornestein et al., 2010; Walters, 2005; Neill, 2005). For John Dewey, education and a democratic society are intimately linked (Neill, 2005). He maintained that the critical responsibility of democratic education was to assist learners to develop character, habits and virtue that would allow them achieve self-realization through use of their full potential and abilities in contributing to the wellbeing of their communities (Westbrook, 1993). For Dewey, the students experience complex new challenges, circumstances that create doubt, and confusion from which they seek solutions through direct involvement with the community that creates opportunities for learning through reflection upon experience (Bringle and Hatcher, 1999).

In seeking solutions, the students engage in activities that are related to the needs of community and reflection, that is central to learning, leads to achievement of educational objectives, personal growth and development (Bringle and Hatcher, 1999). It is seen that community-based nursing education embraces the radical and progressive educational philosophies which applies constructivism and experiential learning theories in teaching and learning processes. The nurse students are immersed in rural, disadvantaged communities where they carry out various authentic community learning activities and other community health projects in order to respond to the health needs of the population as they achieve their learning objectives in partnership with community members and other sector representatives operating in the community.

It is understood that the students make meaning and construct their knowledge based on experience and learn how multiple factors affect the individual, family and community health as whole. Students learn how to solve the myriad of health problems of the population during

community service provision as they develop competences needed in dealing with endless change and challenges of real world situations.

### **2.3. Community-based learning activities**

The community-based nursing education programme is designed in a way that students provide health services that meet the population's needs, especially those who are disadvantaged. Mtshali (2009; 2005); WHO (1987) indicated that students' learning experiences in the community consist of assessing the community health needs, planning the interventions, and implementing and evaluating the interventions.. The same authors argued that the students are expected to conduct a community survey; plan, implement and evaluate a community action plan; conduct home visits and family studies; conduct epidemiological studies; become involved in GOBIFFFF strategies; and provide health education as part of health promotion and illness prevention, working in the community in order to provide service to the community, while they are learning to understand how psycho-social, economic, political, cultural and other factors affect individuals, families and community health.

The community-based education approach is aligned to primary health care principles. The learning experiences of students in community-based learning are congruent with the activities of selective primary health care, which are based on GOBIFFFF strategies aimed to promote and improve the health of the population, especially those who are disadvantaged. In their study, Kaye et al., (2011), showed that the main activities done by students included community diagnosis, health care delivery, family health, applied epidemiology, research methodology and management skills for health services. In Uganda, community-based learning experiences take place in various settings, such as general practices in the

community, rural hospitals and community health centres in order to help students develop awareness and understanding of community health problems, the socio-economic and environmental factors that are determinants to health, and health promotion and illness prevention competences (Kaye, Muhwezi, Kasozi, Kijjambu, Mbalinda, Okullo et al., 2011).

A qualitative study carried out by Frank, Adams, Edelstein, Speakman and Shelton (2005) in USA, indicated that community-based learning experiences took place in various public health departments, prisons, schools and home care and the students' learning activities involved immunization, surveillance, data collection, health education, case management, treatment and procedures. It is shown that this curriculum design is similar to primary health care and places emphasis on health promotion and illness prevention as it promotes health care service to the citizens.

A study conducted by Reising et al., (2008), in USA, indicated that nursing students provided a health education programme about diabetes and heart diseases after discovering the high rate of heart disease/ hypertension and diabetes during their community service learning. This programme has increased the knowledge of the population about those diseases, and 62% decided to adopt healthy lifestyle. The same authors found in their study that health education about sexual risk behaviours provided by nursing students to Latino and African-American adolescents during their community service learning had positively changed their sexual behaviours, where the sexual activities among those who received the health education reduced significantly when compared to the control group.

Another study carried out in the USA by Sullivan (2009) showed that nursing students working with Russian refugees identified various needs, such as oral health, immunization, heart diseases, over-the-counter medication, nutrition, women's health care, disease transmission because of ignorance of western health care system, and cultural and language

barriers, and planned and implemented health promotion programmes in various topics including immunization, oral health, infant feeding, hygiene product use, germ illness transmission, cold weather preparation, the western health care system, healthy eating, women's health issues and assessment of blood pressure for adults. They also taught the refugees some basic English terms, which they could use during appointments with a health care provider.

The findings of a study carried out by Belcher, Conner, Anderson, Branham, Levett, Paddock, Printy, Showalter and Zonca (2012) in USA showed that, during their community based learning, nursing students at Indiana University developed a record system for follow-up of people with latent Tuberculosis infections. These students provided health education to people with TB and did home visits, which improved compliance to the CDC guideline treatment of latent Tuberculosis. This not only had a positive impact on Tuberculosis prevention, but at the same time students developed communication skills and learned the principles of epidemiology in Tuberculosis surveillance.

Lenz and Warner (2011) reported that nursing students identified that the health care service was inaccessible to Somali refugees in the USA due to illiteracy and cultural diversity, which hindered effective communication between the health care providers and refugees. This motivated the students to approach various officials to request that communication be improved by using television and radio in providing health education rather than written format. The students benefited from learning how to deal with multicultural diversity and achievement of learning competence with limited resources, officials became aware of the issue and implemented the necessary strategies and the refugees received health care services.

A study conducted by Erickson (2004) showed that nursing students provided group health promotion to people in an old age home for stroke prevention, stress reduction, blood

pressure screening, weekly medication regime assessment and instruction, fall prevention, group exercise with music, education in nutrition for healthy living, individual health promotion through visits and responding to their questions, injury prevention guidelines, prevention of isolation and encouraging elderly citizen to walk. They also developed tools for emergency data forms. According to Erickson (2004), the community- based service learning helped the students to develop their communication skills, deal with diverse cultures, effectively collaborate with people, understand why some groups of people live in unfortunate conditions and understand the relationships between health related issues and the socioeconomic, environmental and political factors. They also developed a sense of initiative and creativity in order to carry out their plan.

A study conducted by D'Lugoff and McCarter (2005) reported that 14 nursing students used their public health skills of community assessment and problem-solving to serve a vulnerable population they had identified in the community. They provided immunization services to new Somali refugees so that their children would be allowed to attend school, they provided screening for diabetic retinopathy and ensured that those who had diabetic retinopathy received health care services, and they provided health care to the medically underserved and uninsured Hispanic community group. The students gained leaderships and capacity building skills, which are very important, and some became volunteers after community service learning.

Another study carried out by Lashley (2007) reported that the students had implemented various health programmes during their community based learning, including health fairs, health screening and education which targeted homeless people about HIV and AIDS, sexually transmitted infections, hepatitis, prostate cancer, hypertension, diabetes, tuberculosis, foot care, dental care and smoking cessation. After advocacy, the Department of

Health personnel were engaged on a regular basis in counselling and testing for HIV and AIDS, providing services and follow-up treatment for those who were TB positive. This resulted in 33% who completed treatment as against 11% who had previously completed treatment.

It has been shown that nursing students can help vulnerable groups in the community to access the health care services and participate vigorously in health promotion and illness prevention, while at the same time achieving their learning objectives. This approach is in line with primary health care principles, which are believed to improve the health of population by reducing health care access disparities among population. These studies show that community-based learning is a powerful tool of service provision that reduces inaccessibility to health services.

Mtshali (2009) showed that the teaching strategies that are used in community-based education to promote active learning are problem-based learning, group-based learning, experiential learning and self-directed learning. These qualitative studies show that experiential learning activities are designed for the community and aimed to equip students with the ability to work in community settings and improve the health of the population. According to Salmon and Keneni, ((2004), the students work in small groups and choose peer group leaders to coordinate their activities, and mentors are assigned to facilitate, supervise, assess and grade the students. These strategies are believed to promote self-directed learning which fosters lifelong learning, analytical and critical thinking skills, problem solving skills, and communication and team work skills, which are needed to graduate, to work in teams and to become independent practitioners.

Mtshali (2009) stated that in active learning, students are expected to search for relevant information to solve the problems they have identified in the community in order to

contribute to the wellbeing of that community and satisfy their learning needs, while they become lifelong learners who can adapt to the challenges of continuous social change.

It has been shown that this educational approach fits with the primary health care principles of social justice and is aimed to reduce social inequality in health service delivery. The overall objectives of community-based education in the health profession, and nursing education in particular, are to produce a sufficient number of highly qualified health professionals who can serve the community and meet the health needs of the nation at community level and produce community-oriented health professionals who are able and willing to serve their communities and deal effectively with the health problems at primary, secondary and tertiary levels (Frank et al., 2005; Omotara et al., 2004). It has reciprocal benefits, one for students in achieving their learning objectives, and the other for the community in receiving the services responding their needs.

Once they have been trained in this context, students develop a sense of belonging to the community and, feeling that they are members of that community, may choose to work there, which is one of the aims of primary health care. It is believed that this will increase the retention of health professionals in rural health facilities; hence the rural population will get health services as their basic right, which works in favour of primary health care oriented towards social justice. This educational approach may contribute in solving the problem of misdistribution of health professionals in health care facilities, especially in remote and poor regions, and equip the graduates with relevant skills for providing health services to rural people, and hence the achievement of better health for all, as advocated by the World Health Organisation.

## **2.4. Advantages of Community-Based Education**

A number of scholars identified various advantages of community-based education to the community and the students. A study by Bentley and Ellison (2005) showed that out of 20 students engaged in community service learning, 18 (90%) became aware of the needs of the disadvantaged and underserved community where they served during their learning activities and learned to appreciate the diversity by improving communication in real life situations, while 19 (95%) developed responsibility to serve the community and 15 out of 20 acknowledged that they had discovered their own biases and prejudices. The same authors stated that the students engaged in community-based learning learnt how social responsibility is related to professional practice. Those students achieved higher marks in course subjects than their counterparts in the control group. This shows that community-based education helps the students understand the course content better than memorization

CBE empowers innovation, the development of friendships, feelings of satisfaction, increased understanding of social problems, a strengthened sense of social responsibility, group work, group discussions and group projects, creativity, possible development of career goals and fosters connection with the community (Elwell and Bean, 2011). It is in this partnership with the community where the students feel that they belong in the community and feel responsible for persons in the community. In high quality service learning, the students collaboratively solve real problems, directly developing cognitive and academic skills critical for success.

Community-based education enhances the integration of theoretical knowledge and practice of nursing concepts and the development of team work and communication skills, the ability to adapt to endless change in health sector, embracing innovation, enhancing social

responsibility among students, understanding diversity and developing sensitivity to cultural awareness (Govekar and Rishi, 2007). By linkage of real world situations as learning opportunities and service, through civic engagement students develop a real understanding of the world and acquire the knowledge, skills and attitudes they are supposed to acquire (Kielsmeier, 2011; Govekar and Rishi, 2007).

According to the findings of the qualitative study conducted by Groh, Stallwood and Daniels (2011), community-based education helps students to develop leadership skills and social justice for transformative action, which is needed for nurses to take action for social change. According to Mtshali, (2009), it promotes the integration of subjects for the students and they get a holistic and comprehensive image of the problems which the population is facing. Pentrice and Robinson (2010); Elwell and Bean (2011) found that the students in CBE develop a high order of thinking ability, such as critical thinking, analysis, synthesis and valuation skills, and problem solving skills as they achieve the learning competencies expected from a graduate.

According to Elwell and Bean (2011), community-based education helps the students develop team work; civic responsibility; global understanding; citizenship; academic development; and educational success, while according to Hunter and Swiggum (2007), it promotes personal and intellectual growth and empowers students to be contributing citizens to their community. It provides the opportunity for students to increase their cross-cultural awareness and challenge stereotypes, in order to provide service and learn comprehensively (Kazemi, Behan and Boniauto, 2011). In a quantitative study by Nokes et al., (2005), it was shown that while community-based education helps the students develop civic engagement, there was no difference on pre and post-tests on critical thinking skills indicated in other studies on community service-learning. The students who develop these skills and

competences are able to work with multiple partners and are willing to work for vulnerable populations as they become activists for social justice. The important role of community-based education is to train health professional graduates for rural practice by promoting their understanding of the rural and underserved community health issues and encouraging them towards primary health care practice (Kaye et al., 2011; Okayama and Kajii, 2011).

The study conducted by Okayama and Kaji (2011) in Uganda showed that the students who underwent community-based learning displayed the motivation to work in rural communities and that motivation was associated with health education learning activities. Also, another study conducted by Macnab, Kasangaki & Gagnon (2011) revealed that 42% of students who experienced community-based learning displayed their wish to work in rural or small towns after their studies.

The results of a study carried out by Kaye, Mwanika, Sekimpi, Tugumisirize & Sewankambo (2010) in Uganda, indicated that a community-based training experience influenced medical students to choose working in rural and underserved areas of Uganda, as opposed to their counterparts who underwent the traditional teaching approach, and the students of community-based education showed greater motivation to take up employment in rural areas and displayed confidence to practice in rural areas (Kaye, Mwanika and Sewankambo, 2010). It has been shown that community-based education programmes have various advantages on development and growth of communities and students alike.

## **2.5. Perceptions of students about community-based education**

The perceptions of students regarding community-based education may influence how they practice their service-learning and how they develop their academic and professional competences. The study conducted in Uganda by Kaye, et al, (2010) indicated that the

majority of students had positive perceptions on community-based education, saying that community-based education enabled them to comprehensively explore and understand the health conditions in rural areas, see a variety of health conditions which would not be seen in a teaching hospital and gave them the opportunity to understand the health care system. The same authors revealed that there were some students who had negative perceptions on community-based education, revealing their worries about the absence of facilities such as the internet and libraries to promote self-directed learning, inadequate support from the faculty and being cut off from friends and colleagues. These negative perceptions may have an influence on how they embrace community service-learning and their future careers. This difference of perceptions (positive and negative) may be due to the background of the students and whether they come from rural or urban areas.

The findings of a study carried out by Basi (2011) revealed that students reported that service-learning was enjoyable and helped to link the theoretical knowledge to practice, which enhanced their competence and their social and personal development. The study conducted by Reising et al., (2008) revealed that nursing students perceived that their service learning increased their health promotion, research, civic engagement and health needs assessment skills. McMenamain, McGrath and D'Eath (2010) reported that Irish Healthcare students perceived that community-based service learning helped them to become aware of the injustice and inequity in society and gain insight of how the marginalized people struggle for life, and it made them feel like taking revolutionary actions. They also reported that community service learning it is more meaningful because it is associated with deep learning, which motivates the students become committed to their learning materials. Service-learning is tool of social justice and may inspire the students to choose their future workplace in rural areas to promote accessibility of health service to the disadvantaged groups.

Another study conducted by Chang, et al., (2011), showed that the students valued community-based education as it allows them to see the relevance of their training and experience real world situations similar to their future profession, and applying their knowledge in a community setting helps them to develop team work abilities and cope with immersion in a new life, new environment and new culture. Eighty percent (80%) of the students recommended other students to their service learning settings. Findings of a study conducted by Jinadu, Ojofeitimi and Oribabor (2002) in Nigeria, indicated that 45.3% of the students perceived the objective of community-based education as identification of community health needs, 34.4% perceived that community-based education increased sensitivity to community needs, 9.4% said that it was for health education while 10.9% mentioned the conduct of health centre activities. In this study, 52.5% perceived that community-based education was very relevant to their training.

A study conducted by O'Sullivan, Martin and Murray (2000) revealed that community-based learning was perceived by the students as an appropriate way of teaching and learning psychosocial issues in the health field, increasing students' awareness about client autonomy and improving students' communication skills. The study conducted by Barner (2000) indicated that students had positive perceptions about cultural diversity towards underserved population groups where they indicated that service learning had helped them develop the ability to communicate with elderly people, provide services to people from culturally different backgrounds and that being involved in community service helped them develop an understanding of social issues, be less judgmental and avoid stereotyping.

The study also found that students had positive perceptions about community service, saying that service learning was beneficial in helping them to grow as professional practitioners and they would recommend their colleagues to undertake service learning. In addition, 60% of the

students stated that they would return to work in the community. The study conducted by Bentley and Ellison (2005) showed that students perceived service learning as having the potential to help them develop the ability to relate their knowledge into a real world context as they develop confidence and that it makes students become aware of health issues encountered by the disadvantaged population groups. In other words, it helped students develop multicultural sensitivity and inspired them to serve the community.

Another study conducted by Piper, DeYoung and Lamsam (2000) showed that 64% of first year and 86% of second year students perceived service-learning as an educational approach that enhanced their respect for individuals, awareness of others in need, confidence in interacting with others and provided the opportunities to improve their communication skills. Sixty-four point four percent (64.4%) stated that it was effective way of enhancing awareness of personal and social responsibilities.

A study carried out in a college in New Jersey by Scales (2004) showed that students perceived community service learning as a very interesting and wonderful programme. They said they benefited from the positive and meaningful learning experience and the community benefited from the service. The same author stated that the students perceived community service learning as having the potential to facilitate social integration. They said that community service learning requires working together in groups for a common project, which helped them to develop social interaction skills, and social and personal relationship with others. They said they felt part of community and were satisfied to serve the community while they gained competence.

The study conducted by Sheu, Zheng, Coelho, Lin, O'Sullivan and O'Brien (2010) showed that the students perceived that their service learning had value and 86% of the students reported that working in immigrant and underserved populations reinforced their commitment

and interest to serve that population, while 39% perceived it as an effective method of increasing communication skills and 32% reported a sense of personal fulfilment. The students in the study of Sheu et al., was composed of various professions, and 65% reported that service learning gave them the chance of learning inter-professional collaboration, 46% said that it helped to learn other 'professional roles' and 31% reported that it increased team work collaboration skills. These perceptions of community service-learning as a tool for enhancing understanding about other professional roles is very important in nursing education because the nurses are required to work in multidisciplinary teams with other health professions in order to take care of people, since promoting health demands skills to work with various stakeholders and know how to approach each person according his/her position in society.

The study conducted by Critchley, DeWitt, Khan and Liaw (2007) showed that 47% of the students perceived that community-based placement increased their interest to practice in rural areas and 70% perceived that it increased their interest in rural health issues. This study revealed the same findings of a study conducted by Eley, Synnott, Baker and Chater, (2012) in Australia where 70% of medical students who underwent rural training perceived that it greatly encouraged them towards rural practice and their interviews indicated that they perceived rural training experience makes students more aware of what is happening in rural areas and opens their eyes to rural lifestyles, and the needs and benefit of working there.

It has been shown that many studies indicate the positive perceptions about community-based education and this should have a positive impact on students' service-learning and community outcomes. A study conducted in public schools in America revealed that 53% of participants perceived that service-learning helps the students become more active members of the community, 51% perceived that it increases student knowledge and understanding of

the community and 48% perceived that it meets real community needs and/or fosters a relationship with the community. It was also revealed that 46% of the students perceived community-based education as tool to increase altruism and caring for others, while 26% perceived that it improves their personal and social development (Spring, Grimm and Dietz, 2008).

These studies show that, although a few worries were raised, students generally had positive perceptions regarding community-based learning. This positive perception of students may influence how they embrace the approach. Enthusiasm to learning material will enhance their learning process and students may exploit learning opportunities and improve the quality of service provided to the community.

## **2.6. Factors affecting community-based learning/service-learning**

As an innovative approach to teaching and learning, there are many factors that may influence the success or failure of community-based education. Bailey, Carpenter and Harrington, (2002) argued that strong partnership with the community, support from the institution/interested faculty, motivation of the students regarding community service-learning and reflection of learning experiences are the main factors contributing to the success of community-based education. Institutional support is very important for community service-learning. According to Bailey et al., (2002), the institution prepares the learning environment, arranges orientation of students, maintains records of hours and credits, and serves as liaison of students and community.

The study conducted by Mtshali (2009) indicated that students are provided two weeks of orientation about community-based education and this involves introduction to community-based education, cultural diversity, group dynamics, primary health care, community entry,

community participation, how to do a rapid appraisal and epidemiological studies, learning contracts as a means of promoting self-directed learning and a visit to the community placement. This orientation is very important to support the students and alleviates any stress and anxiety which may be caused by unfamiliar situations or environments. The orientation also provides clear information in order to avoid confusion and inform students what is expected from them.

A quantitative study conducted by Salmon and Keneni (2004) showed that difficulty in self-expression and domination of peer group leaders were factors that hindered learning, whereas having interest in community-based education fostered learning. Those authors found that willingness of the mentor to answer the questions, praise the students' answers and facilitate community-based education, and the relevance of learning environment were factors that contributed to learning, whereas mentors who emphasized students' mistakes or made irregular contact with students were identified as hindering factors.

A study conducted by Pillay and Mtshali (2008) showed that the students need clinical supervision to support them emotionally and academically so that they may grow as competent professionals. These authors found that clinical supervisors were supportive when they assisted the students to solve social and academic issues as empathetic people. This research indicated that the time allocated to clinical supervision was short, where 61% of participants reported that the clinical session was below 15 minutes and 21% indicated that it took between 15-30 minutes. It is shown that supervision is very important in learning environments where the student need someone to talk to when they have problems which supports them towards learning objectives.

The supervisor has the obligation to create opportunities for reflection, and foster critical thinking and lifelong learning (Bos, Löfmark and Törnkvist, 2009). The role of supervisor is

providing support, supervision and assessment of students during their period of clinical learning practice (Bos et al, 2009). According to Betony (2012), the role of supervisor or mentor is to introduce the students into the community and to facilitate contact with other partners to ensure rich learning experiences, but the support students receive depends on the mentor's enthusiasm, network of contacts, understanding the students' learning needs and ability to manage the workload. If learning is to occur, the supervisor or mentor or teacher needs to encourage the students to reflect upon their learning experience, otherwise it will be like volunteerism. It is understood that the supervision of students is very supportive and the supervisor should spend regular time with the students in order to facilitate their learning and provide them with assistance, when needed.

A systematic review conducted by Jokelainen, Turenen, Tossavainen, Jamookeeah and Coco (2011) on mentoring in clinical nursing reported that the mentor guides the students, makes resources available, allocates enough time and meets regularly with students in order to ensure attainment of the academic objectives, and supports the students so that they may grow personally and professionally. The mentor encourages critical thinking and problem-solving skills, encourages the students to ask questions and ensures that they get the correct answers to their questions, stimulates co-operation and is there for the students (Jokelainen, et al, 2011). When the mentor is not there for the students, they feel alone and rejected, there is no one to stimulate their thinking and may become confused about what to do and therefore learning does not take place.

The lecturer in clinical placements has various roles including supporting, directing, motivating, facilitating, problem solving, troubleshooting, advocating and monitoring (Price, Hastie, Duffy, Ness and McCallum, 2011). The study conducted by Tang , Chou and Chiang (2005) showed that a good attitude of the teacher and an interpersonal relationship between

the teacher and students was perceived as an important factor in facilitating nursing students' learning in clinical placement in order to enhance learning. Another study conducted by Peters (2011) showed that lack or inadequate preparation of service-learning that resulted in a lack of logistic were factors that affected students' service-learning and quality of service provision. Peters (2011) stated that some students are less motivated when the community partners are not cooperative and therefore hinder the students' learning due to lack of variety of learning experiences and insufficient experience to reflect on.

According to Peters (2011), service-learning requires enough time for its preparation in order to negotiate and ensure adequate service learning experiences that meet the academic requirements as learning objectives. Various studies revealed that lack of time of the teacher negatively affects community based-learning, whereas mentors and advice from colleagues are helpful in service-learning (Abes, Jackson and Jones, 2002; Al Kadri, Al-Moamary, Elzubair, Magzoub, AlMutairi, Roberts and Van der Vleuten , 2011; Rosing, Reed, Ferrari and Bothne, 2010). It is understood that lack of time of the mentors or mentors trying to balance other professional responsibilities cannot help the students reflect on their learning experience and thus inhibit the learning from experience and the quality of service provision.

Furthermore, Abes et al., (2002) found that service learning was hindered by the lack of logistics and funding to prepare and organize service learning, lack of instructions and coordination and lack of institutional support. The misunderstanding or resistance of students to the approach may also affect community service-learning. According to Peters (2011), some students get confused about what they have to accomplish, which leads to low motivation and impacts negatively on the learning process, academic outcome and quality of service provision.

