

**STRATEGIES TO SUPPORT THE UTILISATION
OF THE NURSING PROCESS BY THE
REGISTERED NURSES IN LOCAL-LEVEL
PRIMARY HEALTH CARE PRACTICE IN
NAMIBIA**

BY

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APRIL 2013

**STRATEGIES TO SUPPORT THE UTILISATION OF
THE NURSING PROCESS BY THE REGISTERED
NURSES IN LOCAL-LEVEL PRIMARY HEALTH CARE
PRACTICE IN NAMIBIA**

DISSERTATION

**SUBMITTED IN PARTIAL FULFILMENT OF THE
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BY

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DECLARATION

I Hermine Iita, hereby declare that this study titled: “Strategies to Support the Utilisation of the Nursing Process by the Registered Nurses in Local-level Primary Health Care (PHC) Practice in Namibia” is my own research work and this study, or any part of it, has not been submitted for a degree at any other institution of higher education.

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DEDICATION

This study is dedicated to all Namibian nurses who serve individuals, families and communities in local-level primary health care(PHC) facilities (clinics, health centres and outreach programmes) in Namibia and, secondly, to my biological father, Dorian Ikela Nambinga, who passed away while I was in the process of preparing to start with this study.

ABSTRACT

The purpose of this study was twofold. Firstly to explore and describe the utilization of the Nursing Process by registered nurses in local level Primary health care practice in Namibia with regard to Primary health care delivery during their daily practices and secondly, to develop strategies that would support registered nurses in executing their role and function in this regard. These were prompted by the implementation of a Primary health care approach to health care delivery in the country. The objectives of the study were:

To explore and describe the way in which registered nurses in clinics, healthcare centres and outreach posts in the health districts use the nursing process as regards PHC delivery;

- To determine how supervisors perceive the utilisation of the nursing process by registered nurses with regard to PHC;
- To identify the constraints that registered nurses are faced with when utilising the nursing process with regard to the delivery of PHC;
- To develop a conceptual framework on which to base the formulation of relevant strategies,
- To incorporate the findings of this study into the development of strategies to support registered nurses in their utilisation of the nursing process with regard to the delivery of PHC;
- To validate the appropriateness of these strategies, a multi- phase, quantitative, exploratory, descriptive and contextual design was selected to provide a picture of how registered nurses fulfill their role and function concerning Primary health care (PHC) during their daily practices.

The population consisted of two groups. The first group consisted of 239 registered nurses working in Clinics, health Centres and in Outreach Programmes. The second group consisted of 39 registered nurses supervisors, who supervised the registered nurses in these facilities. A survey was used to gather the data through self-report (questionnaire). Two questionnaires were developed, one for registered nurses and the other for immediate supervisors. Quantitative, descriptive analysis was used to summarize and organize data using tables and figures as well as t-test and analysis of variance (ANOVA), where applicable. Five main areas where registered nurses needed support in execution of their roles and functions were revealed from the results. The areas were: Water and sanitation and other environmental health issues; health education and communication including outreach activities; Nutrition and food supply; Community diagnosis and care and Management support or administrative functions in Primary health Care, including research and education of health workers including fellow registered nurses. Strategies to support the utilization of the Nursing Process by registered nurse in local level Primary health care were developed based on the results of the conceptualization. The problem areas were first analysed and synthesized and three overarching strategies were formulated namely,

Strategy 1: Addressing the contributing factors to challenges that hinder professional nurses to maximally utilise the nursing process in their daily Primary health care practice; Strategy 2: Strategy regarding research activities to be conducted by registered nurses and Strategy 3: Strategy regarding the managerial or administrative aspects in local level primary health care.

Recommendations were made based on the study findings and the strategies formulated.