The kind of supervision the students get in clinical learning has a large role to play in fostering students' learning. The study conducted by Al-Kadri (2011) indicated that some teachers act as a role model, and their way of coaching and guiding, and their experience and commitment to clinical teaching were identified as factors enhancing clinical students' learning. These authors stated that the flexible attitude of teachers in relation to the students, their knowledge and their availability to support and motivate the students were stimulating factors that foster learning in clinical learning environment.

Al Kadri et al., (2011), stated that some teachers do not like to teach and do not devote their time to the students, while others are disorganized which demotivate the students and lessen their interest in learning. The unavailability of the teacher is a source of stress and anxiety for students, which affects their learning in clinical learning setting (Al Kadri, et al., 2011), and Rosing, et al., (2010) revealed some of the factors that hindered students' community learning, reporting that students complained about learning environments that were not prepared to accommodate them, limited resources, lack of interaction with the community members and lack of communication between the stakeholders, all factors which would have made their learning experience more meaningful.

Some of the studies revealed that lack of communication between the university and the community resulted in site members being unaware of the goals and learning objectives of the students. Lack of communication between the community partners resulted in inappropriate goal-setting, which caused confusion as students were unclear about what was expected of them or their responsibilities in the community. Lack of supervisor skills and competence in supervising and teaching the students were also identified as hindering factors to learning (Peters, 2011; Rosing et al., 2010). Rosing et al., (2011) found that the relevance of the community and the time spent in the community have an impact on the learning. The

more time students are able to spend in a relevant community, the more they get a sense of belonging and feel that they are having a positive impact on the community, the more they learn, and conversely the less time they spend in a community, the less they learn. Several other hindering factors that were identified were the community-based learning schedule conflicting with the time table of other courses, lack of transportation to the community learning sites and safety. It is understood that students benefit from community service learning and appreciate support from institutions and the community, and even from their colleagues, which is very important to achieve the community-based learning objectives. It was found that the time spent in the community varied between 5 to 25% of the clinical placement curricula (Reid and Cakwe, 2011).

A peer review conducted by Reid and Cakwe (2011) indicated that some communities are not involved in community service-learning and that some universities in South Africa have stopped community service-learning in rural settings because of fear for the students' safety. The partnership is very important if the learning in community is to occur and both parties are to benefit from the service-learning.

## **2.7. Problem based learning (PBL) as teaching strategy in CBE**

Problem-based learning (PBL) is a student-centred instructional method that uses real problems as the context of learning for students to work collaboratively in small groups to learn problem-solving skills, acquire knowledge and develop lifelong learning skills through a process of facilitation with the facilitator (Sockalingam and Schmidt, 2011; Schmidt, Rotgans and Yew, 2011). It provides students with experience in learning to solve complex, real world situations. The process of finding a solution and its design equip the students with transferable skills such as communication, decision-making, effective team work and

metacognition skills that are needed in health professions and increase of internal motivation while they construct multiple, extensive and flexible knowledge by integrating various domains in addressing health problems (Murray-Harvey, Curtis, Cattley and Philip, 2005; Kenny and Beagan, 2004; Hmelo-Silver, 2004). It was developed to improve health profession education by shifting from the lecture and subject-based teaching approach to an interdisciplinary approach, which is directed by real life health problems (Alexander, McDaniel, Baldwin and Money, 2002).

According to Barrows (1988), cited in Scaffa and Wooster (2004), the problem-based learning scenario has three components which are problem identification, self-directed learning for problem-solving, and analysis of learning and knowledge application. For Celia and Gordon (2001), however this teaching method has five primary components which are problem-based, student-centred, reiterative, small group and facilitation. Although these authors describe the components of problem-based learning differently, the process, characteristics and learning outcomes are same, which support the development of students' leadership attributes for transformation and performance of health systems through adequate and appropriate teaching methods.

This self-directed learning approach has been used in various fields of health profession education, including nursing (Yoshioka, Suganuma, Tang, Matsushita, Manno and Koza, 2005; Akinsola, 2005; Kenny and Beagan, 2004; Hmelo-Silver, 2004). Self-directed learning empowers students with the ability to locate relevant information, integrate theory and practice, apply knowledge and skills to solve complex real life problems and use appropriate resources in an intellectual way as they become lifelong learners (Savery, 2006).

The PBL pedagogy is used in community-based education programmes and/ or in community-oriented programmes in nursing education in order to help the students acquire a

deep understanding of the concepts and their usefulness through learning activities and become competent and responsive to the needs of individual patients, their family and the community as whole (Mtshali and Middleton, 2010; Mtshali, 2009). An authentic health problem is presented to the group of students for discussion, they use their existing knowledge to try to solve the problem, they identify knowledge gaps and what they need to know to solve the problem and then plan learning strategies to meet their learning objectives (Williams, 2001). Reflecting on real life situations represents relevance to the students' future careers and allows them to think broadly of alternative options to answer the questions (Clouston, 2007; Yoshioka et al., 2005). It fosters active, creative, explorative and discovery learning skills (Clouston, 2007).

Various authors found that PBL helps the students develop high critical thinking skills, effective problems solving skills, collaboration, communication, self-directed learning and lifelong learning skills (Clouston, 2007; Savery, 2006; Hmelo-Silver, 2004; Kenny and Beagan, 2004; Brown, Collins and Duguid, 1989). According to Barrow (1994; 1996), cited in Savery (2006), problem diagnosis and problem solving require a hypothetical, deductive reasoning process and multiple knowledge in various disciplines. Scaffa and Wooster (2004) argued that in PBL, the students learn problem identification, self-directed learning and problem-solving skills.

Graduates in the health profession meet with various health problems that require hypothetical deductive reasoning in their solving process. Furthermore, the health system is being challenged by endless change, which requires health professionals to be adaptable in responding to the needs of the society and act effectively in seeking solutions. PBL reflects this process as students, working in groups, are required to solve real life problems (e.g. health problems) which they encounter in the community through the use of their cognitive

knowledge. PBL in health profession education has the potential to enhance humanist skills through team working, and improve clinical performance and attention to patients and other transferable skills needed in health profession (Kenny and Beagan, 2004). It also enhances clinical reasoning, makes the learners better problem solvers, makes them more self-directed and teaches them to use prior knowledge to enhance learning (Klunklin, Subpaiboongid, Keitlertnapha, Viseskul and Turale, 2011). Due to the design and learning process of PBL, Conway, Little and McMillan (2008) found that their students developed cooperation, active learning, collaboration among peers and across the institution, and fulfilment of high expectations and respect for diversity.

Instead of memorization of facts, as is done in a traditional curriculum, problem-based learning is designed around a real-world situation which is similar to what the students will encounter in their professional lives. The students are allowed self-directed time to search for information and analyse it on their own, in order to solve the problems they encounter, (Mellon and Mellon, 2006; Burke, Matthiew, Field and Lloyd, 2006), which makes them develop autonomy, creative skills, responsibility, initiative and information seeking skills, deep learning and lifelong skills (Chan, 2008).

Various studies have revealed that the students in PBL perform better. Schmidt, Vermeulen and Van Der Molen (2006) reported that medical graduates of a problem-based learning school scored higher on 14 of 18 professional competences than their counterparts at a traditional institution. The study showed that the graduates of the problem-based learning school had much better interpersonal skills, better competences in problem-solving skills, self-directed learning and information searching skills and better ability to work and plan efficiently.

A systematic review conducted by Koh, Khoo, Wong and Koh (2008) on the effect of problem-based learning on physician competencies indicated that in eight dimensions of competences (overall, technical, research, social, cognitive, managerial, teaching and knowledge), the physicians who had participated in problem-based learning presented high team work skills; appreciated social and emotional aspects of health care; understood the legal and ethical aspects of health care and had appropriate attitudes towards personal health and well-being. They had good communication and interpersonal skills in the social dimension; practiced continuity of care in the technical dimension; coped and dealt with uncertainty in the cognitive dimension; and used computers and resources for information in the research dimension. Chen, Fang, Lin and Cherng (2002) found that the students in PBL take care of the person as a whole, not as separate entities and are able to adapt to the endless change that occurs within the health profession.

According to Brown et al., (1989), a concept is well captured when it is learnt in the context that it will be used, thus making it useful for the individual and society. The meaning and interpretation associated with a concept depends on the context in which it is learnt, This fosters learning and understanding which is then enhanced through activity (Brown et al., 1989). The use of a real life context as the source of learning is based on the constructivism learning theory, which is based on the theories of Jean Piaget, in his cognitive constructivism, and Levy Vygotsky, with his social constructivism learning theory (Rideout, 2011).

The constructivists state that, instead of being passive, students actively construct their own knowledge from an experience in order to gain deep understanding through continual social interaction and participation in meaningful and relevant learning activities (Hung, Jonassen and Liu, nd; Rideout, 2011; Tam, 2000). For the constructivists, experience plays a greater role in the learning process and students are actively involved in making sense of the

experience in the process knowledge construction. Learners, with their peers, interact with a more knowledgeable person, who is the facilitator, who questions them in collaborative ways in order to achieve their high zone of proximal development as they become independent (Rideout, 2011). Perkins (1991) argued that the students are provided with a complex situation to solve with the guidance of teacher, who helps them to reach their high zone of proximal development as they construct their meaning and understanding and become independent thinkers and problem solvers.

Problem-based learning is characterized by self-directed learning for students where they individually and /or collaboratively take responsibility for their learning and self-assessment, or peer assessment; and the authentic ill structured problem constitutes the beginning point of learning, with the facilitator providing constructive feedback to ensure the achievement of learning objectives (Badeau, 2010). All learning activities are planned and conducted around an authentic problem for the solving process. Students engage in self-reflective learning as they identify the learning needs and search for relevant information to solve the problem and the teacher acts as facilitator who models and supports the learning process and facilitates the group process and dynamics, and acknowledges, praises and probes students' efforts. The facilitator does not act as transmitter of knowledge and is prohibited from answering the questions (Hung et al., nd; Frank et al., 2005).

This teaching method is very important in the community-based education approach because it equips the students with the skills they need in the health and nursing profession, particularly as they become competent and responsive to the needs of the community. PBL is used as a teaching strategy in the community-based education approach in order to help the students acquire a deep understanding of the concepts and their usefulness through learning activity. The sharing and group discussions in PBL help the students construct their

knowledge, and the process of attributing the interpretation and meaning to the situations encountered in community is based on the context of the problem and negotiating alternatives and choosing the best solutions to those problems in that context. This enhances the students' ability to think and construct their knowledge so that, as nurses, they will be able to respond to the population needs and adapt to the endless change of health conditions.

## **2.8. Facilitation in problem based-learning as a teaching strategy in CBE**

The facilitation of problem-based learning students in community-based education programmes requires nurse educators to shift from conventional to student-centred teaching methods (Lekalakala-Mokgele, 2010; Savery, 2006). In a community-based education programme, the starting point is the health problem, where the nurse educators have complex roles in facilitating the development of students' reasoning and critical thinking skills that are required in the problem solving process (Hung et al., nd; Fontes, Mendes Neto and Pontes, 2011).

It is a teaching process where, rather than being taught, the teacher and learner are seen as participants in a learning process in which students are actively engaged in acquiring and managing knowledge (Bruce, Klopper and Mellish, 2011). They are provided with opportunities to explore the issues and directed in reciprocal respect through critical reflection (Dickson, Walker and Bourgeois, 2006). The success of PBL depends on the ability of the tutor to shift from the traditional way of teaching to adopt PBL facilitation and structure the problem and guide the debriefing of students (Lekalakala-Mokgele, 2010; Savery, 2006).

According to this method of teaching, the teacher does not transmit the knowledge as in the teacher-centred approach, but rather facilitates the construction of knowledge (Fontes et al., 2011). According to Papinczak, Tunny and Young (2009), the facilitators provide support to the students, boost their knowledge acquisition of content, develop their critical thinking skills and facilitate the reflective process. Jones (2006) asserted that the facilitator helps the students develop discussion skills and the ability to pose hypotheses, and guides them in identifying knowledge gaps, searching, discriminating, extracting and interpreting information, approaching the problem or the concept, posing multiple solutions to one problem and testing the solutions to the problem.

PBL emphasizes active and self-directed learning that demands collaboration (Hung et al., nd; Fontes et al., 2011; Papinczak et al., 2009). In collaborative learning, the students work together in small groups in order to identify their learning needs in the process of solving their common goal, and apply new knowledge to address that problem (Fontes et al., 2011). Papinczak et al., (2009), argued that the students need strong support from the institution and the tutor's scaffolding skills if learning is to occur (Papinczak et al., 2009). This scaffolding occurs when the teacher is able to help the students to reach their high level zone of proximal development.

The term scaffolding was coined by the social constructivist, Levy Vygotsky, who stated that the zone of proximal development is reached by the students when they are assisted, guided, coached and supported by the teacher or another colleague who is more knowledgeable about the subject matter (Papinczak et al., 2009). Scaffolding of critical thinking needs teachers who know how to question, probe, suggest alternatives, challenge students' understanding and support reflection for learning (Papinczak et al., 2009).

To do that, the teacher structures the tasks and asks the questions that make the students think beyond their current intellectual development, recognizes their problems, and provides assistance, guiding the students by challenging them, modelling and coaching their learning processes and providing resources when needed (Papinczak et al., 2009). In this process, the facilitator does not answer the health problem but, having identified their competence deficiencies for problem solving and in conducting self-directed learning, rather presents a health problem that exists in the community and, through brainstorming, guides the students in generating a hypothesis, analysing and formulating the problem, providing initial alternate solutions for the problem, searching for relevant and useful information and then applying new knowledge to solve the problem (Hmelo-Silver, 2004).

As the students develop confidence, autonomy, competence and mutual responsibility, the facilitator slowly withdraws (Meyer and Niekerk, 2008; Azer, 2005). This method of facilitation in PBL requires a collegial, cooperative and collaborative student-teacher relationship as an authoritative teacher does not help learning in PBL. Facilitation of problem-based learning in a community-based education programme is the key for success in the preparation of nurses who can work in the community as competent nurses who are responsive to the needs of the population.

## **2.9. Brief overview of Primary Health Care Philosophy**

The concept of primary health care is defined as

*“essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their*

*development in the spirit of self-determination and self-reliance. It focuses on the overall social and economic development of the community and bringing health care closer where the people live and work constituting the first element of continuing health care process” (WHO and UNICEF, 1978).*

This health care system has had a great influence in many developing countries (Cueto, 2004) and is believed to promote accessibility of health care to all citizens, especially in disadvantaged rural and remote areas (Nteta et al., 2010).

The philosophy of primary health care is based on a holistic understanding of wellbeing, rather than absence of illness, and acknowledgement of multiple determinants of health including social determinants, such as housing; sanitation; education; individual and community involvement in health care planning and provision; equity in health care and prioritising provision of health care services to the most needy; a service that is socially, culturally and technologically accessible, acceptable and affordable; and health promotion and illness prevention that is evidence based (Australian Capital Territory, 2010).

This philosophy of primary health care lied on different pillars such as universality, equity, quality, efficiency and sustainability (WHO, 2003). Based on this philosophy, international conference on primary health care held in Alma-Ata in 1978, declared active community participation in health care programmes, social relevance, collaboration with other sectors, health service provision and health promotion, and use of appropriate and effective technology in health care delivery as five components of PHC (WHO, 2003). The purpose of this philosophy is the achievement of better health for all through provision of promotive, preventive ,curative and rehabilitative health care services using immunization, health education, nutrition, safe water and basic sanitation, maternal and child health care including

family planning, prevention and control of locally endemic diseases, appropriate treatment of common diseases and injuries, and provision of essential drugs (WHO and UNICEF, 1978).

In the late 1970s, the concept of primary health care started to be heard in the USA, where the hospital based health care system of developing countries was criticized for emphasizing curative rather than prevention of diseases. medicine was accused of not only being irrelevant, but also detrimental and physicians were seen as expropriating health care from the public as more than 50% of people worldwide did not have access to health care at all and many of the remaining population did not receive the health care that responded to their health problems (Cueto, 2004). According to Cueto (2004), the term, primary health care, was used for the first time in the USA in 1970s in the *Journal of Contact*, which was founded by medical missionaries who worked in developing countries, providing health training to the village workers at grassroots and equipping them with essential drugs and simple methods.

Primary health care started in South Africa in the 1940s at the Pholela Health Centre in rural KwaZulu-Natal. Dr Sidney Kark, his wife, Dr Emily Kark, Eduard Jali, a medical aid graduate from Fort Hare University, and Amelia Jali, a graduate nurse from McCord Zulu Hospital, aiming to act as a model to all South African health centres, initiated a policy of community-oriented primary care by providing comprehensive preventive and curative health care to the community (Kautzky and Tollman, nd).

According to Kautzky and Tollman (nd), the Pholela Health Centre provided integrated curative and preventive health services to the community, focusing on comprehensive care comprising of health education, health promotion, family, the community and population as whole, not only as individuals. They endeavoured to identify and address the social determinants and situations that were related to the health problems of that community, such as water and sanitation, hygiene, nutrition, housing conditions, occupational threats,

especially on vulnerable population groups such as women and children. They incorporated programmes on immunization, child growth monitoring, breastfeeding and baby food supplementation, and family planning. They established community child care, school feeding schemes, and household and community gardens. The community was empowered by being involved in planning and decision making with regard to health service delivery, which made the health service culturally and socially accessible and acceptable (Kautzky and Tollman, nd).

In 1946, the Institute of Family and Community Health was founded in Durban which collaborated with the University of Medicine in Natal in order to strengthen and support multidisciplinary community training and strengthen the development of planned health centres (Kautzky and Tollman, nd). Under the leadership of proponents of PHC, such as Dr Kark, Dr Gluckman, George Gales, who had decision making positions in the health system of South Africa, the PHC system was implemented, and in 1949, 44 health centres throughout the country got funding from the Rockefeller foundation and provided a similar service to their communities as the Pholela Health Centre.

In 1960, all efforts to build a primary health care system were destroyed and became null and void after the United Party was defeated and the National Party took power and withdrew financial and political support. The nursing profession was headed by Charlotte Searle who, concerned by the prestige of Pholela Health Centre approach, blocked the implementation of a national health system. The proponents fled the country and the nurses and doctors who had trained at the Institute of Family and Community Health went to clinics or became involved in teaching because they had no other options (Kautzky and Tollman, nd). Due to lack of government support and resources, many clinics were closed and although some organisations and missionaries continued to provide community-based care, the majority of

South Africans suffered from discrimination and inaccessibility to health services. Although some Ministers tried to implement the PHC system, they failed because the ideology of the government at that time did not accommodate equity among all South Africans. It was only in 1994, when the African National Congress took power under the leadership Nelson Mandela that primary health care was implemented to drive the health system of South Africa (Kautzky and Tollman, nd).

In 1978, at an international conference on primary health care held at Alma Ata, USSR, the World Health Organisation declared that all countries should strive to achieve better health for all by 2000, and all countries were called to embrace the PHC model (WHO and UNICEF, 1978). The declaration can be seen as declaration of human right because to attain the above goal and requires the partnership of all sectors to address existing inequality in health service delivery. It follows, therefore, that primary health care is oriented towards social justice (WHO and UNICEF, 1978) and (Cueto, 2004).

The advocacy of PHC was done mainly by medical missionaries who were members of the WHO and Dr Halfdan T. Mahler, Director General of the WHO from 1973-1988, who said that for him social justice was a holy word (Cueto, 2004). This declaration stated that health services should not be organised around means, but rather organized around the needs of the population, thus reducing disparities in health service provision among the citizens, increasing partnership and participation of all stakeholders in health service provision and integration of health services in all sectors of the country's life.

In Australia, primary health care is delivered in the community outside the hospital so that the community members can access the health services they need in order to manage their health conditions and prevent disease (Australian Government, 2011). This access to health care service is in line with social justice principles, where the health of people is a human right.

The philosophy of primary health care services integrates aspects of promotion, prevention, treatment and rehabilitation in taking care of the population and respecting equity and the equal distribution of health resources with the involvement of local members and partnership of other sectors, thus promoting their affordability and accessibility (Bury, 2005; Hills and Mullett, 2005; WHO and UNICEF, 1978). The philosophy of primary health care, focusing on marginalized, poor and underserved areas, aims to promote equity in health care services by providing culturally and scientifically accessible and acceptable health care to all people (WHO and UNICEF, 1978), eliminating injustice in health service provision (Keleher, Parker and Francis, 2010; Keleher, 2001), addressing determinants of health (Starfield, Shi and Macinko, 2005) and ameliorating the consequences of disadvantages (Keleher, 2001).

The practitioners of primary health care empower the affected people with needed skills with the aim of assisting them become self-resilient and in control their lives. They work to revolutionize social, political, environmental and economic factors that determine the health of people and ill health in community, regions and cities, comprising a range of inter-related conditions such as poverty; wealth and income distribution; psycho-social deprivation; discrimination such as sexism, racism, ethnicism and powerlessness; and factors related to gender, age, socio-ecological environment, literacy and health service utilization (Keleher, 2001) and advocate for equitable distribution of health resources of the nation to ensure that everyone has access to health care and gets support to control his life (Gargioni and Raviglione, 2009; Hills and Mullett, 2005; WHO, 1986).

This function demands that multi-sectors work together for the common goal of better health for all and ensuring that the population is getting basic needs such as safety without violence (peace), shelter, education, food, income, a stable eco-system (health environment without harmful hazards), sustainable resources, social justice and equity (Keleher, 2001; WHO,

1986). The core activities of primary health care include education concerning prevailing health problems and methods of preventing and controlling them; promotion of food supply and proper nutrition; adequate supply of safe water and basic sanitation; maternal and child health care, such as family planning and immunization against major infectious diseases; prevention and control of local endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs (Gargioni and Raviglione, 2009; Keleher, 2001; WHO, 1986; WHO and UNICEF, 1978).

It is understood that the primary health care approach is a social justice oriented health system, aiming to reduce inequality and eliminate injustice in order to ensure that every person, whoever they are and wherever they live, gets a better health care service when needed, so that he/she can control his/her health and determinants of his/her health as resources of personal and social development.

Although the 1978 WHO declaration on primary health care at Alma Ata was received enthusiastically by the worldwide participants (WHO and UNICEF, 1978), its goal was not achieved (Kautzky and Tollman, nd; Nteta et al., 2010; Jantrana and Crampton, 2009; Rawaf et al., 2008). The double burden of communicable diseases (TB, HIV and AIDS, Malaria) and non-communicable diseases (diabetes, cardiovascular diseases, lung cancer, etc); risk factors, such smoking, alcohol, unhealthy lifestyles (Maher, Smeeth and Sekajugo, 2010); and lack and imbalance of health workers in quantity and quality (WHO, 2011; Frenk, Chen, Bhutta, Cohen, Crisp, Evans et al., 2010), have hindered the process, mainly in rural and remote regions in the world, but particularly in the sub-Saharan region.

In addition, excessive emigration and irrelevant training of health professionals, where students were not taught to address the context-specific population health problems, have contributed to the failure of achieving the global goal of better health for all (Macnab et al.,

2011; WHO, 2011; WHO, 2011; Frenk et al., 2010). Furthermore, the distribution of health professionals is not fair geographically, between public and private health facilities or between and within countries. For example, according to the WHO (2011), there are 230 doctors per 100000 in the USA, but only 1.1 per 1000 people in Malawi. Overall, sub-Saharan Africa has a total professional workforce of approximately 1 per 1000 people, despite the high burden of disease, where communicable diseases, maternal and perinatal conditions and nutritional deficiencies represent 68% of the disease burden. In South Africa, 46% of population lives in rural areas, but only 12% of doctors and 19% of nurses work in non-urban regions. In Uganda, only 13% of the population lives in urban areas, but are served by 70% of doctors, 80% of the pharmacists and 40% of the nurses or midwives who work there (Kaye et al., 2011).