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LIST OF ABBREVIATIONS

AIDS	Acquired immune deficiency syndrome
ANOVA	Analysis of variance
CBHC	Community-based health care
CORPS	Community own resource persons
CVD	Cardio vascular diseases
EPI	Expanded programme on immunisation
FAO	Food and Agricultural Organization
GRN	Government of the Republic of Namibia
HIS	Health information system
HIV	Human immunodeficiency virus
IMCI	Integrated management of childhood illness
I-TECH	International Education and Training Centre on HIV/AIDS/Health
MDGs	Millennium Development Goals
MOSS	Ministry of Health and Social Services
PHC	Primary health care
PMO	Principal medical officer
TB	Tuberculosis
UN	United Nations
UNAM	University of Namibia
UNESCO	United Nations Education Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Fund
WHO	World Health Organization

CHAPTER 1

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1. INTRODUCTION

Immediately after the independence of Namibia in 1990, the Government of the Republic of Namibia, under the auspices of the MOHSS (MOHSS), investigated the disparities in the country regarding the provision of health care services. These disparities were found to be the result of the way in which the country had been governed during the pre-independence era – a challenge that many countries which have been under foreign rule often face after independence (Jauch, Edwards, & Cupido, 2009; Tansey, 2000; Agere, 1998).

Health care service delivery in Namibia was fragmented with some of these fragmentations being based on racial differences. Accordingly, the new government faced challenges with regard to coordinating health care in such a way that every citizen in the country would have access to essential health care services. As in many other countries efforts were made to decentralise so as to equalise as far as possible the provision and administration of health care services throughout the country (Cloke, Crang, & Goodwin, 2009; Mavrotas & Shorrocks, 2007; Government of the Republic of Namibia. National Planning Commission, 2007; Bosl, Horn, & Du Pisani, 2010). The implementation of a proper primary health care (PHC) service was regarded a possible solution to the problem. However, in order to understand how PHC services are managed, it is important first to understand the way in which the health care system of Namibia is constructed.

1.2. HEALTH CARE DELIVERY SYSTEM IN NAMIBIA

The health services of Namibia, which include PHC, are delivered at different levels as outlined by the government of the Republic of Namibia: MOHSS (1995).

National level

The MOHSS, through the medium of the Directorate of Primary Health Care (PHC) and Nursing Services, is responsible for the overall implementation, monitoring and evaluation of PHC services, which are provided by registered nurses in the health facilities mentioned above, namely, clinics, health centres and outreach programmes. At this level the ministry staff provide support and direction for the officer responsible for PHC at the regional level – the next level down from the central level.

Regional level

The country comprises thirteen political regions, which would be considered as provinces in some countries. These political regions correspond with the health regions. In each region there is a Regional Health Director who heads the Regional Health Management team, while Chief Health Programme Administrators are responsible for coordinating the PHC services in the health regions.

During the first ten to fifteen years after independence the Regional Health Directorates made every effort to support the health regions in terms of capacity building and infrastructure development with the aim being to initiate and consolidate the coordination of health care services by the individual health regions. By 2005, fifteen years after independence, all the health regions were in a position to coordinate the health care services in their health catchment areas and, thus, with the health regions now able to run their own health affairs independently, the Regional Health Directorates were done away with (Government of the Republic of Namibia:MOHSS, 1995). Figure 1.1 depicts the regions of Namibia.



Figure 1.1: Regions of Namibia

Source: Adapted from the 2012 University of Texas Library Country Maps (University of Texas, 2012).

As outlined in Annexure 2, the health regions fall under various health areas which, immediately after independence, were known as health directorates. The health regional management teams coordinate the health care services in each region, and

serve as a link between the national level of health care and the health district, which is at the next level.

District level

Each health region consists of one or more health districts. In each health district there is a Principal Medical Officer (PMO) who is responsible for coordinating all the health care delivery services in that district. There is also a PHC supervisor in every district, with this supervisor coordinating all the PHC services in the district. Within these health districts, there are also community services/outreach points (Government of the Republic of Namibia: MOHSS, 1995).

There are a total of 34 health districts. A health district is a self-contained segment of the health care system. In each of the health districts, a District Primary Health Care Supervisor is responsible for coordinating PHC service provision in the district. He/she also serves as a link between the Chief Health Programme Administrator of the region and the registered nurses in the clinics, health centres and outreach programmes as regards the provision and management of PHC services.

Health facility level (clinics, health centres and outreach programmes)

There are approximately 293 health facilities involved in the provision of PHC services, including 12 health centres, clinics and outreach points (see table 3.4 in chapter 3). However, district hospitals are not included here. These did not form part of this study because they are not regarded as part of local-level PHC, but rather as a higher level of care which clients are referred to from local-level health facilities. The purpose of this study was to study the provision of PHC by nurses at the local level or in the community health facilities as mentioned above. In each health facility a registered nurse is responsible for coordinating the PHC services in the catchment area of the specific health facility – the area that the specific health facility serves.