According to Cueto (2004), implementation of primary health care was criticized as being unfeasible, especially in the timeframe of achieving better health for all by 2000, and medical doctors who were based in the cities and getting a high income from the upper and middle-upper classes resisted to embrace it for fear of losing their privileges, prestige and power, and did not want to move from cities to rural and remote facilities, perceiving primary health care as promoting anti-intellectual ideals.

Cueto (2004) stated that conflict arose when Mahler, the Director General of the WHO, criticized the condescending manner in which the medical doctors wanted to supervise the lay personnel in primary health care settings, which made things worse. No effort was made to train doctors in primary health care and no effort was made to increase the prestige of lay personnel, which hindered the implementation of primary health care. The failure to successfully implement primary health care resulted in the majority of people having little access to health care services. Literature indicated that the majority of South African do not

have access to the health care services due to geographical and physical factors, population growth, culture and language barriers, and financial resources (Reid and Cakwe, 2011; Nteta et al., 2010).

It is believed, however, that implementation of community-based education in health profession education will result in positive outcomes as it embraces the philosophy of primary health care, which is concerned with principles of equity and social justice (WHO, 2011; American Association of Colleges of Nursing, 2005; Ministry of Education, 2001; Department of Health, 1997), and produce nurses who are competent, willing and motivated to serve the rural and vulnerable communities focusing on health promotion, illness prevention, promoting community self-reliance and self-determination, and community involvement in all health services, which will enhance the acceptability, affordability and accessibility of the health care system (Hoebeker, McCullough, Cagle and St.Clair, 2009).

## **2.10. Progress of Health-related Millennium development goals (MDGs) in South Africa**

The UN Millennium Development Summit held in 2000 declared the objective of achieving eight goals worldwide by 2015. The Millennium Development Goals (MDGs) aimed to eradicate extreme poverty and hunger; achieve universal primary education; promote gender equity and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, Malaria and other diseases; promote environmental sustainability; and develop a global partnership for development (UNDP, 2011). There are only three years left if the targets of MDGs are to be achieved by 2015. Although, achievement of these eight MDGs requires partnerships and collaboration of all sectors of the nations, the health sector focuses on MDGs 4, 5 and 6. Goal 4 aims to reduce child mortality; goal 5 to improve maternal health and goal 6 to combat HIV/AIDS, Malaria and other diseases (NEPAD, 2010). It is

understood that one sector alone cannot achieve its target without collaboration with other sectors and that the MDGs are interdependent, where achievement of one leads to the achievement of another targeted by another sector. For instance, if the population is sick and cannot work and produce, the economy suffers, hence making it difficult to reduce extreme poverty; and poverty is source of ill health. If the environment is not well sustained, the population gets sick, meaning that all are dependent on each other for their achievement. Working together in collaboration and partnerships is the key of MDGs achievement.

The fourth goal is to reduce child mortality (infants and under-five) by two thirds by 2015 (African Development Bank Group, 2012; UNDP, 2010). The UNDP (2010) report indicates that in 1998, the under-five mortality rate was 59 per 1000 live births, while in 2007 it was 104 per 1000 live births, with the target of 20 per 1000 live births by 2015. The infant mortality rate in 2001 was 54 per 1000 live births and 53 per 1000 live births in 2007, with the target for 2015 being 18 per 1000 live births (UNDP, 2010). It is clear that from 1998 to 2007, the under-five mortality rate almost doubled while the infant mortality rate decreased slightly. According to McKerrow and Mulaudzi (2010), different sources do not always show the same statistics, with some showing the under-five child mortality rate in 2007 being 58 per 1000 birth lives, whereas others show 69 per 1000 birth lives. Although the statistics vary, however, they all reflect that with only 3 years left, there seems to be little hope of achieving the MDGs.

The UNDP (2010) report indicates that the proportion of one year old children immunized for measles had increased from 68.5% in 2001 to 98.3% in 2009 and immunization coverage for children under one year old increased from 66.4% in 2001 to 95.3% in 2009, with a target of 100%. This coverage is possible to achieve if the effort continues to be provided. The UNDP (2010) report shows that diarrhoea incidence of under 5 years olds was 138 per 1000 in 2001

and 132.6 per 1000 in 2009 and incidence of pneumonia in children under five, was 21 per 1000 in 2003 and 102.1 per 1000 in 2009. These statistics show that children are at risk and that South Africa is far away from achieving MDG4.

To lower this child mortality rate, the UNDP suggests the implementation of a comprehensive primary health care approach, which integrates management of childhood illness, expanding immunization of children, and combating HIV and AIDS, TB, malnutrition, diarrhoea and lower respiratory infections. McKerrow and Mulaudzi (2010) found in data of 2007, that of childhood deaths, 21.9% occur at the neonatal stage, 54% between one month to a year old and 21.4% between one to five years old, and that the leading causes of death were neonatal problems, respiratory infections, TB, HIV and AIDS, pneumonia, diarrhoea and malnutrition. The child mortality rate is the testimony of the quality of the health care system in conjunction with the working conditions and health status of the country.

According to The New Partnership for Africa's Development (2010) (NEPAD) MDG4 was not achieved because the health professionals were not well distributed, motivated or appropriately trained in working in a primary health care setting. The NEPAD, therefore, suggests that nurses and midwives should all be trained at primary health care level, where they would work after their graduation and improve access to health care services. In supporting this suggestion, Gumbi and Muller (1996) argue that alignment of primary health care and curriculum based education in the community may bring hope to address that issue.

The fifth Millennium goal is to improve maternal health, targeting to reduce the maternal mortality ratio by 75% between 1990 and 2015 (African Development Bank Group, 2012; UNDP, 2010). The report shows that while the target is 38 per 100000 live births by 2015, the maternal mortality ratio was 369 in 2001 and 625 in 2007. According to Buchmann

(2011), the maternal mortality ratio varied from 230 to 702 per 100000 live births from 2005 until 2007, and most causes were associated to hypertension, haemorrhage, causes related to HIV and AIDS, and pregnancy-related sepsis. These statistics show that much needs to be done to improve the maternal health as, rather than decreasing; the maternal mortality ratio is in fact increasing and far from achieving the global goal. It seems unlikely that this goal will be met in the next three years.

The proportion of births attended by skilled health personnel was 76.6% in 2001 and 94.3% in 2009, which revealed good progress towards achievement of MDG5 and indicated that the target of 100% is possibly achievable by 2015. In an endeavour to improve maternal health, the government strives to promote the use of contraceptives and make them freely available. The MDG targets 100% of condom use, at least during high risk sex, which has been not achieved and difficult to reach, considering available statistics of 27.3% in 2002 and 62.4% in 2008. The prevalence rate of contraceptives was 25.2% in 2001 and 33.4% in 2009, which indicates that it is far from the achievement of the target of 100% by 2015. The use of modern contraceptive methods of sexually active women was 61.2% in 1998 and 64.6% in 2003, aiming to achieve 70%. Based on this slow increase, the target is unlikely to be achieved by 2015. Antenatal coverage in 2009 was 102.8%, indicating that target has already been achieved.

The Southern African Network of Nurses and Midwives (2012) (SANNAM) states that implementation of community-based learning in nursing and midwifery education and training is a strategy that can help to improve maternal health by making health services accessible to the women, especially those in rural and underserved areas, while the students are learning. In community-based learning, the nursing students involve members of the

community, such as community health workers in a community-campus partnership in improving maternal health, thus empowering community members (SANNAM, 2012).

The sixth goal is to combat HIV and AIDS, Malaria and other major diseases with the target to halt and begin to reverse the spread of HIV and AIDS and stop incidence of Malaria and other major diseases by 2015 (African Development Bank Group, 2012; UNDP, 2010). The HIV prevalence among the population aged 15-24 years old was 9.3% in 2002 and 8.7% in 2008, with a target of below 9.3% by 2015 (UNDP, 2010), which is possible to achieve. It was targeted to achieve 22.8% of HIV prevalence among 15-24 years old pregnant women and 15.6% prevalence among 15-49 year old men by 2015, but the results are not promising as shown by increase of the HIV prevalence among women of 15-24 years old from 22.8% in 2002 to 29.3% in 2008 and HIV prevalence among men of 15-49 years old from 15.6% in 2002 to 16.9% in 2008. While it is possible to achieve the target, it will require much effort from stakeholders, NGOs and Government leadership.

The UNDP (2010) report shows that South Africa aims to provide 100% access to antiretroviral drugs for people with advanced HIV infection by 2015, but based on the statistics of 13.9% in 2005 and 41.6% in 2008, it will be difficult to achieve this global goal in the three coming years. This report revealed that it is possible to reduce the incidence of Malaria below 6800 by 2015 as the statistics indicate the decrease of Malaria incidence from 64600 in 2000 to 6800 in 2008. The objective to achieve below 2% of death rate related to Malaria by 2015 has already been attained as the death rate associated to Malaria decreased from 2% in 2002 to 0.6% in 2007 (UNDP, 2010). Another MDG6 objective that has been achieved is to treat under-five year old children who have Malaria with the appropriate anti-malarial drugs. Statistics show that there were 9513 cases of Malaria in under 5 year old children in 2000, but only 603 cases in 2009.

Also with respect to MDG6, South Africa wanted to achieve incidence of Tuberculosis below 253, prevalence of Tuberculosis below 134000, and the death rate related to Tuberculosis below 147 per 100000 populations by 2015. This is unlikely to be achieved considering the evidence indicating the increase of incidence of Tuberculosis from 253 in 2004 to 283 in 2009; the increase of prevalence from 134000 in 2004 to 144000 in 2008 and the death rate from 147 per 100000 population in 2002 to 179 per 100000 in 2007 (UNDP, 2010). According to the South African Department of Health (2012), South Africa has the seventh highest TB incidence in the world and it continues to increase having become resistant to many of the drugs. Based on this evidence, there is still a long way to go towards achieving the targets that have been fixed. Although many things have been achieved, there is still much to be done to progress towards the achievement of the goal.

Community-based nursing education has positive impact on health-related MDGs (MDGs 4, 5& 6) where the nurse students may provide their contribution towards their achievement. The study conducted by Hoebeke et al., (2009) showed that nurse students conducted service-learning projects on maternal-infant health. According to these authors, the students implemented a learning project to increase awareness of folic acid supplementation among women of childbearing age by providing education on the importance of folic acid in preventing complications of pregnancy and defect premature births. The nurse students also participated in a post-partum depression screening, education and follow-up programme by developing a protocol for this programme in order to fight against this condition amongst new mothers, which had positive impact on the health of both mothers and their babies.

Another community-service learning project conducted by the multi-disciplinary student team focused on the promotion of breastfeeding in low-income mothers with the intention of increasing the nutritional state of infants and preventing disease related to early weaning.

This study contributes to the attainment of MDGs 4 and 5, as the nurse students achieved their learning objectives (Hoebeke et al., 2009). In a study carried out by D'Lugoff and McCarter (2005) in the USA, students planned and implemented various health services including immunization of refugee children, while in another study in the USA by Sullivan (2009), findings revealed that the nurse students provided immunization to refugee children, infant feeding, hygiene product use and women's health projects as their community-based learning services. Such health services delivered by students in their community-based learning must have a positive impact on the reduction of child mortality and improvement of maternal health as it not only provides a service to people living in the community, but also equips the students with competences to work in primary health care facilities, which enhances the accessibility of health care services to the population.

The three health-related MDGs cannot be achieved if the health professionals are not evenly distributed throughout the country, especially in rural and marginalised settings, in order to facilitate accessibility of health services to all citizens. The studies revealed that community-based education has the potential to motivate health profession students to return to work in community health facilities once they have graduated (Williamson et al., 2012; Leipert and Anderson, 2012; Kaye et al., 2010).

This is an important aspect of community-based education, where the contribution of health professionals, including nurses, working in community settings, is vital to the provision of health services because those living in the community will have access to adequate and appropriate health care. The nurses will be qualified to deliver health education on the prevention of HIV/AIDS, Tuberculosis, Malaria and other diseases such as sexually transmitted infections. They will provide antiretroviral therapy to patients living with HIV/AIDS, Prevention of Mother-to-Child Transmission of HIV, reproductive health

services and immunization, thus increasing the accessibility of health services and contributing to attainment of health related MDGs. Mtshali (2009), argued that community-based education prepares nurses to practice in the community.

An experiment study conducted in Ghana by Phillips, Bawah and Binka (2006) reported that the location of nurses in the community reduced childhood mortality rates by above 50% in 3 years, making the Millennium Development Goal for child survival more attainable, and reduced the fertility rate by 15% due to accessibility of contraceptive and other health services. It is obvious that community-based education has a positive impact on reaching health-related MDGs through primary health care services. While the goals specifically related to health are to reduce child mortality, improve maternal health and combat HIV/AIDS, Malaria, Tuberculosis and other diseases, all MDGs are interrelated and affect each other. Nurses may contribute in many ways towards their achievement since good health is considered not only as outcome of development, but also as a resource of development.

## **2.11. Conclusion**

This literature reviews covered an overview of community-based education, service-learning activities, perceptions of students about community based education, factors affecting community-based service-learning, problem-based education, facilitation in problem-based learning, primary health care and the progress of the Millennium Development Goals in South Africa.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1. Introduction**

The research methodology refers to the plan of conducting the study (Burns and Grove, 2009). This chapter describes the research paradigm, research approach, research design, research setting, population, sample size and sampling techniques, data collection procedure, research instrument, data analysis, data management and ethical considerations.

#### **3.2. Research paradigm**

The current study follows a positivist paradigm. A positivist paradigm believes that there is a fixed objective reality existing in the world that can be observed and measured, and from the observation and explanation of the realities, one can make predictions about the relationships of the phenomenon (Weaver and Olson, 2006; Krauss, 2005). The positivist paradigm was chosen because the researcher believes that an objective, measurable and observable reality exists that can be explained through scientific methods. The promotion of primary health care philosophy in a community-based nursing education programme is objective and, therefore, can be observed and measured. The researcher aimed to explore the promotion of primary health care philosophy in a community based education programme in a selected Nursing Education Institution in KwaZulu-Natal.

#### **3.3 Research approach**

A quantitative approach was used to carry out the current study. This approach is defined by Burns and Grove (2005) as a formal, objective, systematic process in which numerical data is used to get information about the phenomenon. The researcher chose this approach because

he believes that numerical data can be used to objectively explain the phenomenon which is the students' perspective of the promotion of primary health care philosophy in a community-based nursing education programme at a selected higher education institution in KwaZulu-Natal.

### **3.4. Research design**

According to Polit & Beck (2008), the research design is the overall plan of getting information on the question being studied and resolving some of the problems you meet during the research process. A non-experimental, quantitative, cross sectional survey, with an explorative descriptive design was used to conduct the study for exploring the students' perspective of the promotion of primary health care philosophy in a community-based education programme at a selected higher education institution in KwaZulu-Natal. This design was chosen because the researcher wanted not only to describe how primary health care philosophy is promoted through the community-based nursing education programme, but also to describe the associated variables.

### **3.5. Research setting**

The study was conducted in a School of Nursing and Public Health at a selected higher education institution in KwaZulu-Natal. The school falls under the College of Health Sciences. According to the University's Handbook for 2012, the school offers various undergraduate programmes, such as a diploma in nursing that is offered in two semesters for full time students and three semesters for part-time students, a Bachelor of Nursing, advanced practice, that is offered on a three years basis for full time students and not less than ten semesters for part- time students, and a Bachelor of Nursing, offered on a four year basis for full time students.

### **3.6. Population of the study**

According to Brink (2006) and Polit and Beck (2008), the population of a study is the entire group of subjects, persons, objects or elements that have same characteristics of interest to the researcher. The target population of the current study was composed of all 124 registered nursing students at second, third and fourth year level of a Bachelor of Nursing programme at the selected School of Nursing in KwaZulu-Natal because they fulfilled the characteristics of interest of the research as they were exposed to the community-based nursing education programme.

### **3.7. Sample size, sampling techniques and procedure**

Brink (2006); Burns and Grove (2005) define the sample size as the portion of the population selected by the researcher to represent the entire population, so that the inference can be made. All 124 nursing students registered in second, third and fourth years of the Bachelor of Nursing programme in 2012 were considered as the sample of the study. The non-probability, convenience sampling method was used to recruit the participants. According to Polit and Beck (2012); Brink (2006), when using the non-probability convenience sampling technique, the researcher chooses the elements of the study who are available and ready at the right place and the right time during the study period. Six (6) participants were recruited for the pilot study and 118 participants were considered as the final sample size.

Because all population of the study was 124 registered students who were at same time considered as sample size, and six of them were taken in pilot study for test-retest, therefore their responses were not included for final analysis. The remaining 118 registered students were considered as final sample size for further analysis. The researcher had prepared 118 questionnaires to be distributed. This technique was suitable for the current study because of

the time available to the researcher. He anticipated that some students might not be available during the data collection period, and it was easy for him to get the participants using non-probability convenience sampling techniques, especially during the lecture sessions.

### **3.7.1. Criteria for inclusion**

The inclusion criteria of the study were:

- a) Second, third and fourth year nursing students who were registered for a Bachelor of Nursing in 2012;
- b) who had experienced community based service-learning; and
- c) who were willing to participate in the study.

### **3.7.2. Criteria for exclusion**

All first year nursing students and those who did not wish to participate were excluded from the study.

## **3.8. Data collection instrument and procedure**

### **3.8.1. Data collection instrument**

The data was collected using a questionnaire that had been adapted from various resources (Pentrice and Robinson, 2010; Dolmans, Wolfhagen, Heineman and Scherpbier, 2008; WHO, 1987) and literature. The questionnaire had four main sections: Section one (items 1 to 7) required the socio-demographic data from participants; section two (item 8 to item 31) pertained to community-based learning activities that promote primary health care philosophy; section three (item 32 to item 39) described the perceptions of students about

community-based education as a tool that promotes primary health care philosophy; and section four (item 40 to item 47) related to factors affecting promotion of primary health care philosophy in a community-based education programme. Appendix 3. The questionnaire took approximately 20 minutes to complete.

### **3.8.2. Data collection procedure**

The researcher applied for permission to conduct the study from the Dean and Head of the selected School of Nursing in KwaZulu-Natal (Appendix 4). He also applied for ethical clearance from the Ethics Committee of the University of KwaZulu-Natal, which was granted. After getting ethical approval (appendix 6) and permission to conduct the study (appendix 5), the researcher contacted the co-ordinator of the Bachelor of Nursing Programme to ask permission to recruit the participants. He then contacted the lecturers to arrange a suitable time table to avoid disturbing the class and requested permission to speak to their students. After obtaining permission, the researcher met with the participants in their nursing classes and explained the purpose of the study to them.

He explained that participation in the study was voluntary and that they had the right to participate or to refuse without fear of any negative consequences. He also told the participants that they had the right to withdraw at any time if they felt uncomfortable without fear of negative consequences. The participants were given the opportunity to ask questions related to the study. Thereafter, the researcher invited the participants to participate in the study. Those who accepted were given a written informed consent form to sign (appendix 1 and 2) and then the questionnaires were distributed to the participants who were available. The researcher explained that no names could be written on questionnaires. Some participants preferred to take the questionnaires home so that they could read them in depth and return the

questionnaire during the following class session. The completed questionnaires were put in box which was closed after data collection. The data collection was done every Monday, Tuesday and Thursday for one month because not all of the participants were available at same time. The researcher had to wait until they returned the questionnaires.

Data collection took place in the class for those who wanted to participate and who did not want to take questionnaires home. They were handed the questionnaires and given time to read them and ask questions. The researcher went out the class in order to let the participants fill in the questionnaires without feeling they were being intimidated, but stood outside in order to answer any queries of the participants, if necessary. The researcher then collected the completed questionnaires and thanked the participants for their participation in the study.

### **3.9. Validity and reliability of instrument**

#### **3.9.1. Validity of instrument**

Brink, (2006) defines the validity of instrument as the quality of the instrument to measure accurately what it is supposed to measure in the context in which it is applied. The validity of the instrument that was used in this study refers to the variables that are related to the objectives of the study. The instrument was presented to experts in nursing education, community-based education and research methodology for critique and was modified according to their input. Items were matched against the research objectives and the conceptual framework, which is Kolb's experiential learning cycle.

#### **3.9.2. Reliability of instrument**

According to Brink (2006), the reliability of the instrument is the capacity of the instrument to yield consistent results if it is used by two different researchers at same time or used by

same researcher repeatedly over time. The reliability of this instrument was measured by conducting a pilot study with six participants to detect any ambiguity and misunderstanding and to determine its stability and consistency. In the pilot study, a Test, re-Test reliability was done. The instrument was administered twice in a two week interval to the same group of six participants and Cronbach's alpha was calculated to determine internal consistence of the instrument for reliability. Cronbach's alpha of community-based learning activities was .851; Cronbach's alpha of perceptions on community-based education as tool that promotes primary health care philosophy was .767 and lastly, Cronobach's alpha of factors affecting promotion of primary health care philosophy was .746, which were acceptable internal consistencies.

According to Polit and Beck (2012), the acceptable vicinity of Cronbach's alpha is 0.70 which was used as acceptable in this current study. Those who participated in pilot study did not participate in the main study for final analysis.

**Table 1: Content validity of the instrument that was used in this study**

<b>Research objectives</b>	<b>Theoretical framework</b>	<b>Questionnaire items</b>
1. Describe community-based learning activities that promote primary health care philosophy	Concrete experience, abstract conceptualisation and active experimentation	Q8-Q31
2. Identify factors affecting promotion of primary health care philosophy in community-based learning activities	Reflective observation and abstract conceptualisation	Q40-Q47, plus Q1-Q7
3. Describe the perceptions of students about community-based education as a tool that promotes primary health care philosophy	Reflective observation and abstract conceptualisation	Q32-Q39

### **3.10. Ethical considerations**

Brink (2006) states that ethical consideration is crucial in any research and aims to protect the rights of participants, avoid any harm to the participants and maintain honesty in the research. To adhere to ethical principles, the researcher designed the research in a valid and scientific way to ensure that the research yielded valid and reliable findings from which the community may benefit. Permission to conduct the study was obtained from the School of Nursing and Public Health and ethical clearance was granted from the Research Ethics Committee at the University of KwaZulu-Natal. To respect the rights of participants, the researcher explained the purpose of the study to them and explained that participation in the study was voluntary and they had the right to withdraw at any time if they felt uncomfortable without fear of any negative effects. He also explained that they would experience no harm by participating in the study. After providing all the necessary information regarding the study, a signed informed consent was obtained from those who voluntarily accepted to participate.

The researcher explained to the participants that the questionnaire would take them about 20 minutes of their time to complete and that their anonymity and confidentiality would be respected by using codes on the questionnaire. Their names or student numbers would not appear anywhere on the questionnaires, so no one would be able to identify whose response it was. Therefore, once the questionnaires were submitted, they could not be withdrawn because they could not be identified. The participants were treated equally and the data was presented as it was collected, without modification. The data is kept safely in a locked area to which only the researcher and supervisor have access. The researcher explained that the findings of the study may be used in the curriculum review process in view of maintaining quality of education.

### 3.11. Data analysis

The questionnaires were coded and the data was captured in SPSS (Statistical Package for the Social Sciences), Version 19, and was checked to eliminate the mistakes. Numerical data was summarized by measures of central tendency and measures of variability such as mean, standard deviation, mode and median, range, minimum and maximum values, quartiles and interquartiles range, according to whether data was normally distributed or skewed. The distribution of data was detected by computing the Kolmogorov-Smirnov test of normality, in which a value  $\geq 0.05$  was considered as normal distribution data. Tables and figures were used to present the data using SPSS, Version 19. To find out where the students had covered more community-based learning activities that promote PHC philosophy, in items 17-31, each community learning setting was considered as a variable to a learning activity and was given a letter. These variables were coded as categorical variables/measurements. "Yes" and "no" were recorded as numerical variables in scale measurement with "yes" being recorded as "1" and "no" being recorded as 0. Thereafter, the score of community learning activities in each community learning setting was computed.

The perceptions of students on CBE as a tool to promote PHC philosophy variables were scored to form one variable, which is a perception of students on CBE as a tool to promote PHC philosophy. This perceptions variable was categorized into three categories, where those who scored between 1 and 15.999 were categorized as having negative perceptions; those with scores of between 16 and 23.999 were categorized as having moderate positive perceptions and those with scores between 24 and 32 were categorized as having strong positive perceptions.

With regard to factors affecting promotion of PHC philosophy in the CBE programme, the factors with a mean below 2.4 were considered as hindering factors while those with a mean above 2.4 were considered as influencing factors.

The association between variables was done. This included the associations between demographic variables and perceptions of students regarding community-based education; demographic variables and community learning activities variables; perceptions of students on CBE as PHC tool and community learning activities. Parametric and non-parametric tests were used in statistical analysis, according to the data distribution (Independent T-test, Chi-square test, Mann-Whitney *U* test, Kruskal-Wallis test) and a statistical significance level of *P*-value of  $\leq 0.05$  was set to be considered as significant. The associations that did not indicate statistical significance were not reported in the final presentation.

### **3.12. Data management**

The data was collected by the researcher himself to ensure confidentiality. The completed questionnaires were immediately put in box and sealed after data collection and were opened during the data entry. The data was entered into SPSS, Version 19, using codes. The data was, and will continue to be, stored in a safe locked area in the School of Nursing and Public Health to which only the researcher and supervisor are allowed to access. The data in SPSS can only be accessed using a code and no one, except the researcher and supervisor, can access the information. Following the UKZN policy in data management of research, the data will be maintained in the proper way and then will be destroyed after 5 years. The findings will be published in form of journal articles and a report will be compiled and submitted to the School of Nursing and Public Health, Faculty of Health Sciences and the university Library.

### **2.13. Conclusion**

The methodology chapter covered the research methods used in this study and explained the paradigm and research approach, the research design, study setting, population, and sampling and sample size. It also looked at the validity and reliability of the instrument, ethical considerations, the data collection procedure, data analysis and data management.

## **CHAPTER FOUR**

### **PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS**

#### **4.1. Introduction**

This chapter covers the presentation, analysis and interpretation of findings. The purpose of the study was to explore the students' perspectives regarding the promotion of primary health care philosophy in a community-based nursing education programme in a selected Higher Education Institution in KwaZulu-Natal. The objectives of the study were to describe community-based learning activities that promote primary health care philosophy, identify the factors affecting promotion of primary health care philosophy in community-based learning activities and describe the perceptions of students about community-based education as a tool that promotes primary health care philosophy. The results are presented in tables and figures. The objective related to community-based learning activities that promote primary health care philosophy comprised of the periods in which the students were based in community settings, the learning activities that were carried out and where the community-based activities had been conducted.

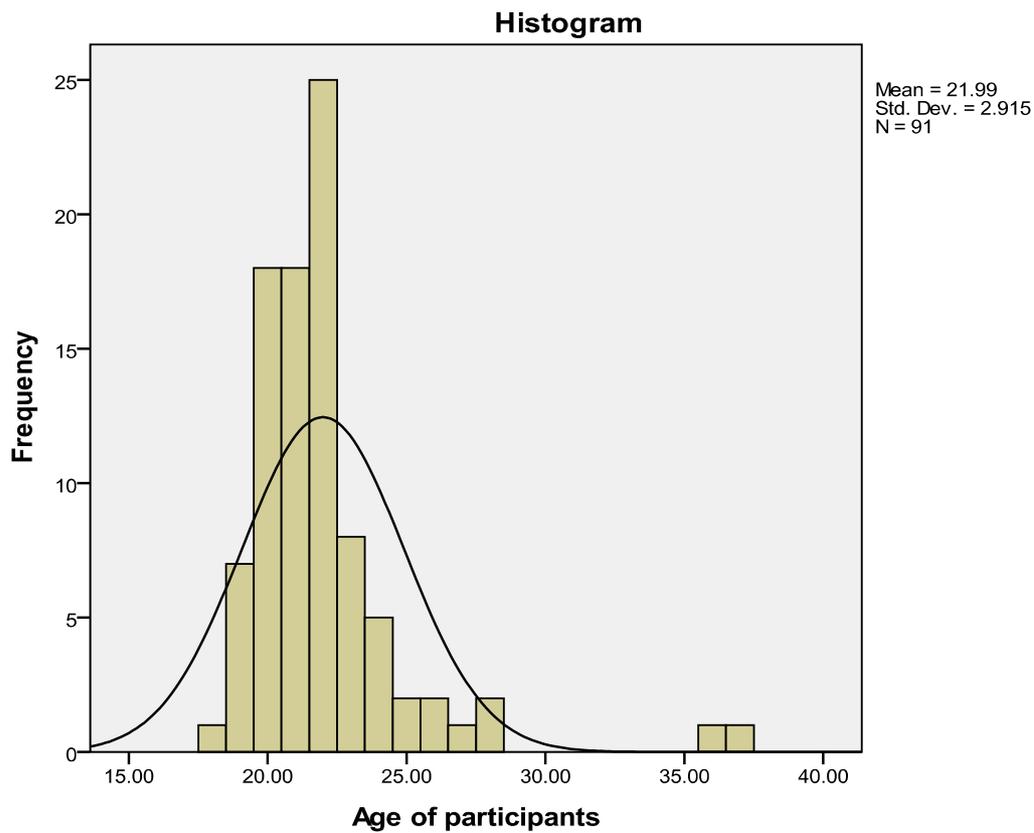
Analysis was done using the Statistical Package of Social Sciences, Version 19 (SPSS-19). Cross tabulation and the Chi-square test, Kruskal-Wallis Test, Mann-Whitney U Test and T-test were used in analysis to test extent of relationships between variables. A  $p$ -value  $\leq 0.05$  was considered as statistically significant.

## **4.2. Description of socio-demographic data**

The population of the current study consisted of 124 students from the nursing department at a selected University who were registered in the second, third and fourth year for the Bachelor of Nursing degree in the 2012 academic year. All of them (124) constituted the sample size of the present study. Six of them (4.8%) participated in a pilot study that was not included in the final analysis. Ninety-one (91) questionnaires representing 73.3% were returned and included in the final analysis of results. This response rate was acceptable since it was above the 60% response rate that is considered acceptable (Johnson and Wislar, 2012).

### **4.2.1. Age distribution of participants**

The minimum age of the respondents was 18 years old and the maximum age was 37 years old with mean age of 21.99 years old. The median was 22 years old, the mode was 22 years old and the standard deviation was 2.915. The skewness was 2.987 and had a std. error of skewness of .253. The Kurtosis was 12.422 and sdt. error of Kurtosis was .500. The percentile 25 was 20 years old; the percentile 50 was 22 years old while the percentile 75 was 22 years old. The interquartile range was 2. The distance between the first quartile and median was 2, while the distance between the third quartile and the median was 0. The significance-value of the Kolmogorov-Smirnov test of normality is .000 which indicates that the data was not normally distributed (skewed). As it appears in figure 1 below, the age distribution of the respondents is positively skewed.



**Figure 2: Age distribution of participants**

#### **4.2.2. Gender of participants**

The majority of participants were female (80.2%,  $n=73$ ), while 19.8% (18) were male.

#### **4.2.3. The academic level**

A large number of participants were in their second year (38.5%,  $n=35$ ), while 30.8% (28) and 30.8% (28) were studying in the third and fourth year respectively.

#### **4.2.4. Home area**

It was indicated in this current study that 35.2% (32) of the participants lived in urban areas, 33% (30) lived in suburban areas and 31.9% (29) lived in rural areas.

#### **4.2.5. Practical community settings**

This study revealed that 30.8% (28) of the participants did their practice in urban community settings, 30.8% (28) in suburban community settings, 26.4% (24) in informal settlements and 12.1% (11) in rural communities.

#### **4.2.6. Previous involvement in community activities as volunteer**

The results showed that the majority of the participants confirmed that they had participated in community activities before, as volunteers (62.6%, n=57), while 37.4% (34) declared that they had not participated in community activities before undertaking nursing studies.

#### **4.2.7. The choice of nursing**

The majority of participants representing 71.4% (65) declared that nursing was their first choice of career, while 28.6% (26) said that nursing was not their first choice.

**Table 2: Summary of socio-demographic data distribution**

Socio-demographic variables	Attributes	Frequencies	Percent
<b>Gender</b>	Male	18	19.8%
	Female	73	80.2%
	<b>Total</b>	<b>91</b>	<b>100%</b>
<b>Level of study</b>	Second year	35	38.5%
	Third year	28	30.8%
	Fourth year	28	30.8%
	<b>Total</b>	<b>91</b>	<b>100%</b>
<b>Home area</b>	Rural area	29	31.9%
	Suburban area: Township	30	33%
	Urban area	32	35.2%
	<b>Total</b>	<b>91</b>	<b>100%</b>
<b>Practical community settings</b>	Informal settlement	24	26.4%
	Suburban community	28	30.8%
	Urban community	28	30.8%
	Rural community	11	12.1%
	<b>Total</b>	<b>91</b>	<b>100%</b>
<b>Previous involvement in any community activity as volunteer, ect.</b>	Yes	57	62.6%
	No	34	37.4%
	<b>Total</b>	<b>91</b>	<b>100%</b>
<b>First choice of nursing</b>	Yes	65	71.4%
	No	25	28.6%
	<b>Total</b>	<b>91</b>	<b>100%</b>

### **4.3. Description of community-based learning activities that promote PHC philosophy**

#### **4.3.1. Distribution of respondents according to the periods in which they participated in a community-based learning programme during their educational programme**

The findings showed that 82.4% (75) of the respondents were exposed to community-based learning during their first year and had done their practicals at an old age home, while 24.4% (22) said they had done their first year practicals at a crèche. A big proportion of respondents, (92.1%, n=82) indicated that they had been involved in a community-based learning programme while doing their practicals during January/February in their second year, 89.9% (80) said they participated in a community learning programme during the April vacation, 87.6% (78) were exposed to a programme in their second year June/July vacation, 64% (57) said they were exposed to the community-based learning programme their second year September vacation and 56.7% (51) were exposed to a programme in their second year December vacation. Findings of the study revealed that only 36.7% (33) were exposed in psychiatric practicals while only 34.4% (31) were exposed to a community-based learning programme in a primary health care clinic. The table below indicates the distribution of respondents according to their periods they participated in a community-based learning programme.

**Table 3: Distribution of respondents according to the periods in which they participated in a community-based learning programme**

Periods	Yes	No	Total
1 <sup>st</sup> year old age home practicals	75 (82.4%)	16 (17.6%)	91 (100%)
1 <sup>st</sup> year crèche practicals	22 (24.4%)	68(75.6%)	90 (100%)
2 <sup>nd</sup> January/February	82 (92.1%)	7 (7.9%)	89 (100%)
2 <sup>nd</sup> year April vacation	80 (89.9%)	9 (10.1%)	89 (100%)
2 <sup>nd</sup> year June/July vacation	78 (87.6%)	11 (12.4%)	89 (100%)
2 <sup>nd</sup> year September vacation	57 (64%)	32 (36%)	89 (100%)
2 <sup>nd</sup> year December vacation	51 (56.7%)	39 (43.3%)	90 (100%)
Psychiatry	33 (36.7%)	57 (63.3%)	90 (100%)
PHC Health Clinic	31 (34.4%)	59 (65.6%)	90 (100%)

#### **4.3.2. Distribution of respondents according to activities they participated in**

The results revealed that the majority of respondents (97.8%, n=89) participated in family assessment; 100% (91) were involved in epidemiological studies and 100% (91) did community assessment. The findings also showed that 95.6% (87) participated in needs validation in community and 90.1% (82) participated in community project planning. This study showed that the majority of respondents (93.4%, n=85) participated in fundraising for a community project, while 80.2% (73) participated in community mobilization to take responsibility for their health. A big proportion of respondents 985.7%, n=78) participated in community project implementation, while 70.3% (64) participated in community project evaluation. The table shows the distribution of respondents according to activities they participated in during their community-based learning.

**Table 4: Distribution of respondents according to activities they participated in**

ACTIVITIES	YES	NO	TOTAL
Family assessment	89 (97.8%)	2 (2.2%)	91 (100%)
Epidemiological studies	91 (100%)	0 (0%)	91 (100%)
Community assessment	91 (100%)	0 (0%)	91(100%)
Validation of community problems (2 <sup>nd</sup> year April vacation practicals)	87 (95.6%)	4 (4.4%)	91 (100%)
Community project planning	82 (90.1%)	9 (9.9%)	91 (100%)
Fundraising for community projects	85 (93.4%)	6 (6.6%)	91 (100%)
Community mobilization to take responsibility for their health	73 (80.2%)	18(19.8%)	91 (100%)
Community project implementation	78 (85.7%)	13(14.3%)	91 (100%)
Community project evaluation	64 (70.3%)	27 (29.7%)	91 (100%)

#### **4.3.3. Distribution of respondents according to the community members they involved in community-based learning activities**

The majority of respondents (95.6%, n=87) involved school teachers in their community-based learning activities, 91.2% (83) involved local leaders and 44% (40) involved church leaders. It was revealed that only 14.3% (13) involved traditional healers in their community-based learning activities. The majority of respondents (60.4%, n=55) involved youth leaders and 89% (81) involved community health workers in community learning activities. This study showed that a large proportion of respondents (87.9%, n=80) involved the clinic health workers (nurses), 52.7% (48) involved the elder people committee and the majority of respondents (93.4%, n=85) involved the community members in their community-based learning activities. It was shown that, in general, a large proportion of respondents (69.9%) involved community members and the key community leaders in their community-based learning activities. See table 5 below.

**Table 5: Distribution of respondents according to the community members they involved in community-based learning activities**

<b>Community members involved in community based learning activities</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
School teachers	87 (95.6%)	4 (4.4%)	91 (100%)
Local leaders	83 (91.2%)	8 (8.8%)	91 (100%)
Church leaders	40 (44%)	51 (56%)	91 (100%)
Traditional healers	13 (14.3%)	78 (85.7%)	92 (100%)
Youth leaders	55 (60.4%)	36 (39.6%)	91 (100%)
Community health workers	81 (89%)	10 (11%)	91(100%)
Health clinic workers (nurses)	80 (87.9%)	11 (12.1%)	91 (100%)
Elder people committee	48 (52.7%)	43 (47.3%)	91 (100%)
Community members	85 (93.4%)	6 (6.6%)	91 (100%)

#### **4.3.4. Distribution of respondents according to primary health care philosophy components as the focus of community-based learning project**

The majority of the participants (89%, n=81) indicated that their community-based projects focused on promotion of health (health education on nutrition, sexuality, breastfeeding, environmental health, waste disposal, and safe and clean water); 90.1% (82) stated that their project focused on prevention of illness, injuries and social problems (immunizations, family planning, health education on prevention of STIs, chronic illness such as hypertension and teenage pregnancy); and 52.7% (48) cited engaging in community-based project that focused on treatment of common diseases and injuries at home (treatment of lice, diarrhoea and vomiting, flu and minor burn injuries).

Forty-five point one percent (45.1%, n=41) of the respondents carried out community-based projects focused on rehabilitative care (home management of a patient with deformities,

elderly patients with chronic illness, mentally ill clients in the community) and the majority of respondents (76.9%, n=70) indicated that their community-based projects were focused on promoting self-reliance and self-determination in the community (identifying, accessing and utilizing available resources within the community in addressing health related issues). Overall, 70.8% of respondents carried out community-based learning projects that embraced primary health care philosophy. The table below indicates how the respondents are distributed according to the focus of their community-based learning projects.

**Table 6: Distribution of respondents according to primary health care philosophy components as the focus of community-based learning project**

<b>Focus of community-based project</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
Promotion of health ( <i>health education on nutrition, sexuality, breastfeeding, environmental health, waste disposal, safe and clean water</i> )	81 <b>89%</b>	10 <b>11%</b>	91 <b>100%</b>
Prevention of illness, injuries and social problems ( <i>e.g.immunisations, family planning, health education on prevention of STIs, chronic illness such as hypertension, teenage pregnancy</i> )	82 <b>90.1%</b>	9 <b>9.9%</b>	91 <b>100%</b>
Treatment of common illnesses and injuries at home (eg. <i>treatment of lice, diarrhoea and vomiting, flu, minor burn injuries</i> )	48 <b>52.7%</b>	43 <b>47.3%</b>	91 <b>100%</b>
Rehabilitative care (eg. <i>Management of a patient with deformities at home, elderly patient with chronic illnesses, mentally ill clients in the community</i> )	41 <b>45.1%</b>	50 <b>54.9%</b>	92 <b>100%</b>
Promoting community self-reliance and self-determination ( <i>identifying, accessing and utilizing available resources within the community in addressing health related issues</i> )	70 <b>76.9%</b>	21 <b>23.1%</b>	91 <b>100%</b>

#### **4.3.5. Distribution of respondents according to settings and the community-based learning activities exposure**

As the community-based nursing programme is part of the nursing curriculum at the selected higher education institution and the many aspects of this programme are incorporated into various teaching settings, respondents were requested to indicate whether they had been exposed to these aspects and whether the teaching had taken place in a classroom, a community environment, a health clinic or a hospital. Because of the nature of the programme it was likely that participants would have been exposed to the same concept in a variety of settings.

The majority of respondents (71.4%, n=65) indicated that they had learnt about provision of health education to prevent disease and promote health in the classroom; 51.6% (47) said that they had learnt it in a community setting; 40.7% (37) said they in a health clinic; and 20.9% (19) said they were in a hospital.

Just over half (52.7%, n=48) of the respondents stated that they had learnt about oral rehydration methods for dehydrated children in class, 22% (20) said they had covered it in a community; 41.8% (38) said that they were in a health clinic; 23.1% (21) said that they were in a hospital, while 13.3% (12) said that they did not learn it at all.

It was shown in this study that a large proportion of respondents (57.1%, n=52) learnt the importance of baby breastfeeding in class, 22% (20) said that they learnt it in a community setting, 41.8% (38) learnt it in a health clinic, 31.9% (29) said that they learnt the importance of baby breastfeeding in hospital, while 11% (10) did not learn it at all.

Findings showed that the majority of respondents (62.6%, n=57) said that they had learnt about family planning for both males and females in class; 23.1% (21) said that they were in

a community setting; 52.7% (48) said they were in a health clinic; 24.2% said that they were in hospital; and 5.5% (5) said they did not learn it at all.

With respect to learning about prevention of malnutrition in children through food supplementation, the majority of the respondents (70.3%, n=64) said that they had covered this in class; 25.3% (23) said that they were in a community setting; 41.8% (38) said that they were in a health clinic, while 18.7% (17) said that they were in a hospital.

It was revealed in this study that 58.2% (53) of the respondents had learnt about first aid measures at home when they were in class; 12.1% (11) said they were in a community setting; 29.7% (27) said they were in a health clinic, whereas 20.9% (19) said they were in hospital.

Just over half of the respondents (52.7%, n=48) had learnt about growth monitoring of children when they were in class; 20.9% (19) said they had covered this aspect of nursing in a community setting; 52.7% (48) said they were exposed to it when they were in health a clinic and 15.4% (14) said they had learnt about it in hospital.

It was shown in the current study that 60.4% (55) said that they had learnt about baby immunization in class; 16.5% (15) said they had learnt about it in a community setting; 53.8% (49) said they covered baby immunisation in a health clinic and 13.2% (12) said they were exposed to it in hospital.

Findings revealed that 51.6% (47) had learnt about community involvement in community-based project when they were in class, the majority of respondents (70.3%, n=64) had covered this in a community setting; 15.4% (14) had learnt about it in a health clinic, while 5.5% (5) said they were exposed to it in hospital.

Thirty eight point five percent of the respondents (38.5%, n=35) had covered the topic of about advocating for vulnerable people in class, 29.7% (27) had learnt about it in a community setting; 16.5% (15) were in a health clinic, while 18.7% (17) said they were in hospital.

Just about half of the respondents 50.5% (46) said that they had learnt about educating the community about waste disposal in a community setting; 42.9% (39) said they had learnt about it in class; 16.5% (15) said they were in a health clinic, 12.1% (11) said they were in a hospital and 19.8% (18) said they had not covered it at all.

The study indicated that just over half (56.7%, n=51) said that they had learnt about ways of keeping water clean if there are no taps when they were in class; 34.4% (31) said they had been exposed to this topic in a community setting; 24.4% (22) said they were in a health clinic and 15.6% (14) said that they were in hospital.

The current study indicated that 51.6% (47) of the respondents said that they had learnt about caring for a terminally ill patient at home when they were in class; 28.6% (26) said that they had learnt this in a community setting; 17.6% (16) said they were in a health clinic and 22% (20) said they were in hospital.

The study revealed that 57.1% (52) of the respondents had learnt about women empowerment when they were in class; 27.5% (25) said they were in a community setting; 15.4% (14) said they were in a health clinic; 11% (10) said they were in a hospital, while 18.7% (17) said they had not been exposed to this topic. Findings showed that 52.7% (48) of the respondents had learnt about collaboration with other sectors as a nurse in addressing health issues in the community while they were in class, 59.3% (54) had been exposed to this topic in a

community setting; 16.5% (15) said they were in a health clinic and 11% (10) said they learnt about it when they were in hospital. See table 9 below.

**Table 7: Distribution of respondents according to settings and the community-based learning activities exposure**

<b>Community-based nursing programme exposed me to learning about</b>	<b>Class</b>	<b>Community</b>	<b>Health Clinic</b>	<b>Hospital</b>	<b>Not learnt</b>
Provision of health education to prevent diseases and promote health	65 <b>71.4%</b>	47 <b>51.6%</b>	37 <b>40.7%</b>	19 <b>20.9%</b>	1 <b>1.1%</b>
Oral rehydration methods for dehydrated children	48 <b>52.7%</b>	20 <b>22%</b>	38 <b>41.8%</b>	21 <b>23.1%</b>	12 <b>13.3%</b>
Importance of baby breastfeeding	52 <b>57.1%</b>	20 <b>22%</b>	38 <b>41.8%</b>	29 <b>31.9%</b>	10 <b>11%</b>
Family planning for both males and females	57 <b>62.6%</b>	21 <b>23.1%</b>	48 <b>52.7%</b>	22 <b>24.2%</b>	5 <b>5.5%</b>
Prevention of malnutrition to children through food supplementation	64 <b>70.3%</b>	23 <b>25.3%</b>	38 <b>41.8%</b>	17 <b>18.7%</b>	3 <b>3.3%</b>
First aid measures at home (e.g. burns, paraffin ingestion, fractures)	53 <b>58.2%</b>	11 <b>12.1%</b>	27 <b>29.7%</b>	19 <b>20.9%</b>	12 <b>13.2%</b>
Performing grow monitoring of children	48 <b>52.7%</b>	19 <b>20.9%</b>	48 <b>52.7%</b>	14 <b>15.4%</b>	8 <b>8.8%</b>
Baby immunization	55 <b>60.4%</b>	15 <b>16.5%</b>	49 <b>53.8%</b>	12 <b>13.2%</b>	8 <b>8.8%</b>
Community involvement in community-based projects	47 <b>51.6%</b>	64 <b>70.3%</b>	14 <b>15.4%</b>	5 <b>5.5%</b>	3 <b>3.3%</b>
Advocating for the vulnerable people	35 <b>38.5%</b>	27 <b>29.7%</b>	15 <b>16.5%</b>	17 <b>18.7%</b>	22 <b>24.2%</b>
Educating the community about waste disposal	39 <b>42.9%</b>	46 <b>50.5%</b>	15 <b>16.5%</b>	11 <b>12.1%</b>	18 <b>19.8%</b>
Ways of keeping water clean if there are no water taps	51 <b>56.7%</b>	31 <b>34.4%</b>	22 <b>24.4%</b>	14 <b>15.6%</b>	10 <b>11.1%</b>

Care of a terminally ill patient at home (home-based care)	47 <b>51.6%</b>	26 <b>28.6%</b>	16 <b>17.6%</b>	20 <b>22%</b>	19 <b>20.9%</b>
Women empowerment (e.g. education about women abuse and women's right, education and skills development for women survival)	52 <b>57.1%</b>	25 <b>27.5%</b>	14 <b>15.4%</b>	10 <b>11%</b>	17 <b>18.7%</b>
Collaborating with other sectors as nurses in addressing health issues in the community (eg. Working with business people, teachers, police officers, transport, etc.)	48 <b>52.7%</b>	54 <b>59.3%</b>	15 <b>16.5%</b>	10 <b>11%</b>	8 <b>8.8%</b>

**Table 8: Summary of distribution of number of learning activities exposed to according to educational settings.**

	Number of learning activities in class	Number of learning activities in community	Number of learning activities in health clinic	Number of learning activities in hospital
Mean	8.344	4.888	4.822	2.611
Median	9.000	4.000	5.000	2.000
Mode	11.00	2.00	.00	.00
Std. deviation	4.598	3.363	3.710	2.989
Minimum	.00	.00	.00	.00
Maximum	15	15	13	12
Kolmogorov-Smirnov test of normality	1.123	1.410	1.093	1.814
<b>Total</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>

Table 8 above shows that the Kolmogorov-Smirnov test of normality is above 0.05 to all educational settings. Thus, the data relating to the class, the community, the health clinic and the hospital are normality distributed, which means that a large amount of data is distributed around the mean.