In each health facility there is an immediate supervisor of the PHC services being provided in the health facility. He/she is accountable to the District Primary Health Care Supervisor and acts as the immediate supervisor of all the nursing and non-nursing staff working in the clinic or catchment area. Several of these immediate health facility supervisors are registered nurses, although, owing to various circumstances, there are also health facilities which are being run by enrolled nurses. Each health facility has one or more nursing staff members and, in some cases, a medical doctor will visit the health facility to consult on complicated cases referred to him/her by the nurses; otherwise patients are referred to the district hospital should the situation so require (Government of the Republic of Namibia MOHSS, 1995) (see also chapter 3, under the context of the study).

1.3. IMPLEMENTATION OF PRIMARY HEALTH CARE IN NAMIBIA

The concept of primary health care (PHC) evolved in the 1940s and 1950s when the governments of several countries were urged to rationalise their highly technical approaches to health care delivery and to broaden their coverage by providing basic services. By 1970, health care throughout the world was in turmoil with fragmented health systems. In response to the international sense of despair at the inadequate health care, an international conference on PHC was jointly sponsored by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). The conference was held at Alma Atta from 6 to 12 September 1978 (WHO, 2009). The PHC philosophy introduced at this conference was endorsed with enthusiasm by the 134 participating nations. This philosophy also had an immediate impact on the global strategies of the WHO and has dominated both its policies and programmes ever since (Bouwer, Dreyer, Herselman, Lock, & Zeelie, 2006; WHO, 2009).

PHC refers to essential health care and is based on practical, scientifically sound and socially acceptable methods and technology which are made universally accessible to individuals and families in the community and at a cost that the community and the country are able to afford and maintain at every stage of their development in the spirit of self-reliance and self-determination (Monekoso 1994; Searle, Human, & Mogotlane, 2009; Berman, Snyder, Kozier, & Erb, 2008; WHO 2009).

The concept of PHC encompasses a political philosophy that calls for radical changes in both the design and the content of traditional health care services. In addition, it advocates an approach to health care based on principles that allow people to receive the care that enables them to lead socially and economically productive lives (Bower et al., 2006; WHO, 2009).

With the independence of Namibia in 1990, the Government of the Republic of Namibia adopted a health care system that places the focus on PHC, as a strategy to provide health care to all Namibians. The aim of this strategy was to make health services easily accessible and available to all communities in Namibia, at a cost that the country and the communities could afford and with the emphasis on community-based health care (GRNMOHSS, 1992). The intent behind this shift in emphasis from hospital-based care to PHC was that the people in the community would become active participants in matters pertaining to their own health care, while the hospitals and other health facilities were to play a role in strengthening PHC implementation through the education of health personnel and community members, as well as in the supervision of the treatment being rendered to the community (Government of the Republic of Namibia: MOHSS 1992).

However, this new approach to health services required a change in terms of influencing people's commitment to social equity, promoting a sound understanding of the issues pertaining to the implementation of PHC strategies and taking initiatives to ensure the success of this new PHC approach. By implication, this change meant a reorientation towards a health system which would relocate resources to help to meet the needs of the local community, irrespective of its environmental setting (Ebrahim & Ranken, 1995; WHO, 2009; Bouwer et al., 2006).

Furthermore, this new approach also meant that health care delivery personnel would have to be trained and educated accordingly, as experience has shown that the implementation of aPHC approach in many countries has never taken place without any constraints and this has always required the adequate preparation of all stakeholders.

For example, the experience with the implementation of the PHC approach in Zambia – a country with a health care system that had included elements of PHC before the Alma Ata declaration on PHC implementation in 1978 – revealed that the country had, indeed, experienced problems in the development of a PHC approach. These problems had arisen as a result of the following: conditions within the health sector itself, support for PHC was extremely limited and this, in turn, had had a negative effect; the emphasis on the prevention of sickness and the promotion of good health in PHC had had little genuine public appeal; the public had forced health workers to provide curative services; poor teamwork among health personnel and, at community level, difficulties were encountered in sustaining PHC activities (Kasonde & Martin, 1994; WHO, 2009).

1.3.1. The contribution of institutions to the implementation of PHC

The institutions that played an important role in the implementation of aPHC approach in Namibia included the institutions that provided health care, for example the Ministry of Health and Social Services (MOHSS), as well as institutions that offered education and training. According to WHO (2009) and Sines, Saunders and Forbes-Buford (2009), it is essential that the implementation of PHC be regarded as everybody's business if it is to be maintained and improved, while political commitment is also required if it is to be a success. In order to overcome the type of problems that are sometimes experienced, the MOHSS implemented various strategies to address this issue of PHC success. One such strategy included spearheading the PHC approach by launching the policy guidelines for Primary Health Care (PHC) and Community Based Health Care (CBHC) for Namibia in 1992 (GRNMOHSS, 1992, Official PHC/Community Based Health Care Guidelines).

In addition, the MOHSS in Namibia embarked on the reorientation of health workers on the staff list as regards the implementation of the PHC approach throughout the country. This reorientation programme involved professional health workers (registered nursing staff) being sent for training both outside and within the country through workshops, conferences and in-service education sessions (Iipinge, 2000).

The University of Namibia was another important institution that played an important role in the implementation of the PHC approach in its education and training of professional nurses. It was deemed essential that the education system relating to the allocation of students in practice and also the curriculum to prepare registered nurses be revisited. The education system may be regarded as one of the support systems for health care activities because it is the system which is responsible for educating the human resources (registered nurses) and it is, therefore, important that this education

system should function well as it has to supply human resources with the skills that are needed by health care providers. Thus, the existence of an efficient education system is a prerequisite for any action designed to improve the health situation in a country, for example, the implementation of the PHC approach (Quinn & Hughes, 2007).

The foundation of an education system is a good curriculum that contains complex materials and offers rich educational opportunities to benefit the learners (Darbyshire, 2010; Walker, 2009). By implication this meant that the curriculum preparing professional nurses for their role and function in implementing the PHC approach had to be reviewed. Consequently, this curriculum was reviewed in 1995 so as to accommodate the elements and principles of PHC. The allocation of students for clinical nursing education was also revised so as to fit the new requirements concerning PHC practice. According to Quinn and Hughes (2007), the placement of students for clinical nursing education is important as it should be done in such a way that the students benefit from these placements in terms of fulfilling their learning needs, and to ensure that they are able to adapt to the clinical setting once they embark on their professional careers.

The content of the revised nursing education curriculum was, therefore, reorganised in such a way that, on completion of the course, the newly qualified registered nurses were able both to provide and to facilitate comprehensive health care for individuals, families and communities in clinics, health centres and hospitals, according to the policy guidelines on PHC of the Ministry of Health and Social Services in Namibia. This revised course for registered nurses in Namibia was known as the Diploma in Comprehensive Nursing and Midwifery Science (University of Namibia, 1995).

However, apart from the MOHSS and the educational institutions that played a major role in implementing the PHC services, the community also had a role to play.

1.3.2. The contribution of the community to the implementation of primary health care

If PHC is to succeed, it is of the utmost importance that individuals, families and communities be responsible for their own health (WHO, 2009). Thus, unlike the situation that prevailed in Namibia before independence, it should not be the health workers only who are responsible for the health of individuals, families and communities (GRNMOHSS, 1995).

Accordingly, with the independence of Namibia, the Government of the Republic of Namibia placed greater emphasis on community involvement as one of the supporting pillars of PHC delivery. Communities were encouraged to take ownership and to participate actively in matters affecting PHC delivery and to provide input into the health care delivery (GRNMOHSS, 1992).

1.4. BACKGROUND TO THE PROBLEM

Nurses are vital to every health care service system worldwide, with nursing being an essential aspect of all health care. Nursing not only involves the care of the sick and the dying, but its overall goal is to help people to accept responsibility for their own health as well as that of their families and communities, and to help them both to retain and to regain health (Searle, 1987). Nursing practice is, thus, a phenomenon which is concerned with human biology, the environment, lifestyles, human interactions, as well as health care systems and methods (Searle et al., 2009; Du Toit & Van Staden, 2009). Accordingly, it is essential that registered nurses have sound knowledge and skills regarding all the elements of PHC to enable them to render a

proper service to the community at clinics, health centres, outreach points and district hospitals.