#### **4.4. The factors affecting promotion of primary health care philosophy in community-based learning activities**

The findings of this study showed that 28 (30.8%) of the respondents strongly disagreed and 26 (28.6%) disagreed with the statement that the accessibility of the community site was not expensive and transport was easily available while 26 (28.6%) strongly agreed and 26 (28.6%) agreed. It was shown that 40.6% agreed that the accessibility of the community site was not hindering their community learning (28.6% who agreed and 12% who strongly agreed). Many of the respondents agreed that safety in the community promoted their learning (n= 44, (48.4%) who agreed and (n=15, 16.5%) who strongly agreed, while 22 (24.2%) disagreed and 10 (11%) strongly disagreed and had concerns about safety in the community site. Findings revealed that 58 (63.7%) of the respondents agreed and 16 (17.6%) strongly agreed that the community leaders and members of the community were available to support their learning.

The majority of the respondents 60 (65.9%) agreed and 19 (20.9%) strongly agreed that the support they received from the community enhanced their learning about health-related issues in the community and their management. It was shown in this study that 61 (67%) of respondents agreed and 17 (18.7%) strongly agreed that the support of the lecturer as a resource person enhanced their learning about health-related issues at the community level. The study revealed that a large number of respondents 65 (71.4%) agreed and 13 (14.3%) strongly agreed that the orientation period gave a clear introduction to expected outcomes from their learning in the community. The majority of respondents (n=63, 69.2%) agreed and 14 (15.4%) strongly agreed that they had enough time in their programme to allow them to execute their community-based learning activities. Just over half of the respondents (51.6%, n=47) agreed and 9.9% (9) strongly agreed that there had been enough resources to support

their learning and project in the community sites, while 24.2% (22) disagreed and 14.3% (13) strongly disagreed with this statement.

The factors affecting the promotion of primary health care philosophy are divided into two categories. Those with a mean equal and above 2.4 were considered positively influencing factors, whereas those with mean below 2.4 were considered hindering factors. Thus, findings showed that all factors positively affect the promotion of primary health care philosophy in community-based learning activities except accessibility to the community, which had the mean below 2.4 and therefore hindered promotion of primary health care philosophy in community-based education. The table below indicates the distribution of respondents according to their responses with regard to factors affecting promotion of primary health care philosophy in community-based learning activities.

Table 9: The factors affecting promotion of primary health care philosophy in community-community-based learning activities

<b>Statement</b>	<b>Strongly disagree</b>	<b>disagree</b>	<b>Agree</b>	<b>Strongly agree</b>	<b>Total</b>	<b>Mean</b>	<b>Std. deviation</b>
Accessibility of community site is not expensive and transport is easily available	28 <b>30.8%</b>	26 <b>28.6%</b>	26 <b>28.6%</b>	11 <b>12.1%</b>	91 <b>100%</b>	2.220	1.02
The level of safety in the community promoted our learning	10 <b>11%</b>	22 <b>24.2%</b>	44 <b>48.4%</b>	15 <b>16.5%</b>	91 <b>100%</b>	2.703	.875
Community leaders and members were available to support our learning	2 <b>2.2%</b>	14 <b>15.6%</b>	58 <b>64.4%</b>	16 <b>17.8%</b>	90 <b>100%</b>	2.978	.653
The support we received from the community enhanced our learning about health-related issues in the community and their management	1 <b>1.1%</b>	11 <b>12.1%</b>	60 <b>65.9%</b>	19 <b>20.9%</b>	91 <b>100%</b>	3.1	.611
Support of lecturer as source person enhanced our learning about health-related issues at a community level	4 <b>4.4%</b>	9 <b>9.9%</b>	61 <b>67%</b>	17 <b>18.7%</b>	91 <b>100%</b>	3	.683
Orientation period gave a clear introduction to expected outcomes from our learning in the community	2 <b>2.2%</b>	11 <b>12.1%</b>	65 <b>71.4%</b>	13 <b>14.3%</b>	91 <b>100%</b>	2.978	.596
The time in our programme	4	10	63	14	91	2.956	.665

was adequate to allow us to execute our community-based learning activities	<b>4.4%</b>	<b>11%</b>	<b>69.2%</b>	<b>15.4%</b>	<b>100%</b>		
We had enough resources to support our learning and project in community sites	13 <b>14.3%</b>	22 24.2%	47 <b>51.6%</b>	9 <b>9.9%</b>	91 <b>100%</b>	2.571	.858

#### **4.5. The perceptions of participants about community-based education as tool that promotes PHC philosophy**

##### **4.5.1. Distribution of participants according to their perceptions about community-based education as tool that promotes primary health care philosophy**

In this study, 52.7% (48) and 35.2% (32) of the respondents agreed and strongly agreed respectively that the community setting prepared them to work as nurses in the communities while 3.3% (3) strongly disagreed and 8.8% (8) disagreed. It is shown in same table that 53.8% (49) agreed and 35.2% (32) strongly agreed that working in community settings gave them a better understanding of the influence of social, economic, political and cultural issues on health, whereas 8.8% (8) disagreed and 2.2% (2) strongly disagreed. Many of the respondents were in agreement that the distance between the university and the community settings did not affect their community learning with 40.7% (37) and 24.2% (22) agreeing and strongly agreeing respectively. The majority of respondents (58, n=63.7%) agreed and 23 (25.3%) strongly agreed that working with members from other health teams or sectors better prepared them for their role as nurses within these teams.

A big proportion of participants 65.9% (60) and 29.7% (27) agreed and strongly disagreed respectively that the type of community learning experience helped them develop new skills of managing and addressing health issues in the community. The majority of respondents 52 (57.1%) and 26 (28.6%) agreed and strongly agreed respectively that the practical exposure

in the communities gave them a better understanding of the primary health care theory they had learnt in class. Many of the respondents (49.5%, n=45) and (33%, n=30) agreed and strongly agreed respectively that the community-based learning increased their interest to work in under-resourced communities such as rural areas and informal settlement. It was indicated in this study that a large proportion of the respondents, 62.6% (57) and 27.5% (25) agreed and strongly agreed respectively that their community projects contributed to improving the health of the community.

The table below shows the distribution of respondents according to their perceptions about community-based education as a tool that promotes primary health care philosophy.

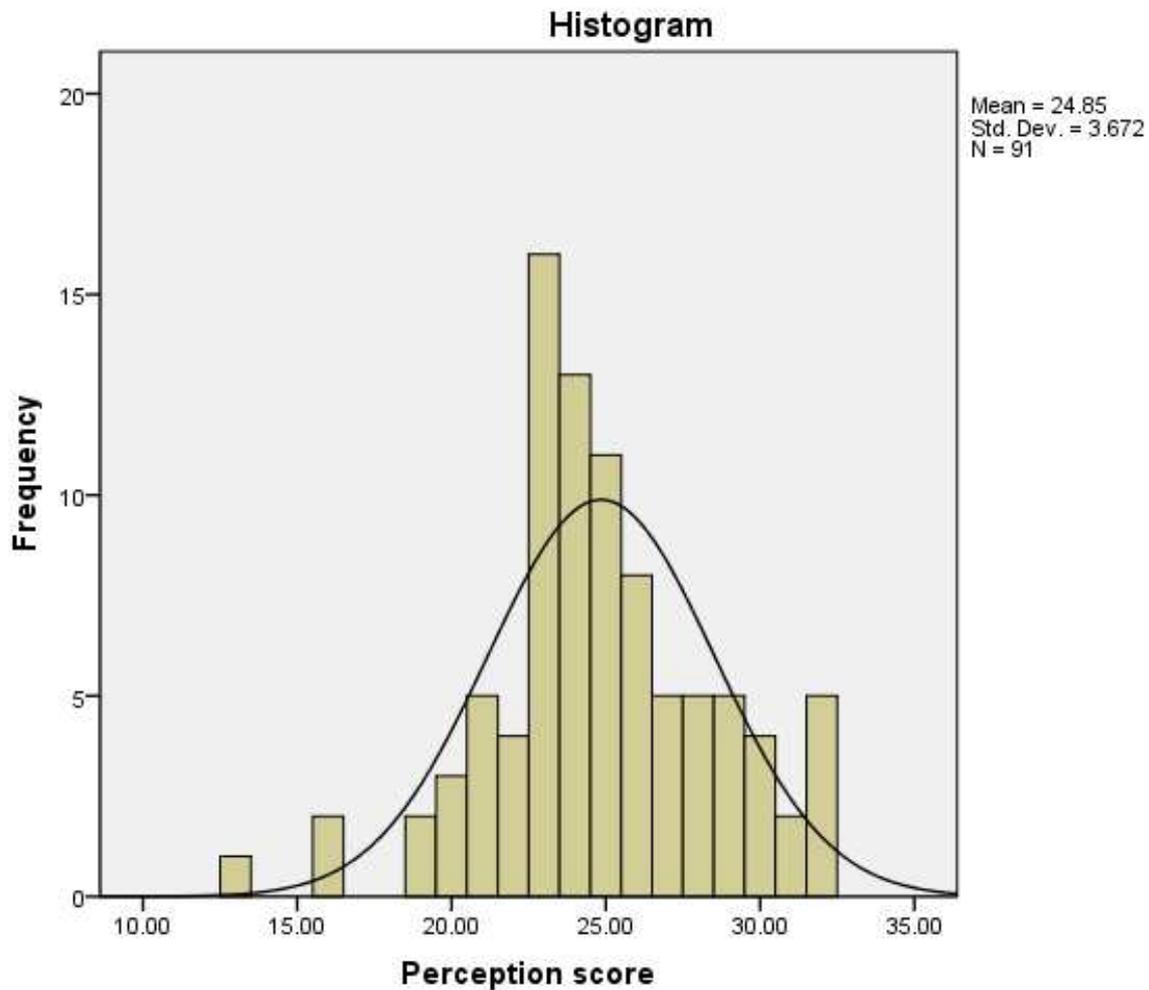
**Table 10: The perceptions of participants about community-based education as tool that promotes primary health care philosophy**

Statement	Strongly disagree	Disagree	Agree	Strongly agree	Total
Placement in the community setting better prepared me as a nurse to work even with the communities	3 (3.3%)	8 (8.8%)	48 (52.%)	32 (35.2%)	91(100%)
The type of community setting I was placed in made me understand better the social economic, psychological, political and cultural issues that influence health	2 (2.2%)	8 (8.8%)	49 (53.8%)	32 (35.2%)	91(100%)
The distance between the university and the community where I was placed did not affect my learning in the community	18 (19.8%)	14 (15.4%)	37 (40.7%)	22 (24.2%)	91(100%)
Working with members from other health teams or sectors better prepared me for my role as a nurse within these teams	1 (1.1%)	9 (9.9%)	58(63.7%)	23 (25.3%)	91(100%)
The types of community-based learning experiences I was exposed to, helped me develop some skills I did not have before of managing and addressing health issues in the community	1 (1.1%)	3 (3.3%)	60 (65.9%)	27 (29.7%)	91(100%)
Practical exposure in the communities allowed me better understand the Primary health care theory that was learnt in class	3 (3.3%)	10 (11%)	52 (57.1%)	26 (28.6%)	91(100%)

Community-based learning increased my interest to work in under-resourced communities such as rural areas, informal settlements, etc.	3 (3.3%)	13 (14.3%)	45 (49.5%)	30 (33%)	91(100%)
Our community projects contributed in improving the health of the community	4 (4.4%)	5 (5.5%)	57 (62.6%)	25 (27.5%)	91(100%)

#### **4.5.2. The overall perceptions of respondents about community-based education as tool that promotes primary health care philosophy**

Eight items of perceptions of students on community-based education as a tool that promotes primary health care philosophy were described. Scales ranging from 1 to 4 distinguished whether the perceptions were considered as negative or positive. All scores were summed to make overall perceptions. The minimum perception score of the respondents in the sample size was 13 and the maximum was 32. The mean was 24.85 with the std. deviation of 3.672. The median was 24 and the mode was 23. The skewness was -.195 with a std. error of skewness of .253. The Kurtosis was .709 with a std. error of Kurtosis of .500. The percentile 25 was 23; the percentile 50 was 24 and the percentile 75 was 27, with an interquartile range of 4. The distance between the first quartile and median was 1, while the distance between third quartile and the median was 3. The significance value of Kolmogorov-Smirnov test of normality was .002, which indicates that the distribution of perceptions of respondents is negatively skewed.



**Figure 3:** The overall perception scores of respondents about CBE as a tool that promotes PHC philosophy.

#### **4.5.3. The overall distribution of respondents according to the category of perceptions about community-based education as tool that promotes primary health care philosophy**

The current study showed that the majority of respondents (63.7%, n=58) had strong positive perceptions and 35.2% (32) had moderate positive perceptions about community-based education as a tool that promotes primary health care, while only one respondent representing 1.1% had negative perceptions. As it had been indicated above, the overall perceptions score

mean were 24.85 at 79.5% indicating that the respondents had strong positive perceptions about community-based education as tool that promotes primary health care philosophy. The table below shows the overall distribution of respondents according to the category of their perceptions with regard to community-based education and primary health care philosophy.

**Table 11: The distribution of respondents according to the category of their perceptions about CBE as tool that promotes PHC philosophy**

Perceptions	Frequency	Percentage
Negative perceptions	1	1.1%
Moderate Positive perceptions	32	35.2%
Strong positive perceptions	58	63.7%
<b>Total</b>	<b>91</b>	<b>100%</b>

#### 4.5. The association between variables

Only the findings showing statistical significant associations between variables have been presented. The findings that were not statistically significant are not presented.

**Table 12: Perceptions of respondents on CBE as tool that promotes PHC Philosophy across the year of study**

	Mean rank of perceptions on CBE as a tool that promotes PHC philosophy	Chi-square	df	P-value
Second year	44.63	12.308	2	.002
Third year	59.09			
Fourth year	34.62			

The Kruskal-Wallis Test was computed to test difference in perceptions across the academic years of respondents. The Chi-square value was 12.308 with df:2 and the significance level

(*p*-value) of .002, which indicated that there was statistical difference of perceptions across the years of study of respondents. It means that the perception of students on community-based education as a tool that promotes PHC philosophy is different according to their academic year. Thus, the third year students were more positive that CBE is a tool that promotes PHC philosophy than second year and the fourth year students, with the fourth year students being the least positive. This shows that there was an increase of positive perceptions from the second year to the third, but a decrease in the fourth year. This decrease may be due to the fact that the students are exposed to specialization learning experiences in their fourth year and thus have less exposure to community settings.

**Table 13: Comparison of community-based learning settings and perceptions respondents on CBE as tool that promotes PHC Philosophy**

	Mean rank of perceptions of CBE as tool that promotes PHC Philosophy	Chi-square	df	<i>p</i> -value
Informal settlement	64.19	16.957	3	0.001
Suburban area	43.82			
Urban area	36.16			
Rural community	36.91			

The Kruskal-Wallis Test was computed to test difference in perceptions across the community-based learning settings the respondents were based in during their community based learning practice. The Chi-square was 16.957 with df: 3 and significance level (*p*-value) of .001, which indicates that the differences of perceptions across the community-based learning settings were statistically significant. The students based in informal settlements had more positive perceptions on CBE as a tool that promotes PHC philosophy

than those from suburban, rural communities and urban areas respectively, while those from urban areas had low positive perceptions on CBE as a tool that promotes PHC philosophy.

**Table 14: Cross-tabulation between community-based learning settings and community-based projects focused on rehabilitative care**

Community-based learning settings	Repartition of participants according to the focus of the community-based project on rehabilitative care			Chi-square	df	p-value
	Yes	No	Total			
Informal settlement	16 (66.7%)	8 (33.3%)	24 (100%)	7.958	3	.047
Suburban area	8 (28.6%)	20 (71.4%)	28(100%)			
Urban area	13 (46.4%)	15 (53.6%)	28 (100%)			
Rural community	4 (36.4%)	7 (63.6%)	11 (100%)			
<b>Total</b>	41 (45.1%)	50 (54.9%)	91 (100%)			

The Chi-square test was computed to test the difference between the respondents across the community-based learning settings in conducting community-based projects that focused on rehabilitative care. The Chi-square test value was 7.958 with df: 3 and significance level (*p*-value) of .047 (2-sided) which is statistically significant. Thus, there was difference between respondents in conducting community-based learning projects that focused on rehabilitative care across the community-based learning settings. More students who were based in informal settlements carried out community-based learning projects that focused on rehabilitative care than those who were based in rural, urban and suburban settings. This could be due to the fact that the people who live in informal settlements have limited resources and are not able to access to expensive rehabilitative services.

**Table 15: Comparison between respondents according to the year of study and interest in working in under-resourced communities**

	Distribution of participants according to the academic year	N	Mean Rank	Chi-square	df	<i>p</i> -value
Distribution of participants according to the level of agreement whether the community-based learning increased their interest to work in under-resourced communities	Second year	35	48.79	8.080	2	.018
	Third year	28	53.02			
	Fourth year	28	35.50			
	Total	91				

The Kruskal-Wallis Test was computed to compare the difference of respondents in interest in working in under-resourced communities across the year of study. The Chi-square test value was 8.080 with df: 2 and significance level (*p*-value) of .018, which indicates that there was statistical significance of difference in interest to work in under-resourced communities across the years of study. Findings revealed that the third year students perceived that the community-based education programme increased their interest to work in under-resourced communities more than others while the fourth year students perceived that the community-based education programme increased their interest to work in community less than others. It was shown that the perceptions of students on whether the CBE programme increased their interest to work in under-resourced communities increased from the second year to the third, but it decreased again in the fourth year. This might be because students have to do specialisation courses in both theory and practice in their fourth year of study.

**Table 16: Comparison of respondents' interest to work in under-resourced communities across the community-based learning settings**

	Distribution of participants according to the community settings	N	Mean Rank	Chi-square	df	p-value
Distribution of participants according to the level of agreement whether the community-based learning increased their interest to work in under-resourced communities	informal settlement	24	60.88	13.363	3	.004
	Suburban area	28	44.27			
	urban area	28	38.16			
	Rural community	11	37.91			
	<b>Total</b>	<b>91</b>				

The Kruskal-Wallis test was performed to compare respondents' interest to work in under-resourced communities across the community-based learning settings. The Chi-square test value was 13.363 with df: 3 and significance level ( $p$ -value) of .004 (2-sided), which is statistically significant. Thus, there was difference in interest of students to work in under-resourced communities across the community-based learning settings. Students who had been based in informal settlements in their community-based learning showed more interest in working in under-resourced communities than those who were based in other settings.

**Table 17: Comparison of respondents according to the year of study and better understanding the primary health care theory learnt in class due to practical exposure to communities.**

	Distribution of participants according to the academic year	N	Mean Rank	Chi-square	df	p-value
Distribution of the participants according to the level of agreement whether the practical exposure in the community allowed them understand PHC theory learnt in class	second year	35	36.26	10.007	2	.007
	Third year	28	53.48			
	Fourth year	28	50.70			
	Total	91				

The Kruskal-Wallis test was performed across the years of study to test if respondents had a better understanding of primary health care theory learnt in class due the practical exposure to the communities. The Chi-square test value was 10.007 with df: 2 and significance level of .007 (2-sided), which is statistically significant. Thus, there was difference between respondents across the years of study in whether the practical exposure in the communities had contributed to a better understanding of primary health care theory learnt in class. The practical exposure in communities in the third year students had more impact on a better understanding of primary health care theory learnt in class than those in the second or fourth years.

**Table 18: Cross-tabulation between students' exposure to learning about provision of health education to prevent diseases and promotion of health in a community and in a hospital**

		Exposure to learning about health education to prevent diseases and promote health in hospital			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about health education to prevent diseases and promote health in community	Yes	14(29.8%)	33(70.2%)	47(100%)	4.669	1	.031
	No	5 (11.4%)	39(88.6%)	44(100%)			
	<b>Total</b>	19 (20.9%)	72(79.1%)	91(100%)			

The Chi-square test was performed to test difference of students' exposure to learning about provision of health education to prevent diseases and promote health in a community setting or a hospital. The Chi-square test value was 4.669 with df: 1 and p-value of .031 (2-sided) which is statistically significant. Thus, there was difference and students had more exposure to learning about provision of health education to prevent diseases and promote health in a community than in hospital.

**Table 19: Cross-tabulation between students' exposure to learning about importance of baby breastfeeding in class and in a hospital**

		Exposure to learning about importance of baby breastfeeding in hospital			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about importance of baby breastfeeding in class	Yes	12 (23.1%)	40 (76.9%)	52(100%)	4.319	1	.038
	No	17 (43.6%)	22(56.4%)	39 (100%)			
	Total	29 (31.9%)	62(68.1%)	91(100%)			

The Chi-square test was performed to test whether students had more exposure to learning about the importance on baby breastfeeding in class or in hospital. The test value was 4.319 with df: 1 and *p*-value of 0.038 (2-sided), which is statistically significant. Therefore there was a difference students' exposure to the importance of baby breastfeeding and students had more exposure in class than in hospital.

**Table 20: Cross-tabulation between students' exposure to learning about importance of baby breastfeeding in a community and in a health clinic**

		Exposure to learning about importance of baby breastfeeding in health clinic			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about importance of baby breastfeeding in community	Yes	13 (65%)	7 (35%)	20(100%)	5.693	1	.017
	No	25 (35.2%)	46(64.8%)	71 (100%)			
	Total	38 (41.8%)	53 (58.2%)	91(100%)			

The Chi-square test was calculated to test difference between students' exposure to learning about importance of baby breastfeeding in a community and in a health clinic. The test value was 5.693 with df:1 and *p*-value of .017 (2-sided), which is statistically significant. Therefore, there was difference between exposure to learning about the importance of baby breastfeeding and students had more exposure to learning about it in health clinic than in community.

**Table 21: Cross-tabulation between students' exposure to learning about importance of baby breastfeeding in a health clinic and a hospital**

		Exposure to learning about importance of baby breastfeeding in health clinic			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about importance of baby breastfeeding in community	Yes	17 (44.7%)	21 (55.3%)	38 (100%)	4.976	1	.026
	No	12 (35.2%)	41(64.8%)	53 (100%)			
	Total	29 (31.9%)	62 (68.1%)	91(100%)			

The Chi-square test was computed to test the difference between exposure to learning about the importance of baby breastfeeding in a health clinic and in a hospital. The test value was 4.976 with df: 1 and *p*-value of .026 (2-sided), which is statistically significant. Therefore, there was difference of exposure to learning about importance of baby breastfeeding and students had more exposure in a health clinic than in a hospital.

**Table 22: Cross-tabulation between students' exposure to learning about family planning for both male and female in a community and a health clinic**

		Exposure to learning about family planning for both male and female in hospital			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about family planning for both male and female in community	Yes	12 (57.1%)	9 (42.9%)	21 (100%)	16.186	1	<.001
	No	10 (14.3%)	60(85.7%)	70 (100%)			
	Total	22 (24.2%)	69 (75.8%)	91(100%)			

The Chi-square test was performed to test the difference between student's exposure to learning about family planning for both male and female in a community and in a hospital.

The Chi-square test value was 16.186 with df: 1 and *p*-value of <.001 (2-sided), which is

statistically significant. Thus there was more of exposure to learning about family planning for both male and female in a community than in a hospital.

**Table 23: Cross-tabulation between students' exposure to learning about family planning for both males and females in a health clinic and a hospital**

		Exposure to learning about family planning for both males and females in a hospital			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about family planning for both males and females in a health clinic	Yes	18(37.5%)	30 (62.2%)	48 (100%)	9.838	1	.002
	No	4 (9.3%)	39(90.7%)	43 (100%)			
	Total	22 (24.2%)	69 (75.8%)	91(100%)			

The Chi-square test was calculated to test the difference between students' exposure to learning about family planning for both males and females in a health clinic and in a hospital. The Chi-square test value was 9.838 with df: 1 and *p*-value of .002 (2-sided), which is statistically significant. Therefore, there was difference of exposure and students had more exposure to learning about family planning for both male and female in a health clinic than in a hospital.

**Table 24: Cross-tabulation between students' exposure to learning about prevention of malnutrition of children through food supplementation in class and in a health clinic**

		Exposure to learning about prevention of malnutrition of children through food supplementation in health clinic			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about prevention of malnutrition of children of through food supplementation in class	Yes	22(34.4%)	42 (65.6%)	64 (100%)	4.835	1	.028
	No	16 (9.3%)	11(40.7%)	27 (100%)			
	Total	38 (41.8%)	53 (58.2%)	91(100%)			

The Chi-square test was calculated to test the difference in students' exposure to learning about prevention of malnutrition of children through food supplementation in a class and in a

health clinic. The Chi-square test value was 4.835 with df: 1 and  $p$ -value of .028 (2-sided), which is statistically significant. Thus, there was difference between exposures to learning about prevention of malnutrition of children through food supplementation and students had more exposure in class than in a health clinic.

**Table 25: Cross-tabulation between students' exposure to learning prevention of malnutrition of children through food supplementation in a health clinic and in a hospital**

		Exposure to learning about prevention of malnutrition of children through food supplementation in hospital			Chi-square	df	$p$ -value
		Yes	No	Total			
Exposure to learning about prevention of malnutrition of children of through food supplementation in health clinic	Yes	11(28.9%)	27 (71.1%)	38 (100%)	4.526	1	.033
	No	6 (11.3%)	47(88.7%)	53 (100%)			
	Total	17 (18.7%)	74 (81.3%)	91(100%)			

The Chi-square test was computed to test the difference between exposure to learning about prevention of malnutrition of children through food supplementation in a health clinic and in a hospital. The Chi-square test value was 4.526 with df: 1 and  $p$ -value of .033 (2-sided), which is statistically significant. Therefore, there was difference and students had more exposure to learning about prevention of malnutrition of children through food supplementation in a health clinic than a hospital.

**Table 26: Cross-tabulation between students' exposure to learning about first aid measures at home in class and in a community**

		Exposure to learning about first aid measures at home in community			Chi-square	df	$p$ -value
		Yes	No	Total			
Exposure to learning about first aid measures at home in class	Yes	3(5.7%)	50 (94.3%)	53 (100%)	4.934	1	.026
	No	8 (21.1%)	30(78.9%)	38 (100%)			
	Total	11 (12.1%)	80(87.9%)	91(100%)			

The Chi-square test was computed to test difference between students' exposures to learning about first aid measures at home in a class and in a community. The Chi-square test value was 4.934 with df:1 and  $p$ -value of .026 (2-sided), which is statistically significant. Therefore, there was difference and students had more exposure to learning about first aid measures at home in class than in a community.

**Table 27: Cross-tabulation between students' exposure to learning about first aid measures at home in a health clinic and in a hospital**

		Exposure to learning about first aid measures at home in hospital			Chi-square	df	$p$ -value
		Yes	No	Total			
Exposure to learning about first aid measures at home in health clinic	Yes	10 (37%)	17 (63%)	27 (100%)	6.067	1	.014
	No	9 (14.1%)	55(85.9%)	38 (100%)			
	Total	19 (20.9%)	72(79.1%)	91(100%)			

The Chi-square test was performed to test the difference between students' exposure to learning about first aid at home in a health clinic and in a hospital. The Chi-square test value was 6.067 with df: 1 and  $p$ -value of .014 (2-sided), which is statistically significant. Thus, there was difference and students had more exposure to learning about first aid measures at home in a health clinic than in a hospital.

**Table 28: Cross-tabulation between students' exposure to learning about baby immunization in class and in a health clinic**

		Exposure to learning about baby immunization in health clinic			Chi-square	df	$p$ -value
		Yes	No	Total			
Exposure to learning about baby immunization in class	Yes	25 (45.5%)	30 (54.5%)	55 (100%)	3.939	1	.047
	No	24 (66.7%)	12 (33.3%)	36 (100%)			
	Total	49 (53.8%)	42(46.2%)	91(100%)			

The Chi-square test was performed to test the difference between students' exposure to learning about baby immunization in class and in a health clinic. The Chi-square test value was 3.939 with df:1 and p-value of .047 (2-sided), which is statistically significant. Thus, there was difference and students had more exposure to learning about baby immunization in class than in a health clinic.

**Table 29: Cross-tabulation between students' exposure to learning about baby immunization in class and in a health clinic**

		Exposure to learning about baby immunization in hospital			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about baby immunization in community	Yes	5 (33.3%)	10 (66.7%)	15 (100%)	6.368	1	.012
	No	7 (9.2%)	69 (90.8%)	76 (100%)			
	Total	12 (13.2%)	79(86.8%)	91(100%)			

The Chi-square test was computed to test the difference between students' exposure to learning about baby immunization in a community and in a hospital. The Chi-square test value was 6.368 with df:1 and p-value of .012 (2-sided), which is statistically significant. Therefore, there was a difference and students had more exposure to learning about baby immunization in a community than in a hospital.

**Table 30: Cross-tabulation between students' exposure to learning about educating the community about waste disposal in a health clinic and in a hospital**

		Exposure to learning about educating the community on waste disposal in hospital			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about educating the community about waste disposal in health clinic	Yes	6 (40%)	9 (60%)	15 (100%)	13.168	1	<.001
	No	5 (6.6%)	71(93.4%)	76 (100%)			
	Total	11 (12.1%)	80 (87.9%)	91(100%)			

The Chi-square test was calculated to test difference between students' exposure to learning about educating community about waste disposal in a health clinic and in a hospital. The Chi-square test value was 13.168 with df: 1 and  $p$ -value of  $<.001$  (2-sided), which is statistically significant. Thus, there was difference and students had more exposure to learning about educating the community about waste disposal in a health clinic than in a hospital.

**Table 31: Cross-tabulation between students' exposure to learning about ways of keeping water clean if there are no water taps in a health clinic and in a hospital**

		Exposure to learning about ways of keeping water clean if there are no water taps			Chi-square	df	$p$ -value
		Yes	No	Total			
Exposure to learning about ways of keeping water clean if there are no water taps in health clinic	Yes	9 (40.9%)	13 (59.1%)	22 (100%)	14.249	1	<.001
	No	5 (7.4%)	63(92.6%)	68 (100%)			
	Total	14 (15.6%)	76 (84.4%)	91(100%)			

The Chi-square test was computed to test difference between students' exposure to learning about ways of keeping water clean if there are no water taps in a health clinic and in a hospital. The Chi-square test value was 14.249 with df: 1 and  $p$ -value of  $<.001$  (2-sided), which is statistically significant. Therefore, there was difference and students had more exposure to learning about ways of keeping water clean if there are no water taps in a health clinic than in a hospital.

**Table 32: Cross-tabulation between students' exposure to learning about care of a terminally ill patient at home (home-based care) in a community and in a health clinic**

		Exposure to learning about Care of a terminally ill patient at home (home-based care) in health clinic			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about care of a terminally ill patient at home in community	Yes	10(38.5%)	16 (61.5%)	26 (100%)	10.950	1	.001
	No	6 (9.2%)	59 (90.8%)	65 (100%)			
	Total	16 (17.6%)	75 (82.4%)	91(100%)			

The Chi-square test was performed to test the difference between students' exposure to learning about care of a terminally ill patient at home in a community and in a health clinic. The Chi-square test value was 10.950 with df: 1 and  $p$ -value of .001 (2-sided), which is statistically significant. Therefore, there was a difference and students had more exposure to learning about care of a terminally ill patient at home in a community than in a health clinic.

**Table 33: Cross-tabulation between students' exposure to learning about care of a terminally ill patient at home (home-based care) in a health clinic and in a hospital**

		Exposure to learning about Care of a terminally ill patient at home (home-based care) in hospital			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about care of a terminally ill patient at home in health clinic	Yes	7(43.8%)	9 (56.2%)	16 (100%)	5.366	1	.021
	No	13 (17.3%)	62 (82.7%)	75 (100%)			
	Total	20 (22%)	71 (78%)	91(100%)			

The Chi-square test was performed to test difference between students' exposure to learning about care of a terminally ill patient at home (home-based care) in a health clinic and in a hospital. The Chi-square test value was 5.366 with df:1 and  $p$ -value of .021 (2-sided), which is statistically significant. Thus, there was difference and students had more exposure to learning about care of a terminally ill patient at home in a health clinic than in a hospital.

**Table 34: Cross-tabulation between students' exposure to learning about women empowerment in a community and in a health clinic**

		Exposure to learning about Women empowerment (e.g. education about women abuse and women's right, education and skills development for women survival) in health clinic			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about Women empowerment (e.g. education about women abuse and women's right, education and skills development for women survival) in community	Yes	7(28%)	18 (56.2%)	25 (100%)	4.214	1	.040
	No	7 (10.6%)	59 (89.4%)	66 (100%)			
	Total	14 (15.4%)	77 (84.6%)	91(100%)			

The Chi-square test was computed to test the difference between students' exposure to learning about women empowerment in a community and in a health clinic. The Chi-square test value was 4.214 with df:1 and p-value of .040 (2-sided), which is statistically significant. Therefore, there was difference and students had more exposure to learning about women empowerment in a community than in a health clinic.

**Table 35: Cross-tabulation between students' exposure to learning about women empowerment in a health clinic and in a hospital**

		Exposure to learning about Women empowerment in hospital			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about Women empowerment (e.g. education about women abuse and women's right, education and skills development for women survival) in health clinic	Yes	5(35.7%)	9 (64.3%)	14 (100%)	10.341	1	.001
	No	5 (6.5%)	72 (93.5%)	77 (100%)			
	Total	10 (11%)	81 (89%)	91(100%)			

The Chi-square test was calculated to test difference between students' exposure to learning about women empowerment in a health clinic and in a hospital. The Chi-square test value was 10.341 with df: 1 and p-value of .001 (2-sided), which was statistically significant. Thus,

there was difference and students had more exposure to learning about women empowerment in a health clinic than in a hospital.

**Table 36: Cross-tabulation between students' exposure to learning about collaborating with other sectors as nurses in addressing health issues in the community in a health clinic and in a hospital**

		Exposure to learning about collaborating with other sectors as nurses in addressing health issues in the community (eg. Working with business people, teachers, police officers, transport, etc ) in hospital			Chi-square	df	p-value
		Yes	No	Total			
Exposure to learning about collaborating with other sectors as nurses in addressing health issues in the community (eg. Working with business people, teachers, police officers, transport, etc) in health clinic	<b>Yes</b>	<b>6(40%)</b>	<b>9 (60%)</b>	<b>15 (100%)</b>	<b>15.454</b>	<b>1</b>	<b>&lt;.001</b>
	<b>No</b>	<b>4 (5.3%)</b>	<b>72 (94.7%)</b>	<b>76 (100%)</b>			
	<b>Total</b>	<b>10 (11%)</b>	<b>81 (89%)</b>	<b>91(100%)</b>			

The Chi-square test was performed to test the difference between students' exposure to learning about collaborating with other sectors as nurses in addressing community health issues in a health clinic and in a hospital. The Chi-square test value was 15.454 with df: 1 and *p*-value was <.001 (2-sided), which is statistically significant. Therefore, there was difference and students had more exposure to learning about collaborating with other sectors as nurses in addressing community health issues in a health clinic than in a hospital.

**Table 37: Association of learning activities in a community as an educational setting and community-based projects focusing on promotion of health**

	Community-based project focus on promotion of health	N: 90	Mean	Std. deviation	T-test	df	Sign. (2-sided)
Learning activities in community	Yes	80	5.175	3.378	2.339	88	.022
	No	10	2.600	2.270			

The independent T-test was computed to determine the association of learning activities in a community setting and community-based projects focusing on health promotion. The T-test result value was 2.339 with df: 88 and *p*-value of .022 (2-sided), which indicated that there was a significant statistical association between learning experiences in a community and community-based projects focusing on health promotion. The study suggested that exposure to learning materials in a community was associated with carrying out a community-based project focusing on health promotion.

**Table 38: Association of learning activities in a community as an educational setting and community-based projects focusing on prevention of illness, injuries and social problems**

	Community-based project focus on prevention of illness, injuries and social problems	N: 90	Mean	Std. deviation	T-test	df	Sign. (2-sided)
Learning activities in community	Yes	81	5.135	3.401	2.130	88	.036
	No	9	2.666	2.000			

The independent T-test was performed to test the association of educational activities in a community setting and conducting community-based learning projects focusing on prevention of illness, injuries and social problems. The T-test result value was 2.130; df:88 and  $p$ -value of .036, which indicated that there was a statistical association between carrying out a community-based learning project focusing on prevention of illness, injuries and social problems and education activities in community. Thus, the study suggested that the students conducted community-based learning projects focusing on prevention of illness, injuries and social problems when they were exposed to educational activities in community.

**Table 39: Association of learning activities in a community as an educational setting and community-based projects focusing on treatment of common illnesses and injuries at home**

	Community-based project focusing on treatment of common illnesses, injuries at home	N: 90	Mean	Std. deviation	T-test	df	Sign. (2-sided)
Learning activities in community	Yes	48	5.583	3.712	2.135	88	.036
	No	42	4.095	2.748			

The independent T-test was calculated to test the association between exposure to educational activities in community and carrying out community-based learning projects focusing on treatment of common illnesses and injuries at home. The T-test result value was 2.135, df: 88 and  $p$ -value of .036 which indicated that there was a significant statistical association between exposure to educational activities in community and carrying out community-based learning project focusing on treatment of common illnesses and injuries at home.

**Table 40: Association of learning activities of in a community as an educational setting and community-based projects focusing on rehabilitative care**

	Community-based project focusing on rehabilitative care	N: 90	Mean	Std. deviation	T-test	df	Sign. (2-sided)
Learning activities in community	Yes	41	6.024	3.704	3.065	88	.003
	No	49	3.938	2.741			

The independent T-test was computed to test the association between carrying out community-based learning project focused on rehabilitative care and educational activities exposure in community. The T-test result value was 3.065; df: 88 and *p*-value of .003, which indicated that there was significant statistical association between educational activities exposure in community and carrying out community-based learning projects focused on rehabilitative care. Thus, the study suggested that there was association between learning activities in community as an educational setting and carrying out community-based learning projects focused on rehabilitative care.

**Table 41: Association of learning activities in a health clinic as an educational setting and community-based projects focusing on rehabilitative care**

	Community-based project focus on rehabilitative care	N: 90	Mean	Std. deviation	T-test	df	Sign. (2-sided)
Learning activities in health clinic	Yes	41	5.731	4.037	2.171	88	.033
	No	49	4.061	3.262			

The independent T-test was performed to test the association between carrying out community-based learning projects focusing on rehabilitative care and a health clinic as the setting of educational activities. The test result value was 2.171; df:88 and *p*-value of .033, which indicated that there was significant statistical association between learning in health clinic and carrying out community-based learning project focusing on rehabilitative care.

Thus, the study suggested that there was an association between exposure to learning about educational activities in a health clinic and carrying out community-based learning projects focusing on rehabilitative care.

**Table 42: Association of learning activities in a community as an educational setting and community-based projects promoting community self-reliance and self-determination**

	Community-based project focus on promoting community self-reliance and self-determination	N: 90	Mean	Std. deviation	T-test	df	Sign. (2-sided)
Learning activities in community	Yes	69	5.347	3.359	2.409	88	.018
	No	21	3.381	2.974			

The independent T-test was computed to test association between exposure to learning about educational activities in a community and carrying out community-based learning projects promoting community self-reliance and self-determination. The T-test result value was 2.409,df: 88 and *p*-value of .018 , which indicated that there was significant statistical association between exposure to learning about educational activities in a community and carrying out community-based learning project promoting community self-reliance and self-determination. Thus, the study suggested exposure to learning about educational activities in a community was associated with carrying out community-based learning projects promoting community self-reliance and self-determination.

## 4.6. Conclusion

This chapter four covered the presentation, analysis and interpretation of findings. Descriptive and analytical analysis was done and the findings were presented using tables and figures. Analysis was done using various statistical tests such as the Mann-Whitney U test, the Independent Test-test, the Chi-square and the Kruskal-Wallis Test to test associations between variables. A significance level of  $\leq .05$  was considered as statistically significant. The Kolmogorov-Smirnov test of normality was computed to test normality of data distribution that guided the choice of test to be used in data analysis, where a value of  $\leq .05$  indicated skewed data, therefore use of non-parametric tests and value  $> .05$  indicated use of parametric tests. The association between demographic variables and perceptions of participants on CBE as a tool to promote primary health care philosophy, factors that affect promotion of primary health care philosophy and community-based learning activities that promote primary health care philosophy was done and it has been shown that some variables were associated and reported in this chapter, whereas those that were not associated were not reported here.

## **CHAPTER FIVE**

### **DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1. Introduction**

This chapter presents a discussion of the finding and the conclusion, recommendations and limitations of this study which aimed to explore the students' perspectives regarding the promotion of primary health care philosophy in a community-based nursing education programme at a selected School of Nursing in KwaZulu-Natal. The discussion was guided by objectives of the study, Kolb's experiential learning theory that was the theoretical framework followed in this study, the positivist paradigm and literature.

#### **5.2 Discussion of the findings**

##### **5.2.1. Socio-demographic characteristics of the respondents**

The findings of this current study showed that the majority of respondents were female (80.2%), while only 19.8% were male. The findings are congruent with findings of a study conducted in South Africa where the majority of nursing students who were studying a four-year nursing programme in 2006 were female, with males constituting only 20% of the nursing students (Breier, Wildschut and Mqglozana, 2009). It is also similar to the study conducted in United Kingdom (UK) by McLaughlin, Muldoon and Moutray (2010) where they found that among 350 students followed in their longitudinal study, 318 (91%) were female. The majority of the United Nations of American nursing staff were also female (U.S. Department of Health and Human Services; Health Resources and Services Administration, 2010) while in Rwanda, 66% of nurses are female (AHWO, 2009).

The dominance of female nurse students is not surprising, since the nursing profession has historically been stereotyped as a profession of women from the time of Florence Nightingale (McLaughlin et al., 2010) and males tend to avoid the profession due to the stereotypes associated with a woman's role in a patriarchal society (Loughrey, 2008; Evans, 2004). Furthermore, the studies indicated that the image of a nurse portrayed by the media as a physician handmaiden, someone without children, young and female, prevents males from entering and remaining in a nursing career (McLaughlin et al., 2010). If the nursing profession continues to be considered as profession of women with little attraction to males, it may decrease in status, which may result in females avoiding nursing as a career. This may lead to the shortage of nursing staff and negatively affect the implementation and sustainability of primary health care philosophy.

The current study revealed that the minimum age of respondents was 18 years old and the maximum was 37 years old; the mean age was 21.99 years and mode 22 years. This reflects the traditional age of students attending university to obtain a bachelor's degree. The findings are similar with those of the study carried out by Small and Pretorious (2010), where they found that the average age distribution of students was 25 years old. It is also similar to the study conducted in UK by Watson, Gardiner, Hogston, Gibson, Stimpson, Wrate and Deary (2009), where they found that median age of nurse students was 22 years old. These studies are similar in terms of age distribution of respondents and revealed that nursing students are generally young. This might be good news for nursing profession in South Africa, where currently two thirds of nursing staff are over 40 years and will be retiring in the next few years (Breier et al., 2009). Therefore, the young incoming nurses will take over and replace those who retire. This may facilitate the implementation and sustainability of primary health

care philosophy as most of their training programmes have been underpinned by PHC philosophy.

### **5.2.2. Community-based learning activities that promote primary health care philosophy**

The study showed that 82.4% (75) did their community-based learning activities in their first year of study as practicals in an old age home and 24.4% (22) did their first year practicals in a crèche. In the second year of study, the students participated in various community learning programmes during the course of the year. During January/February, 92.1% (82) of the respondents were placed in a community setting. Community learning also took place in April, involving 89.9% (80) of the students; in July, involving 87.6% (78); in September, involving 64% (57); and in December, involving 56.7% (51). In addition, 36.7% (33) of the respondents did community learning at a psychiatric unit and 34.4% (31) did community learning in a primary health care clinic.

This distribution showed that the university programme reflects community-based education principles in terms of early exposure to community learning, continuity of exposure to community learning and a variety of community learning settings which include the community itself and specialty learning environments. Early exposure to community education aims to familiarize the students with primary health care principles in order to equip them with culture of primary health care philosophy principles with regard to health promotion and disease prevention (Mtshali, 2005; WHO, 1987). The continuity of community learning is crucial as it helps the students to maintain and reinforce a spirit of community practice and reinforce internalization of health promotion and illness prevention throughout the educational programme.

The current study showed that 97.8% (89) of the students participated in family assessment; 100% conducted epidemiological studies; 100% (91) conducted community assessment to identify the community health needs; and 95.6% (81) did validation needs from the community to identify the health need priorities. The activities the students were involved in correspond with the concrete experience stage of Kolb's experiential learning cycle, where students are immersed in real situations and experience real health problems of community.

During the stage of concrete experience, the students engage in assessing critical health problems in a community through community studies by different methods, either by interviews with the community or any other methods of data collection (Lisko and O'Dell, 2010). This stage forms the basis of learning, where the learner understands the real world through tangible information by taking part in what is happening and feels the reality of the world by using their senses and immersion in the concrete experience (Schellhase, 2006). From direct participation in community surveys, and family and epidemiological studies, assisted by community members as sources of information, the students reflect on what they experienced, critically analyse and examine their experience in the community, which are complex encountered situations.

This reflection on community experience raises the consciousness of both students and community members about real issues in the community, while analysis of data obtained from community studies and validation needs of the community enables them to identify available resources. Also, as a result of reflection on the information they have obtained, the students learn and understand how multiple factors such as cultural, socio-economic and political factors are interrelated to determine the health status of the population (Uys and Gwele, 2005). Together, through discussion with the community members, and in the

reflection process, which takes place after the community experience, the priority health needs of the community are determined during the validation of needs process.

The results of this study are in line with literature where Lalonde (2010) states that the reflective process takes place after the concrete experience through discussion, debriefing sessions, guides of experience and reflective journals and logs. Dewey explained reflection as way of interpreting and making meaning of experience through discernment of facts of what it is and what it was supposed to be, or the consequences of one's own action, and also thinking on what is perplexing in the community in the light to make meaning (Bringle and Hatcher, 1999; John, 1996). The validation needs respects the principles of primary health care philosophy, where it is stated that in community-based education, community members participate in identification of their needs (WHO, 1987), which leads to their participation in finding of solution and acceptability of services.

The findings of this study is consistent with findings of the study conducted by Bentley and Ellison (2005) who found that out of 20 students who engaged in community-service learning, 90% became aware of the health needs of the community. It is also congruent with the study carried out in the USA by Sullivan (2009) and the study conducted by Lenz and Warner (2011), who both found that the students identified the health needs of the community before they implemented health interventions to address those health problems.