Furthermore, the registered nurse should use the nursing process to render PHC. The nursing process is a systematic method of assessing data, coming to a conclusion (diagnosis), planning the activities of care accordingly, implementing these activities of care, evaluating the progress and recording everything that has been done (Searle et al., 2009; Tomey, 2009; Jooste, 2010).

The discussion below supports the reasons why the nursing process is considered to be an important tool for nurses to use when they implement PHC in their daily practice.

One research study conducted in Namibia regarding the use of the nursing process by registered nurses is the one by Van der Vyver (2007), titled: “Guidelines to implement an educational programme to internalise and operationalise the nursing process in the gynaecology wards of the training hospitals of Namibia”. This was a qualitative study done with the purpose of exploring and describing the operationalisation of the nursing process among registered nurses who work in the gynaecology wards of Namibian training hospitals. The aim of the research was to develop a programme that would facilitate the utilisation of the nursing process, as well as to develop guidelines for its implementation.

The finding of this study indicated that not all registered nurses in the gynaecology wards used the nursing process, a situation which could contribute to defective nursing care in this area. The study recommends that registered nurses need support so that they will use the nursing process effectively and be able to care for patients holistically in their daily practice. The study further mentioned that many court cases

laid by patients against nurses in Namibia could be prevented by the use of the nursing process because, through it, nurses have an opportunity to identify patients' problems systematically and to come up with the correct care plan to implement in each case.

In this study the nursing process is described as a logical and rational method of problem solving that enables registered nurses to make intelligent decisions about patient care, instead of relying on an unsystematic and intuitive process. This logical and rational method of problem solving contributes to a large extent to the image of the nurse who is not only kind and caring, but also intelligent, competent and technically well prepared to provide services to patients. Although the nursing process is regarded by many nurses as time consuming, it is the only systematic way of problem solving as it is the process of identifying nursing problems and interpreting, analysing and selecting appropriate courses of action to solve these problems. It is a tool that nurses use to think critically about the nursing care they render.

The nursing process has its roots in systems theory and the steps of the nursing process facilitate holistic problem solving. These steps are presented as follows: Assessment is the first step and involves the process used by nurses to draw conclusions about patients' strengths and health concerns. Assessment, thus, ends up in the second step, diagnosis, which is about specifying health concerns and strengths. Planning is the third step and entails the development of approaches to meet patients' needs. After planning comes the fourth step, implementation, which comprises the actual care provided by the nurse. This involves completing specific activities to help the patient meet the goals in the plan while continuing to think about what is being done, how it is being done, and when, where, and why it is being done. The fifth step following implementation is evaluation. This is a determination of the patient

outcomes and the quality of care. It involves thinking and collecting information about the patient's response after nursing care has been provided and working on determining whether the patient's goals and objectives have been attained and how well they have been attained. The last step is documentation, which is about recording the nursing actions that have been performed so that the quality of care is not affected. Furthermore, the nursing process is a problem-solving framework that enables the nurse to plan care for a client on an individual basis.

The work of other authors who emphasise the importance of the nursing process is summarised in the table below:

Table 1.1: The importance of the nursing process

Author	How the nursing process is described
Perez Rivas, Garcia, Arenas, Lagos, and Lopez (2012)	The implementation of the nursing process in PHC centres in rural areas of Spain resulted in improved nursing care effectiveness (75–80% positive change). This research study concludes that nurses in PHC areas of Spain have effectively incorporated the nursing process as a work methodology in their care-giving practices. The implications for nursing practice are that the nursing process can be used to identify nursing care issues and assess the capacity for resolving such issues.
Muller Staub (2009)	The nursing process is a tool to assist nurses to make their contribution to society known. By making their daily work more visible and offering effective services, the population can become more aware of nursing competence
Muller Staub, Lunney, Odenbreit, Needham, Lavin, and Vanachterberg (2009)	It is necessary to perform in-depth research studies on the way the nursing process methodology is utilised and to demonstrate the results of the nursing process on the population's health. This is possible when basic nursing data sets are known from which information can be collected and conclusions

	made regarding the care being provided by nurses in a specific area.
Lee, Bott, Gajewski, and Taunton (2009)	Nursing staff shortages increase inefficiency in nursing homes. Efficiency could be increased by adopting well-designed, reliable care planning processes, which can reduce costs and improve quality.

In applying the nursing process during their daily practices when rendering PHC services, registered nurses have roles and functions to perform. Searle (1987), identifies two categories regarding the roles of registered nurses, namely, the instrumental and the expressive roles. The instrumental role is concerned primarily with the acquisition of knowledge about the health situation and the evaluation of such knowledge in the search for a possible solution to the problem (Barnald & Locsin, 2007; Searle et al., 2009).

On the other hand, the expressive role involves the establishment and maintenance of an extensive and effective therapeutic environment, as well as assisting the patient/client to become receptive to therapeutic intervention. This, in turn, implies that nurses should accept the patient/client as he/she is, support him/her through his/her problem or needs and identify the health needs of patients correctly when rendering PHC services (Searle et al., 2009). This role requires that a registered nurse treat all patients/clients humanely, including those patients/clients with mental distress/illnesses (Gale, Realpe, & Pedriali, 2008; Buechler, 2008).

There are several functions involved in the various roles played by nurses. These functions refer to those key activities for which the registered nurse, as an accountable person, takes responsibility realising the objectives of knowledgeable, competent and

legally and ethically based patient care. The functions of the registered nurse may be placed into three categories, namely, dependent, interdependent and independent functions. According to Searle (1987), the dependent functions relate to the law that authorises the nurse's practice, while one aspect of the independent function relates to all the factors inherent in the assessment, diagnosis, planning, implementation and recording of patients/individuals, families and communities. On the other hand, the interdependent function relates to the interrelationship between the nurse and various members of the health team as regards those activities which are required by patients, clients and communities (Searle et al., 2009).

Nevertheless, the implementation of any approach may present health care providers with challenges. According to Jooste (2010), the challenge inherent in the implementation of any new approach in the health care services lies in the way in which the approach is managed. In other words, the challenges lie in, inter alia, how effectively people are informed, the extent to which they were involved in interactive decision making as well as how well they were educated and trained as regards essential knowledge about the approach.

The reason for the success of this approach is that there are usually several role players involved in the implementation of a new approach in the health care services. In this study, with its focus on PHC, there are the health care service managers (supervisors) and registered nurses who are responsible for the new PHC, while it is the health care manager (supervisor) who is responsible for the continuous assessment, evaluation and interpretation of the variables impacting on the implementation of the new approach (Jones, 2007; Coetzee & Roythorne-Jacobs, 2007, Smit, Cronje, Brevis, & Urba, 2007).

The health care supervisors are employed by the MOHSS and are institutionally empowered to determine and regulate certain aspects of the actions of their subordinates in the various nursing categories. For the purpose of this study, the performance of registered nurses only was considered.

1.5. PROBLEM STATEMENT

It is not clear whether registered nurses utilise the nursing process effectively in the provision of PHC, as adopted by the government, as a new and better strategy to render health care services in the country after independence in 1992.

This question was raised because health care statistics do not always reflect whether PHC is being executed satisfactorily. Research findings reveal insufficient health communication with clients in health care facilities (Iiyambo, 2005; Neshuku, 2005; (GRN MOHSS, 2006), while an increased prevalence of HIV/AIDS and tuberculosis and a lack of a healthy lifestyle are being observed in society. If nurses are not able to execute their roles and functions in accordance with the nursing process, the care they render will lack the scientific soundness expected of them in their daily practice (Stanhope & Lancaster, 2010; Geyer *et al.*, 2009).

If the purpose of PHC services is to offer a range of services to society to enable greater access to health care and, thus, to improve the health status of society, then it is essential that these services be implemented and properly executed by health care providers.

It is as a result of these problems that the researcher in this study explored and described the extent to which registered nurses utilise the nursing process with regard to the delivery of PHC during their daily practice and, subsequently, developed

strategies that would support registered nurses in their utilisation of the nursing process when executing their roles and functions in this regard.

1.6. RESEARCH PURPOSE AND RESEARCH OBJECTIVES

1.6.1. Research purpose

The purpose of this study is twofold: firstly, to explore and describe the extent to which professional nurses use the nursing process in the delivery of PHC in their daily practice and, secondly, to develop strategies that would support registered nurses in their utilisation of the nursing process when executing their roles and functions in this regard.