The learning activities the students participated in this study are in line with the community learning activities identified by the World Health Organization. This international organisation identified community surveys and family studies as examples of learning experience in community-based education aimed to diagnose the health problems in the community and plan actions to address them. They are also in line with the learning experiences outlined by Mtshali (2005), who states that community surveys, family

assessments, epidemiological studies, and intervention planning are among the learning experiences in community-based nursing education. As stated by the WHO (1987), community-based education enables the students to obtain a clear understanding of the health needs of the community and the different factors contributing to the health status of the community. Findings in this current study revealed that respondents participated in learning activities that aimed to diagnose the health needs of the community and 90.1% of respondents planned appropriate and relevant health interventions aimed to address the health problems that were identified by community members in the community. This is in line with literature where it was stated that during the abstract conceptualization phase in Kolb's experiential learning cycle, in community-based learning, after exposure to real situations and making meaning of experience by identification of community health needs, the students identify possible solutions and plan community health interventions targeting to solve those problems (Mtshali, 2005).

It was revealed in this study that 97.6% (87) involved school teachers, 91.2% (83) involved local leaders, 89% (81) involved community health workers and 93.4% (85) involved community members overall 69.9% of respondents involved the community members in their community-learning activities . This embraces the primary health care philosophy principle where is stated that the community members should be involved in planning, implementation, monitoring and evaluations of community-based projects aimed to address their health needs (Australian Capital Territory, 2010). The findings show that the principle of primary health care philosophy with regard to community participation was covered through the community-based nursing education programme at the School of Nursing where 70.3% (64) of the respondents were exposed to learning about community involvement in a community and 51.6% (47) of them had covered it in the classroom learning environment.

This is in line with recommendations of the WHO (1987) that states that community members should be involved in students' educational experience, not only to provide the support to foster learning, but also to ensure that community needs are satisfied. The success of community-based nursing education depends on the community's participation in educational processes where the community helps the students to identify the health problems in the community to form the curriculum content and in return benefit from the services provided by the students (Mtshali, 2005). The community participation in learning experience enhances ownership of the interventions implemented and acceptability of the programme which, in return, achieves the main objective of improving the health of the population being served.

This current study showed that 94.3% of the nursing students participated in fundraising for community projects, 80.2% participated in PHC principle of community mobilization to take responsibility for their health and 85.7% participated in the implementation of community projects. It was indicated in this study that the students were involved in mobilizing resources for promoting community self-determination, which is a principle to be observed in primary health care philosophy. Mtshali (2009) states that a community-based education programme should respond to the primary health care philosophy, a philosophy which aims to improve the health of the population through health promotion, disease prevention, self-reliance and self-determination of community members with regard to their health, especially that, according to the WHO and Health and Welfare Canada (1986), health is considered as a resource for community development.

It was indicated in the current study that the community-based projects of 89% of the respondents focused on PHC component on promotion of health. It was revealed that 90.1% of their community-based projects focused on prevention of illness, injuries and social

problems. It was also shown that 45.1% of respondents conducted community-based projects focused on rehabilitative care of patients with deformities, elderly patients with chronic illnesses and mentally ill clients in the community. This study revealed that 52.7% of respondents conducted community-based projects focused on treatment of common illnesses and injuries at home, such as treatment of lice, diarrhoea and vomiting, flu and minor burn injuries, and 76.9% of respondents carried out community-based projects focused on promoting community self-reliance and self-determination, such as identifying, accessing and utilizing available resources within the community in addressing health related issues. These focuses reflect the components of primary health care philosophy.

These community-based learning projects that were implemented by the students, reflect active experimentation in Kolb's experiential learning cycle, where the students implement and evaluate learning activities that respond to the health needs of community for the purpose of betterment of that community while achieving their learning objectives (Villani and Atkins, 2000). Dewey stated that learning take place when the learner is actively involved in meaningful learning activities that solve the community problems, learning by doing where the learner tests his hypothesis in relation to the problems to be solved (Walters, 2005; Neill, 2005).

The findings of this study are congruent with the results of the study conducted in USA by Reising et al.,(2008) who found that the nurse students in community-based learning implemented a health education programme about diabetes and heart disease after they discovered the high rate of diabetes and heart disease in community, and provided health education on safe sexual behaviour to the Latino-African -American adolescents, which impacted positively on the adoption of a healthy lifestyle by 62% of the community and reduced sexuality among adolescents respectively. It is also consistent with the findings of

the study by Sullivan (2009) in the USA who found that the nurse students in community-service learning provided Russian speaking refugees in USA with a health promotion and illness prevention programme which incorporated immunization, oral health, infant feeding, hygiene product use, germ illness transmission, weather cold preparation, healthy eating, women's health issues and assessment of blood pressure for adults.

The results of the current study are similar with the findings of the study by Eriskson (2004), who found that in community-based learning, the nurse students provided group health promotion to elderly people in an old age home for stroke prevention, stress reduction, blood pressure screening, weekly medication regime assessment and instruction, fall prevention, group exercise with music, education in nutrition for healthy living, injury prevention guidelines and prevention of isolation. It is also consistent with the results of the study carried out by Lashley (2007), who found that the nurse students in community-based learning provided a health programme that targeted homeless people which included health education about HIV and AIDS, sexually transmitted infections, hepatitis, prostate cancer, hypertension, diabetes, tuberculosis, foot care, dental care and smoking cessation and those who were Tuberculosis positive were treated and 33% completed treatment.

The findings of the study are also in line with the literature where it is stated that community-based learning activities enable the learners to become socially responsible and respond to the needs of the community, especially the underserved and vulnerable population (Vogt et al., 2011; Lazarus et al., 2008; WHO, 1987). The literature also invokes that a community-based nursing education programme provides comprehensive learning experiences that focus on health promotion, illness prevention, treatment, rehabilitation and promotes self-reliance and self-determination of the community as principles of PHC philosophy that links

education to primary health care philosophy as the driving force of health care (Fichardt and du Rand, 2000; WHO, 1987; WHO and UNICEF, 1978).

The findings of the current study suggest that a community-based nursing education programme is in line with recommendations of the South African Department of Health, Department of Education, the South African Nursing Council and various other international organizations stipulating that education of health professionals should be responsive to the community needs and achieve the learning objectives at the same time by actively involving students in learning experiences that bring about change in the community (Whelan, Spencer and Rooney, 2008; Department of Health, 1997; Ministry of Education, 1997). The students' community-based learning projects focused on provision of health care services according to the needs of the community, which made the health services accessible to the community, therefore promoting equity in health care services provision which is in accordance with the social justice orientation of PHC philosophy.

The results are also in line with the primary health care philosophy of health care services being accessible, acceptable and affordable scientifically and technologically; encompassing multiple determinants of health and eliminating causes of diseases through health promotion and illness prevention (Australian Capital Territory, 2010). Weil and McGill (1993); Henry (1993) argue that community-based education is considered as a teaching approach of social change and social transformation, where the students involved in community-based learning experience become autonomous, socially responsible, develop consciousness about society and take actions to change the inequality existing in society through problem-solving processes.

It was suggested in this study that students participating in a community-based nursing education programme do community assessments, needs validations and implement

interventions such as health education that raise the consciousness of the community to their own health issues. This is in line with Paulo Freire's idea about education, stating that the education should be transformative by raising consciousness about prevailing inequality through active participation of the learners in solving social problems in partnership with communities and thus move towards social change (Freire, 1921).

If the students were actively involved in learning projects that were relevant to community, they achieved their learning objectives of becoming independent learners by developing the ability to control their learning process and, as learning became meaningful and relevant to them, benefiting the community by providing services. This is congruent with literature where Weil and McGill (1993) state that community-based education is a teaching strategy aimed to involve the learner in the learning process to make learning active, meaningful and relevant to the real life situation as they change the life of society.

In carrying out the learning projects that respond to the community needs by focusing on prevention of disease, injury and social problems; health promotion; treatment of common illnesses and injuries at home; rehabilitation; promoting self-determination and self-reliance of the community; and addressing the health problems which promote accessibility of health care services to the community, they change the life and health of society in general. It was shown that the community-based learning projects of students made various health services accessible to the communities as the principles to be considered in PHC system. The current study revealed that the community-based nursing education programme exposed the students to learning about various educational aspects in the classroom, the community, health clinics and hospitals. It is very important for students to be exposed to primary health care philosophy during their educational programme, which will make them competent professionals in serving the population, especially those living in poor regions, resulting in

progress towards attainment of health for all. The students who are trained in such an approach become graduates who are responsive to the needs of the community and individual patients, thus enhancing the performance of the health system of the country.

This study revealed that 71.4% of respondents were exposed to learning about health education to prevent diseases and promote health; 52.7% were exposed to learning about oral rehydration methods for dehydrated children; 57.1% were exposed to learning about the importance of baby breastfeeding; 62.6% were exposed to learning about family planning for both males and females; 70.3% were exposed to learning about prevention of malnutrition to children through food supplementation; 58.2% were exposed to learning about first aid measures at home; and 52.7% of respondents were exposed to learning about growth monitoring of children.

Furthermore, it was indicated that 60.4% of respondents were exposed to learning about baby immunization; 70.3% were exposed to learning about community involvement in community-based projects; 38.5% were exposed to advocating for vulnerable people; 50.5% were exposed to learning about educating community about waste disposal; 56.7% were exposed to learning about ways of keeping water clean if there are no water taps; 51.6% were exposed to learning about taking care of terminally ill patients at home (home-based care); 57.1% were exposed to learning about women empowerment, such as education about women abuse, women's rights and skills development for women; and 59.3% of respondents were exposed to learning about collaboration with other sectors as nurses in addressing health issues in community. These learning activities according to WHO (1987) are PHC focus. Students' exposure to PHC learning activities empowers the students with competences to work in community and collaborate with multi-disciplinary teams to deliver and make accessible health services to needy populations. These are in line with the recommendations

of lancet report 2010 stipulating that the curriculum of health professionals should equip them with competences to practice in all levels of health care system in the country especially at community level where they provide primary health care services and learn to work in team for effective team work since maintenance and restoration of health depend on multi skilled professionals, and for that that educational experiences of health professionals should mainly focus on health promotion and prevention than curative approach of teaching (Frenk et al., 2010).

It is obvious that the nurse students are exposed to educational experiences that prepare them to fulfil their role in primary health care settings where they play their roles according to Keleher, Parker and Francis (2010) as health promoters, health educators, community and vulnerable group advocates, promoters of community self-reliance and self-determination and as member of interdisciplinary teams working together to improve health of individuals and groups. These findings about the learning activities are similar to the educational experiences identified in study conducted by Keleher et al.,(2010) in Royal College of Nursing , Australia, in the curriculum of Bachelor of Nursing designed to prepare competent nurses for working towards promotion, strengthening and sustainability of primary health care.

The current study revealed that the community-based nursing programme exposed the students to various learning experience in different settings such as classrooms, communities, health clinics and hospitals. This is in line with the reflective observation, abstract conceptualization and even active experimentation stages of Kolb's experiential learning theory. These stages are interrelated and the learning can start at any stage. After the concrete experiences, the students reflect upon their experience to gain a deep understanding of community health problems. In the reflective observation stage, the learners attend real

situations where they watch, observe and draw conclusions about their experience, which directs them toward abstract conceptualization (Chan, 2012). In this reflection, they interpret findings and discover their knowledge gap in addressing the health problems, which make them to think, analyse, search for information and plan the learning activities needed to address those problems. Abstract conceptualization took place in the classroom, where they analysed the health problems identified in community and learned how to solve them.

John Dewey argues that in the reflective process, the learners interpret and question their experience, try to find out community needs and generate possible causes of those problems, and then, after analysis, they plan and experiment or test the best chosen hypothesis (Rodgers, 2002). The nurse students make meaning of the experience encountered in community and reflect on health problems identified and after analysis; they plan learning activities in relation to health promotion, illness prevention, and promotion of self-reliance and self-determination of the community through GOBIFFFF strategies in abstract conceptualization and other various health interventions. All of these stages may take at any learning environment in process of community health problem solving.

This study is congruent with the study conducted in South Africa by Mtshali (2009), who found that learning experiences in community-based nursing education consisted of GOBIFFFF strategies aimed to promote and improve the health status of the population, especially those from underserved and poor groups. It is also consistent with the study carried out by Okayama and Kajii (2011), who found that 66.8% of medical students were involved in health education and 89.9% involved in home-based care during their community-based learning placement. Okayama and Kajii (2011) indicated that 38.9% of the respondents were involved in vaccination, while this current study showed that 60.4% of respondents were involved in immunization. This difference with regard to vaccination may be due to the

difference in duration of the community placement which was only 2 weeks in the study of Okayama and Kijii. Furthermore it is probably due to that the medical students are more focused on curative interventions rather than health promotion and prevention strategies.

The findings of this study showed that the educational experiences of the respondents are consistent with the declaration of Alma Ata and incorporate essential elements of primary health care philosophy (WHO and UNICEF, 1978), which are to address the health problems in community by providing promotive, preventive, curative and rehabilitative health care services through health education to prevent diseases and promote health. It includes the promotion of food supply and proper nutrition to fight against malnutrition, adequate supply of safe water and basic sanitation, maternal health and child health including family planning, immunization against major infectious diseases, prevention and control of locally endemic diseases, appropriate treatment of common diseases and injuries, and provision of essential drugs with community participation and collaboration of multisectoral and multidisciplinary teams.

The results of this study showed that the primary health care philosophy was covered in different ways in various learning settings (classrooms, communities, health clinics and hospitals) where it was promoted through GOBIFFFF strategies and other learning activities that aimed to prevent diseases; promote health; and treat minor diseases and injuries. It also included rehabilitation learning activities and promotion of self-reliance and self-determination of the community; recognition of interrelationship and collaboration between sectors, disciplines and institutions in determining the community health status; advocating for the community; and empowerment of the community to enable them to have control of their lives (Australian Capital Territory, 2010). The study showed that, with a Chi-square of 4.669 and *p*-value of 0.031, students' exposure to learning about provision of health

education to prevent diseases and promote health was higher in a community setting (51.6%) than in a hospital (20.9% ). Thus, the findings of this study suggest teaching health education to prevent diseases and promote health should rather be done in a community than in a hospital.

The study indicated that learning in a community setting was associated with carrying out community-based learning projects that focused on health promotion, with T-test value of 2.239 and *p*-value of .022; carrying out projects that focused on prevention of illnesses, injuries and social problems with T-test value of 2.130 and *p*-value of .036; carrying out projects focused on treatment of minor illnesses and injuries at home with T-test value of 2.135 and *p*-value of .036; rehabilitative care with T-test of 3.065 and *p*-value of .003; and promoting community self-reliance and self-determination with T-test value of 2.409 and *p*-value of .018. These results suggest that a community learning setting provided a rich learning environment where the students conducted community-based learning projects that promote primary health care philosophy and bring the health services close to where the people live, thus promoting equity in health care service delivery.

It is evident that the community-based learning experiences that the students were exposed to, either in or outside the classroom, are based on primary health care philosophy, which may contribute to achievement of the three health -related millennium development goals (MDGs) aimed to reduce the child mortality rate, improve maternal health, and combat HIV and AIDS, Malaria, Tuberculosis and other diseases, thus resulting to overall better health for all.

### **5.2.3. The factors affecting promotion of primary health care philosophy in community-based learning activities**

The current study revealed that 64.9% (48.4% who agreed and 16.5% who strongly agreed) were in agreement that the level of safety in the community promoted their learning and 82.2% (64.4% who agreed and 17.8% who strongly agreed) were in agreement that the community leaders and members were available to support their learning in community. The safety of the students should be observed when choosing community-based learning sites and is ensured by the community members guaranteeing a safe learning environment for students (Mtshali, 2009). When the students feel safe in a learning environment, they maximize their learning through full active participation in community learning activities, instead of wasting their energy on how to protect themselves.

The results of the current study are incongruent with the findings of a peer review conducted by Reid and Cakwe (2011), who found that some communities did not get involved in community-learning activities and some universities in South Africa had stopped community-service learning in rural settings because of fear for students' safety. They were also inconsistent with the findings of the study carried out by Rosing et al., (2010) who found that some communities did not readily facilitate students' learning in the community and safety considerations were hindering factors to their learning.

The study indicated that overall, 69.9% of participants involved community members in service-learning activities. The study indicated that 86.8% (65.9% who agreed and 20.9% who strongly agreed) were in agreement that support received from the community enhanced their learning about health-related issues in the community and their management. Community participation is a PHC principle, according to WHO (1987), that should be observed in community-based education, and the results of this study are therefore in

accordance with PHC philosophy. According to Mshali (2009), the communities provide a rich learning context and assist the students by providing relevant information and resources needed for knowledge and skills transfer through their learning activities during community surveys and other initiatives that constitute part of the curriculum.

Including the participation of community members in educational programmes may secure the safety of students in the community, thus promoting the achievement of their learning objectives while addressing the community health needs. The tenets of community-based nursing education are the involvement of the community in the learning experience and the achievement of educational objectives, since CBE is a teaching method that is used to achieve academic objectives (Mtshali, 2009; Lazarus et al., 2008; WHO, 1987). When the community participates in the learning experience, the students are no longer considered as outsiders, but rather as belonging to the community. This will enhance their safety and they will provide their contribution to the wellbeing of the community through service provision according to the needs of the community, and thus achieve their learning goals and make accessible health services (Chrzanowski, Rans, Thompson, Kretzmann and McKnight, nd).

The current study indicated that 85.7% (67% who agreed and 18.7% who strongly agreed) were in agreement that support of lecturers as a source person was an enhancing factor to their learning about health-related issues at a community level. This is consistent with the findings of the study by Pillay and Mtshali (2008) in South Africa, who found that the educators were supportive through provision of assistance to the students in solving social and academic issues as an empathetic person. Mtshali (2009) stated that in community-based learning, the teacher acts as a resourceful and knowledgeable person who encourages the students, directs them to where they can find relevant information that might be useful in their learning activities, and comes up with alternative suggestions when the students' plans

do not work effectively. The students may experience anxiety and stress in an unfamiliar, unsafe and uncomfortable environment, which may hinder quantity and quality of service provision related to PHC principles. This may be overcome by support from lecturers. Lecturers can provide emotional and academic support, act as a role model and is available to help the students clarify their expectations and lead the reflective process upon the students' learning experience to stimulate thinking, therefore contributing towards the achievement of learning objectives. According to Al Kadri et al., (2011) facilitators who do not like teaching and do not devote their time to the students hinder their learning.

The study showed that 85.7% (71.4% who agreed and 14.3% who strongly agreed) were in agreement that the orientation period gave a clear introduction to expected outcomes from their learning in the community. These findings were inconsistent with the findings of the study carried out by Peters (2011) who reported that some students were confused of what they were expected to accomplish. Before starting a community-learning programme at the School of Nursing, the students are provided two weeks of orientation to introduce them to various aspects of community-based education, such as cultural diversity, group dynamics, primary health care, community entry, community participation, how to do rapid appraisal and epidemiological studies, learning contract as tool promoting a self-directed learning and a visit to a community settings (Mtshali, 2005). The orientation programme provides clear expectations for students and familiarises them with the learning objectives and competences required to practice in PHC settings they need to achieve in their community-based learning programme. This eliminates or reduces confusion, thus decreasing anxiety and stress.

The study indicated that 84.6% (69.2% who agreed and 15.4% who strongly agreed) of the participants were in agreement that the time allocated to their programme was adequate to allow them to execute their community learning activities. The findings of the current study

are different with those of peer review conducted by Reid and Cakwe (2011), who found that time spent in the community ranged from 5% to 25% of the clinical placement curricula. This difference may be due to different perceptions of meaning of community-based education across the curriculum designers and developers. The findings of the current study are in line with the recommendations of World Health Organizations that states that training and education of health professionals should be based in a community and time spent in community learning activities should be repetitive to enhance familiarity of students in the community (Mtshali, 2005). When the students spend more time in a community, they develop a sense of belonging in the community, and therefore increase number and quality of service provided, and more learning takes place (Rosing et al., 2010).

It was shown in this current study that 61.5% (51.6% who agreed and 9.9% who strongly agreed) were in agreement that they had enough resources to support their learning and projects in community sites. The findings are incongruent with the findings of the study conducted by Peters (2011) who found that lack of logistics was a hindering factor to community-service learning. The findings were also incongruent with another study by Abes et al., (2002), who found that community-based learning activities are hindered by the lack of logistics and funding to prepare, organize and coordinate learning instructions and lack of institutional support. It is evident in this current study that there were enough resources to support students' community learning, which can be seen as a promoting factor to community-learning. When the resources are available to students in community-based learning, learning takes place, while lack of resources and institutional support hinder learning in a community which impact the promotion of PHC philosophy.

It was indicated that 59.4% (30.8% who strongly disagree and 28.6% who disagree) were in disagreement that accessibility of community site was not expensive and transport was easily

available. It means that the accessibility of the community was slightly a hindering factor to learning in a community. This finding is congruent with the findings of the study by Rosing et al., (2010) who found that lack of transportation to the community sites was a factor that hindered community-based learning. When the students have transportation problems, they may either lose the community experience altogether or arrive at the community sites very late and tired, which would hinder the learning experience. It may also be considered as a burden which may demotivate students to community-based learning activities. It is understandable that the various factors affect community based learning which impact negatively or positively the quantity and quality of learning activities related to PHC therefore affect the promotion of PHC philosophy.

#### **5.2.4. Perceptions of respondents on community-based education as a tool that promotes Primary Health Care Philosophy**

The perceptions of students on community-based education as a tool that promotes primary health care philosophy may have impact on how they behave in community-based learning. This study indicated that 98.9% of respondents had positive perceptions (35.2% with moderate and 63.7% with strong positive) and only 1.1% had negative perceptions on community-based education as tool that promotes primary health care philosophy. This study is congruent with the study conducted in Uganda by Kaye et al., (2010) where they found that the majority of medical students had positive perceptions on community-based education. The findings were also similar to findings of Barner (2000), who reported that students had positive perceptions on community-based learning.

The current study showed that 88.9% (52.7% who agreed and 35.2% who strongly agreed) had positive perceptions on community-based education as a tool for promoting primary health care philosophy, and they were in agreement that placement in community settings

prepared them as nurses to work anywhere, even in the communities. It was also found in this study that 82.5% (49.5% who agreed and 33% who strongly agreed) had positive perceptions on community-based education where they were in agreement that community-based learning increased their interest to work in under-resourced communities, such as rural areas and informal settlements.

These findings are similar to those of a study in Australia by Eley et al., (2012), where they found that 70% of medical students who were trained in rural settings perceived that rural training encouraged them to choose rural practice. They are also congruent with the findings with the study conducted in Uganda by Kaye et al., (2010), where community-based training experience of graduates significantly influenced their choice to work in rural and underserved communities in Uganda. The graduates were motivated to take employment in rural health care facilities and were confident about practicing effectively in the community. The results of this current study are different, however, with the findings of the study conducted by Critchley et al., (2007) where only 47% of students developed an interest to work in rural communities.

The results of the current study show that the students perceived that community-based education enhance their interest to work in under sourced areas. This is consistent with findings of the study by Sheu et al.,(2010) where 86% of students perceived that working in immigrant and underserved community during community-service learning reinforced their commitment and interest to serve that community.

It was suggested in this study that community-based education has a positive impact on students' perceptions of choosing to work in underserved communities, which is in accordance with primary health care philosophy. These positive perceptions of respondents of CBE as a tool that promotes primary health care philosophy was associated with informal

settlements as community learning settings, with a Chi-square of 16.957 and *p*-value of 0.001. Various studies carried out in different regions in the world, particularly Africa, sub-Saharan Africa and South Africa, indicated the shortage of health care professionals and their misdistribution within countries and between rural and urban areas, which hinder access to health care and promote inequity in health care service (Reid and Cakwe, 2011; Larkins et al., 2011; Nteta et al., 2010; Rawaf et al., 2008; Crisp, Gawanas and Sharp, 2008; Robinson and Clark, 2008; Anyangwe and Mtonga, 2007; De Maeseneer, Willems, De Sutter, Van de Geuchte and Billings, 2007). Therefore, if students positively perceived that CBE helped them develop an interest in rural community practices, they might be motivated to choose their career in underserved communities, such as rural communities, which may reduce misdistribution of nurses in countries and promote the principles of primary health care philosophy by decreasing inequity in health care service provision.