1.6.2. Research objectives

The following research objectives were identified for the study:

- To explore and describe the way in which registered nurses in clinics, healthcare centres and outreach posts in the health districts use the nursing process in PHC delivery
- To determine how supervisors perceive the utilisation of the nursing process by registered nurses in PHC
- To identify the constraints that registered nurses are faced with when utilising the nursing process in the delivery of PHC
- To develop a conceptual framework on which to base the formulation of relevant strategies
- To incorporate the findings of this study into the development of strategies to support registered nurses in their utilisation of the nursing process in PHC delivery
- To validate the appropriateness of these strategies.

1.7. PARADIGMATIC PERSPECTIVE

A paradigm may be defined as a generally accepted structure or worldview within a particular discipline that organises the questions, processes and outcomes of inquiry, including theory (Chinn & Kramer, 1995; Wagenaar & Babbie, 2008; Babbie, 2008; De Vos, Strydom, Fouche, & Delport, 2009). In addition, a paradigm influences the nature of the phenomena to be researched, as well as the methods and techniques used during the research (Babbie, 2008; George, 2011).

Paradigms are important for research as they contain beliefs or assumptions that guide the research enquiry (Guba & Lincoln, 2005). According to De Vos, Strydom, Fouche, and Delport (2011), all research is conducted within a specific paradigm. A paradigm may be described as a model or framework for observation and understanding, while it also influences what the researcher sees and his or her understanding thereof (Babbie & Mouton, 2001).

The paradigm (framework) which formed the basis of this study was both the nursing process and the elements of PHC. A paradigm also implies a commitment to a collection of convictions which are meta-theoretical, theoretical and methodological by nature (Botes, 1991).

Meta-theoretical assumptions

Meta-theoretical assumptions have their origin in philosophy. They do not make any epistemic judgements nor are they testable but, rather, they deal with the researcher's view of people and society and offer a structure within which the theoretical statements are made (Botes, 1991). The philosophical basis of this study is positivism for the following reasons:

- The researcher contends that there is a reality out there to be studied, captured and understood. In other words, there is a real world driven by natural causes (Morrison, 2008; Mouton & Marais, 1996). By implication this also means there are people out there who are in need of health services. These people may either be ill and in need of treatment or they may need health information in order to maintain their health.
- The persons who provide the health care are health care professionals, including registered nurses. As such, they need to render PHC within the framework of the nursing process and in accordance with the elements of PHC. It was, thus, the aim of the researcher in this study to explore and describe the extent to which professional nurses use the nursing process in the delivery of PHC during their daily practice, and to develop strategies that would support professional nurses in their utilisation of the nursing process when executing their roles and functions in this regard. It is this reality that encapsulates the ontological assumptions of the study. The framework will be discussed in chapter 2.
- The researcher also adopted a distant, detached, neutral and non-interactive stance during the data collection phase and, by so doing, applied the epistemological assumption (Morrison, 2008).
- The researcher also followed a set of orderly, disciplined procedures to gather the required information. In addressing the research question the researcher gathered empirical evidence (Polit & Hungler, 1999).
- The findings of this research study were grounded in reality rather than in the personal beliefs or hunches of the researcher (Polit & Hungler, 1999).

- The researcher also endeavoured to hold all values and biases in check and to be as objective as possible.

Theoretical assumptions

Theoretical assumptions are measurable, they offer epistemic pronouncements about the research field (Botes, 1991) and they include models and theories (Mouton & Marais, 1996).

In this study the researcher made use of the model of the nursing process and the elements of PHC to guide her through the research process. In order to conceptualise the findings and create a conceptual framework within which the strategies could be developed, the researcher applied the practice theory of Dickoff, James and Wiedenbach (1968). This conceptualisation of the findings in terms of the practice theory of Dickoff et al. will be discussed in chapter 5.

Epistemological assumption

An epistemological assumption explains the way in which the researcher is related to those being researched. However, the researcher in this study was independent of those being researched and, thus, the findings were not influenced by the researcher. In addition, the researcher remained as objective as possible and kept her personal beliefs and biases in check as far as possible in an effort to avoid contaminating the phenomenon under investigation (Polit & Hungler, 1999). The aim of this study was to explore and describe the extent to which professional nurses use the nursing process in the delivery of PHC during their daily practice and to develop strategies that would support professional nurses in their utilisation of the nursing process when executing their roles and functions in this regard.

Methodological assumption

The nurse's role and function to render nursing care are carried out within the framework of the nursing process. The gap in the knowledge that guided this study pertained to the way in which the nursing process is viewed and applied in a contemporary context, namely, PHC at a local level.