By working in primary health care facilities in rural areas, these nurses may provide health services to the vulnerable population and contribute to attainment of health-related Millennium Development Goals (reduction of child mortality, improvement of maternal health and combating HIV/AIDS, Malaria, Tuberculosis and other diseases), especially in view of the various reports that indicate that the urban regions are more likely to be successful in achieving the MDGs than urban areas (UN Women Watch, 2012).

Furthermore, this study revealed that there was difference of perceptions on CBE as tool to promote PHC philosophy across community-based learning settings. Informal settlement learning environment was associated with the interest to work in under resourced communities with a Chi-square of 13.363 and *p*-value of 0.004, where those placed in informal settlements were more interested to work in under resourced areas than others. These results are congruent with other studies conducted in different areas that indicated that

learning experiences in under-resourced communities influence the motivation of the graduates to work in poor communities (Williamson et al., 2012; Larkins et al., 2011; Henry et al., 2009; Dalton et al., 2008; Orpin and Gabriel, 2005; Curran and Rourke, 2004). The current study suggested that community-based learning experiences have a positive influence on perceptions of students with regard to primary health care practice; therefore it suggested that nursing education should be based in disadvantaged communities.

The current study showed that there was difference of perceptions of students on CBE as a tool that promotes primary health care philosophy across year of study, with a Chi-square of 12.308 and  $p$ -value of 0.002. The results indicated that as the students progressed from the second year of study to the third, their perceptions on CBE as a tool that promotes primary health care philosophy increased. However, during the fourth year, their perceptions changed. This is illustrated where the rank mean of second year was 44.63; the rank mean of third year was 59.09, but the rank mean of fourth year was 34.62.

Results also indicated that their positive perceptions on working in under-resourced communities increased from the second to the third year, but decreased in the fourth year. Statistics showed that the mean rank of the second year was 48.79; the mean rank of third year was 53.02, while the mean rank of the fourth year was 35.5, with a Chi-square of 8.08 and  $p$ -value of 0.018. This decrease in the fourth year may probably be influenced by the fact that in their last year of study the students are mainly taught specialized aspects of nursing and do their practice in specialized health care facilities. It is therefore suggested that some aspects of specialized practice should be incorporated into the community-based learning programme in the last year.

As the students had positive perceptions that community-based education developed their interest to work in a community, it may be good motivation to choose rural practice which

addresses misdistribution of health care professionals and make health care accessible, and reducing inequity in health care service through delivering health care service to rural areas to improve the health status of the underserved population and promote better health for all, which is one of the main aspects of primary health care philosophy. This interest to choose a career of community practice may be influenced by the sensitivity developed by students during their community-learning. When the students working closely with a vulnerable population, they learn to understand their problems, develop social responsibility and civic engagement and become willing to help disadvantaged communities. This is in line with the literature, where development of social responsibility and civic engagement were found to be fostered by community-based education (Kielsmeier, 2011; Elwell and Bean, 2011; Govekar and Rishi, 2007).

The study revealed that 89% (53.8% who agreed and 35.2% who strongly agreed) had positive perceptions that settings they were placed in gave them a better understanding of the social, economic, psychological, political and cultural issues that influence health. These findings are similar to various other studies. O'Sullivan et al., (2000), found that the students perceived that community-based learning was an appropriate method of teaching and learning psycho-social issues in the health field. Barner (2000) found that community-based education was perceived by students as an approach to education that made them understand cultural diversity and social issues and Eley et al.,(2012) found that the students perceived that community-based learning made them aware of the context of rural community members and their lifestyles which impact their health status.

The results of this study are aligned to the purpose of community-based education. Community-based education has the potential to enhance the students' understanding and equip them with the ability to deal with social, economic, political and cultural factors that

affect individual, family and community health in general (Mtshali, (2011); Mtshali, (2009); WHO, (1993) and WHO, (1987). This competence is needed by nurses in order to deal with the complexity of health issues in the community so that they can promote the wellbeing of community members and thus achieve a better health status.

The current study revealed that 89% (63.7% who agreed and 25.3% who strongly agreed) of the respondents perceived that working with members from other health teams or sectors better prepared them for their role as nurses within those teams. It was indicated that 95.6% (65.9% who agreed and 29.7% who strongly agreed) perceived that community-based learning helped them develop skills they did not have before of managing and addressing health issues in the community, while 90.1% (62.6% who agreed and 27.5% who strongly agreed) perceived that their community projects contributed in improving the health of the community.

The results of this current study are similar with the findings of the study carried out by Sheu et al.,(2010) where the students perceived that community-based learning had value to the community and 65% of the participants perceived that it helped them learn collaboration skills and learn the role of other professionals in improving the health of population. The results are also congruent with the findings of the study conducted by Chang et al., (2011) where the students perceived that learning experience in community made them experience the real world context of the profession and develop team work skills.

It was evident that the students understood the value of community-based nursing education and perceived that it helped them develop collaboration skills. They therefore had a positive perception of the relevance of community-learning as a meaningful approach to learning that familiarized them with the real context of the health care environment early in their career. This may be due to the fact that being in a community provides nursing students with an

opportunity to experiment in assessing the health needs of an individual, family or community; plan the solutions; implement what they feel is best; and evaluate the effectiveness of their actions. Students will see the impact of their actions on the community, and then they may feel that they contribute to well-being of the community members. This is in accordance with Dewey's philosophy, which stated that the learner learns best by experimenting and finding the meaning of their own actions and the consequences of their taken decision (Gwele, 2005).

### **5.3. Conclusion**

The study was conducted at a selected nursing school in a higher education institution and was aimed to explore the promotion of primary health care (PHC) philosophy in a community-based nursing education programme. The students' perspective. To achieve this purpose, the objectives of the study were to describe community-based learning activities that promote primary health care philosophy, to identify factors affecting promotion of primary health care philosophy in community learning activities and describe the perceptions of students about community-based education as a tool that promotes primary health care philosophy.

The study revealed that the respondents were young, with average age of 22 years old. The study indicated that the nursing education programme exposed the students to community-based practice early in their educational programme and that there was continuity of exposure to community learning in health care facilities throughout the educational programme. It was observed in the current study that learning experiences, such as GOBIFFFF strategies and other learning activities were covered in the classroom, communities, health clinics and hospitals. This study showed that community settings provided the best additional learning

experiences in relation to PHC philosophy outside the classroom, with a mean of 4.888. The results also indicated that 90.1% of the respondents became involved in community-based learning projects that focused on prevention of illnesses, injuries and social problems, 89% were involved in health promotion community-based learning projects while 76.9% became involved in community-based learning projects focused on promoting community self-reliance and self-determination and 69.9% of the participants involved the community in their learning activities while they were achieving their learning objectives.

The study indicated that learning in a community setting was associated with conducting community-based learning projects that focused on health promotion with a T-test value of 2.239 and *p*-value of .022; prevention of illnesses, injuries and social problems with T-test value of 2.130 and *p*-value of .036; treatment of minor illnesses and injuries at home with T-test value of 2.135 and *p*-value of .036; rehabilitative care as focus of community-based learning projects with T-test of 3.065 and *p*-value of .003 ; and also community learning setting was associated with promoting community self-reliance and self-determination as focus of community-based learning projects with T-test value of 2.409 and *p*-value of .018.

The study indicated that support from community, support from lecturers, an orientation period and sufficient time spent in community were cited as influencing factors by 86.8%, 85.7%; 85.7% and 84.6% of the respondents respectively, whereas inaccessibility of community site was cited by 59.4% of respondents as a hindering factor to learning.

The study also showed that the 98.9% of respondents had positive perceptions on community-based education as a tool to promote PHC philosophy and 87.9% of the respondents positively perceived that the CBE prepares nurses to work in communities. The perceptions of respondents on CBE as a tool to promote PHC philosophy were associated with informal settlements as a learning environment with a Chi-square of 16.957 and *p*-value

of 0.001. It was revealed in this study that 82.5% of respondents perceived positively that CBE increased interest to work in under resourced communities such as rural areas and informal settlements. Informal settlements were associated with perceptions on interest to work in under-resourced communities due to CBE with a Chi-square of 13.333 and *p*-value of 0.004. The study also showed that the perceptions of students on CBE as tool to promote PHC philosophy were different across year of study with a Chi-square of 12.308 and *p*-value of 0.002. The students became progressively more positive about CBE until they reached the third year of study and then became less positive in the fourth year. In conclusion, the results of this current study suggested that the community-based nursing education programme in the selected Nursing School does promote primary health care philosophy, which may contribute to the achievement of better health for all.

## **5.4. Recommendations**

In the light of the results of this study, the followings recommendations are made to:

### **5.4.1. The Nursing School**

- Provide continual opportunities for students to engage with the community as a learning environment throughout the entire programme to avoid relapse of positive perceptions
- Provide assistance to the students in accessing the community learning sites by providing transport

### **5.4.2. The Nursing School curriculum review committee**

- The school curriculum review committee should review the curriculum of the fourth year to integrate the community settings into clinical practice instead of merely concentrating on specialization learning experiences

### **5.4.3. Further research**

- The study was focused on only one school of nursing in KwaZulu-Natal. Therefore, there is a need to explore how primary health care philosophy is promoted in community-based education programme in other Schools of Nursing in South Africa.
- Further research is needed that focuses on the quality of community-based learning activities that promote primary health care philosophy
- There is a need to explore the views of nurse educators on community-based education as a tool to promote primary health care philosophy
- There is also a need of a study to explore the impact of a community-based education programme on community health status as outcome of primary health care philosophy.
- the use of focus groups to explore student nurses 'understanding of the essence and meaning of primary health care as applied
- The study used quantitative approach ,therefore there is a need for qualitative approach to deeply explore that phenomenon
- The instrument used should be reused by other researchers to refine it.
- Clarification of meaning of PHC philosophy by relevant role-players

## **5.5. Limitations of the study**

- The study was limited to only one School of Nursing at a higher education institution in KwaZulu-Natal, so the findings cannot be generalized to all community-based nursing education programmes in South Africa.
- The research only collected data from students using a self-reported questionnaire. There was no analysis of the curriculum design of the community-based nursing education programme.
- Also, the quality of community learning activities that promote primary health care philosophy was not explored. The quality of those learning activities might provide other aspects in relation with PHC philosophy.
- The findings of the study cannot be generalized due to the use of non-probability convenience sampling

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## APPENDIX 1 : INFORMATION DOCUMENT

**Study title:** The exploring the promotion of Primary Health Care Philosophy in Community-Based Nursing Education Programme at a selected Higher Education Institution in KwaZulu-Natal: The students 'Perspective.

Dear participant,

I, Innocent NDATEBA, Master student in Nursing at University of KwaZulu-Natal, School of Nursing and Public Health, am conducting the research on “The exploring the promotion of primary health care philosophy in a Community-Based Nursing Education Programme at a selected Higher Education institution in KwaZulu-Natal: The students’ Perspective,” am inviting you to participate in this study.

This study is conducted on the undergraduate nursing students of 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year who were exposed in community during their community based learning. This study will provide information on how primary health care is promoted through community based education program and the findings may help the school in curriculum review process from which the students and community may benefit.

Completing the questionnaire is voluntary and you have right to withdraw anytime you feel uncomfortable without fear of any negative consequences. Your responses will be kept confidential and anonymity is guaranteed. You are not required to write your identification on the questionnaire (name or students numbers) and only code will be used so that none can identify whose the response belongs to. There is no harm for you and there are no any negative consequences to participate in this study. Completing the questionnaire will take you around 20 minutes and requires to complete it in your convenience time. Below there is researcher and supervisor address you may contact when you need it.

Thank you!

**Supervisor**

Innocent NDATEBA

Professor: NG Mtshali

Howard College campus  
University of KwaZulu-Natal

5<sup>th</sup> Floor, School of Nursing and Public Health  
Howard College Campus, UKZN

Cell phone: 0838911633

mtshalin3@ukzn.ac.za

Email: 209522065@stu.ukzn.ac.za

## APPENDIX 2: INFORMED CONSENT

### Declaration

I.....(initials of the participant), in signing this document, am giving my consent to participate in this study entitled “Exploring the promotion of primary health care philosophy in Community- Based Nursing Education programme at a selected Higher Education Institution at KwaZulu-Natal: The students’ Perspective”.

I have read the information document, have been explained the purpose of the study and understood the content and nature of the study, and then I agree voluntary to participate in this current study. I have been explained that the participation is voluntary and withdraw is allowed if I feel uncomfortable during the completion of the questionnaire without fear of any negative consequences.

It was agreed that my identification will not appear anywhere on the questionnaire and my identification is not related to my responses.

*Please, note that two copies of informed consent will be signed, one for the participant, and the other for the researcher to file*

Signature of participant.....

Date...../..... /.....

**APPENDIX 3: QUESTIONNAIRE**

Year of Study	
ID Number	

**Research Title: Exploring Promotion of Primary Health Care Philosophy in Community-Based Nursing Education Programme at a selected Higher Education Institution in KwaZulu-Natal: The students' Perspective.**

Thank you for accepting to participate in this study. Please read the following instructions before completing this questionnaire.

- Please, complete the whole questionnaire
- Read instructions before responding to each section of this questionnaire and use a cross (X) to respond.

**SECTION ONE: SOCIO-DEMOGRAPHIC DATA**

1. Age..... in years

2. Gender : Male 1

Female 2

3. What is your current year of study?

2<sup>nd</sup> year 1

3<sup>rd</sup> year 2

4<sup>th</sup> year 3

4. Place of home residence

Rural area 1

Suburban area; Township 2

Urban area 3

5. In which community are/were you based?

Informal Settlement e.g. Cato crest: 1

Suburban area e.g. Austerville 2

Urban area eg. Point area 3

Rural community 4

6. Have you ever been involved in any activity in community as volunteer, youth development or other activity before? Yes 1   
No 2
7. Was nursing your first choice? Yes 1   
No 2

### SECTION B COMMUNITY-BASED LEARNING

8. Indicate the periods in which you were exposed to community-based learning in your programme

	Yes	No
1 <sup>st</sup> Year (Old age home practicals)		
1 <sup>st</sup> Year crèche practicals		
2 <sup>nd</sup> Yr January/February		
2 <sup>nd</sup> Yr April Vacation		
2 <sup>nd</sup> Yr June July Vacation		
2 <sup>nd</sup> Yr September vacation		
2 <sup>nd</sup> Yr December vacation		
4 <sup>th</sup> Pyschiatry		
Other (Specify, e.g. PHC Health Clinic)		

- 9 Which of the following activities did you participate in?

	Yes	No
Family assessment		
Epidemiological studies		
Community assessment		
Validation of community problems (2 <sup>nd</sup> Year April vac practicals)		
Community Project planning		
Fund raising for the community project		
Community mobilization to take responsibility for their health		
Community Project implementation		
Community Project evaluation		
others (specify)		

10. Which community members were involved in your community based learning activities?

Community Members	Yes	No
School teachers		
Local leaders		
Church leaders		
Traditional healers		
Youth leaders		
Community health workers		
Health clinic workers e.g.Nurses		
Elder people committee		
Community members		
Other (specify)		

**The focus of our community-based project was on**

	Yes	No
11. Promotion of health ( <i>health education on nutrition, sexuality, breastfeeding, environmental health, waste disposal, safe and clean water</i> )		
12. Prevention of illness, injuries and social problems ( <i>e.g. immunizations, family planning, health education on prevention of STIs, chronic illnesses such as hypertension, teenage pregnancy</i> )		
13. Treatment of common illnesses and injuries at home ( <i>e.g. treatment of lice, diarrhea and vomiting, flue, minor burn injuries</i> )		
14. Rehabilitative care ( <i>e.g. management of a patient with deformities at home, elderly patients with chronic illnesses, mentally ill clients in the community</i> )		
15. Promoting community self-reliance and self-determination ( <i>identifying, accessing and utilizing available resources within the community in addressing health related issues</i> )		
16. Other (Specify)		

Indicate with a cross (X) the most appropriate response. You may choose more than one response.

- 1:** Class    **2:** Community    **3:** Health Clinic  
**4:** Hospital    **5:** N/A -means you did not learn about this.

<b>Our community-based nursing programme exposed me to learning about:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Items</b>					
17 Provision of health education to prevent diseases and promote health					
18 Oral rehydration methods for dehydrated children					
19 Importance of baby breastfeeding					
20 Family planning for both males and females					
21 Prevention of malnutrition to children through food supplementation					
22 First aid measures at home (e.g. burns, paraffin ingestion, fractures)					
23 Performing grow monitoring of children					
24 Baby immunization					
25 Community involvement in community-based projects					
26 Advocating for the vulnerable people					
27 Educating the community about waste disposal ,					
28 Ways of keeping water clean if there are no water taps					
29 Care of a terminally ill patient at home (home-based care)					
30 Women empowerment (e.g. education about women abuse and women's right, education and skills development for women survival)					
31 Collaborating with others sectors as nurses in addressing health issues in the community (e.g., working with business people, teachers, police officers, transport)					

**What is your level of agreement with the following statements?**

**1. Strongly disagree: SD; 2. Disagree: D; 3. Agree: A; 4. strongly agree: SA**

<b>Level of agreement</b>	<b>SD</b>	<b>D</b>	<b>A</b>	<b>SA</b>
32 Placement in the community settings better prepared me as a nurse to work even with the communities				
33 The type of community setting I was placed in made me understand better the social economic, psychological, political and cultural issues that influence health				
34 The distance between the university and the community where I was place did not affect my learning in the community				
35 Accessibility of community site is not expensive and transport is easy available				
36 The level of safety in the community promoted our learning				
37 Community leaders and members were available to support our learning				
38 Working with members from other health teams or sectors better prepared me for my role as a nurse within these teams				
39 The types of community-based learning experiences I was exposed to, helped me develop some skills I did not have before of managing and addressing health issues in the community				
40 Practical exposure in the communities allowed me to better understand the PHC theory were learning in class				
41 Community based learning increased my interest to work in under-resourced communities such as rural areas, informal settlements, etc.				
42 The support we received from the community enhanced our learning about health-related issues in the community and their management				
43 Support of the lecturer as a resource person enhanced our learning about health related issues at a community level				
44 Orientation period gave a clear introduction to expected outcomes from our learning in the community				
45 The time in our programme was adequate to allow us to execute our community-based learning activities				
46 We had enough resources to support our learning and project in community sites.				
47 Our community project contributed in improving the health of the community				

Thank you for your time to participate in this study

## **APPENDIX 4: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH PROJECT**

Innocent NDATEBA

University of KwaZulu-Natal

School of Nursing and Public

Health/ Howard College Campus

Mob: 0838911633

E-mail: [209522065@ukzn.ac.za](mailto:209522065@ukzn.ac.za)

7<sup>th</sup> May 2012

**To:** Dean and Head of School of Nursing and Public Health

University of KwaZulu-Natal

P.Box: 4041 Durban, South Africa

Dear Professor BP Ncama,

### **RE: Requesting a permission to conduct a research project**

I am a student at University of KwaZulu-Natal, School of Nursing and Public Health doing a master's degree in Nursing Education. I hereby request a permission to conduct a research project in the institution which responsibility is entrusted to you. The title of proposed study is *"Exploring the promotion of Primary Health Care Philosophy in Community-Based Nursing Education programme at a selected Higher Education Institution in KwaZulu-Natal: The students 'perspective'"*.

Madam, in order to complete a course work master's degree, I am required to do dissertation, reason why I come to you requesting a permission to conduct my research project in the School of Nursing and Public Health. The data will be collected after getting Ethical Clearance from University of KwaZulu-Natal, Research Ethics Committee. Here enclosed is the research proposal

Hoping your favorable response to my request, I thank you!

Yours sincerely

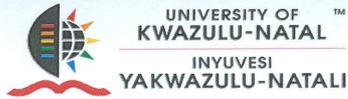
Innocent NDATEBA

Supervisor: Professor: Fikile Mtshali

5<sup>th</sup> Floor, School of Nursing and public Health, UKZN

Email: [mtshalin3@ukzn.ac.za](mailto:mtshalin3@ukzn.ac.za)

## APPENDIX 5: PERMISSION TO CONDUCT A STUDY FROM HEAD OF SCHOOL



16<sup>th</sup> May 2012

**Mr I Ndateba**  
 c/o School of Nursing & Public Health  
 University of KZN  
 Howard College Campus  
 Durban

Dear Mr Ndateba

**Support in conducting research in the Discipline of Nursing**

With reference to your request, to the Dean/Head of School, regarding permission to conduct research on *“Exploring the promotion of Primary Health Care Philosophy in Community-Based Nursing Education Programme at a selected Higher Education Institution in KwaZulu-Natal: The students’ Perspective”*, kindly note that this request is hereby supported.

We wish you all the luck in the completion of your studies.

Thank you

Sincerely

**Professor B P Ncama**  
 Dean/HOS  
 School of Nursing  
 UKZN

School of Nursing and Public Health

Postal Address: University of KwaZulu-Natal, School of Nursing and Public Health, Howard Campus, Private Bag X 54001, Durban, 4000

Telephone: +27 (0) 31 2602499 Facsimile: +27 (0) 31 2601543 Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)

CC. Prof N G Mishali – Supervisor

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## APPENDIX 6: ETHICAL CLEARANCE APPROVAL FROM UNIVERSITY OF KWAZULU-NATAL



**UNIVERSITY OF  
KWAZULU-NATAL**  
INYUVESI  
YAKWAZULU-NATALI

18 June 2012

**Mr Innocent Ndateba 209522065**  
School of Nursing and Public Health

Dear Mr Ndateba

**Protocol Reference Number: HSS/0361/012M**  
**Project Title: Exploring Promotion of Primary Health Care Philosophy in a Community-based Nursing Education Programme at a Selected Higher Education Institution in KwaZulu-Natal: The Students' Perspective**

In response to your application dated 7 June 2012, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

**Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. Please note: Research data should be securely stored in the school/department for a period of 5 years.**

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully



.....  
**Professor Steven Collings (Chair)**  
/pk

cc Supervisor Professor NG Mtshali  
cc Academic Leader Professor M Mars  
cc School Admin. Ms Caroline Dhanraj

---

**Professor S Collings (Chair)**  
**Humanities & Social SC Research Ethics Committee**  
**Westville Campus, Govan Mbeki Building**  
Postal Address: Private Bag X54001, Durban, 4000, South Africa  
Telephone: +27 (0)31 260 3587/8350 Facsimile: +27 (0)31 260 4609 Email: ximbap@ukzn.ac.za / snymanm@ukzn.ac.za

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**APPENDIX 7: PROOF OF EDITING LETTER**

Editing Declaration

P O Box 531  
Hillcrest  
3650  
KwaZulu-Natal

2012-12-03

TO WHOM IT MAY CONCERN

Thesis Title: EXPLORING THE PROMOTION OF PRIMARY HEALTH CARE PHILOSOPHY IN A COMMUNITY-BASED NURSING EDUCATION PROGRAMME AT A SELECTED HIGHER EDUCATION INSTITUTION IN KWAZULU-NATAL: A STUDENTS' PERSPECTIVE

Author: Innocent Ndateba

This is to certify that I have edited the above thesis from an English language perspective only, and have made recommendations to the author regarding spelling, grammar, punctuation, structure and general presentation.

A marked-up version of the thesis has been sent to the author and is available as proof of editing.

I have had no input with regard to the technical content of the document and have no control over the final version of the thesis as it is the prerogative of the student to either accept or reject any recommendations I have made.

Therefore, I accept no responsibility for the final assessment of the document

Yours faithfully



Margaret Addis