Accordingly, a survey was conducted to ascertain whether there was any existing knowledge gap in the application of the nursing process when rendering PHC services.

Methodological assumptions include the researcher's views about the nature of research, which align the researcher with the research design and the research methods selected. The methodological assumptions form the basis of a research project and provide guidelines for the researcher, as well as verifying the researcher's expectations by the use of the statistical analysis of the data (Polit & Hungler, 1999).

The focus in this study was on the execution of registered nurses' roles and functions with regard to PHC, while the aim of the study was to develop strategies that would support the registered nurse in fulfilling her role and function. The purpose of nursing research is that it should be functional in nature. This, in turn, implies that the research should not be conducted merely for the sake of obtaining knowledge, but should rather address problems and provide solutions that may be applied in practice (Babbie, 2008). The functional approach of this study also implies a positivist, scientific approach which involves the use of orderly, disciplined procedures (quantitative approach) that are designed to test the researcher's ideas about the nature of the phenomena being studied (Polit & Hungler, 1999). The research method used will be discussed in chapter 3.

1.8. SIGNIFICANCE OF THE STUDY

The role and function of the nurse to render nursing care is executed within the framework of the nursing process. This study will generate information about the views of both registered nurses and their supervisors regarding the way in which registered nurses utilise the nursing process in a contemporary, local level PHC context in Namibia.

1.9. DEFINITION OF CONCEPTS

1.9.1. Strategies

Strategies refer to a well-planned series of actions designed to attain a specific aim (Booyens, 1999). If registered nurses' roles and functions within the PHC system are to be implemented successfully, then it is essential that a series of planned actions be put in place in order to facilitate their fulfilment.

1.9.2. Support

The term *support* is defined by the *Webster Comprehensive Dictionary* (2005) as an act of keeping something from falling, sinking etc; the idea of keeping something from failing or declining; to strengthen or to serve to uphold a theory.

On the other hand, according to Muller (2001), *support* means to encourage something to happen.

In the context of this study, *support* refers to those measures that may enhance the role and function of the registered nurse in PHC practice in Namibia.

1.9.3. Nursing process

The nursing process may be regarded as an instrument that guides the functioning of registered nurses while, in the context of this study, the nursing process also guides the registered nurses in managing the elements of PHC. The nursing process comprises a number of steps: assessment, diagnosis, planning, implementation and evaluation as the five main steps, with the sixth step of recordkeeping. The nursing process directs the nurse in providing care to meet the health needs of clients who may be individuals, families or communities. This process promotes both collaboration and meaningful communication with other disciplines in the solving of problems.

In addition, it is appropriate to apply the nursing process to clients of any age and also in a variety of health-related settings, including schools, hospitals, home health care facilities and clinics, as well as across specialities in hospitals or acute care settings, including intensive care units, paediatrics, labour and delivery units, medical surgical units and any other setting in which nursing care is rendered (Bower et al., 2006; WHO, 2009; Seaback, 2006; Stanhope & Lancaster, 2010; Geyer, Mogotlane, & Young, 2009; Hinchman & Sheridan-Thomas, 2008; Ackley & Ladwig, 2008; McGloin & McLeod, 2010; Schaaf & Zumla, 2009; Berman et al., 2008).

1.9.4. Registered nurse

A registered nurse is a person registered as such in terms of section 20, or regarded to be registered as such in terms of section 64, of the Namibian Nursing Act, No. 8 of 2004 (Nursing Act No. 8, 2004. *Government Gazette of the Republic of Namibia*, 3249).

A registered nurse is regarded as a professional nurse when compared to other categories of nurses of a lower educational level, including enrolled nurses or nursing assistants.

1.9.5. Primary health care

PHC is the basic, essential health care that is aimed at disease prevention and health promotion, with PHC services being made universally available, accessible, affordable, acceptable and appropriate to the needs of the community. However, this is possible only if the community is involved in the decision making, as well as the planning, implementation, monitoring and evaluation of these services. The success of this approach does not depend only on the services provided by the Ministry of Health but also on a great deal of input from other sectors and, thus, intersectoral collaboration is essential. PHC addresses the basic needs such as water, housing, food, environmental sanitation and the control of communicable diseases and, above all, it is concerned with the health of the vulnerable groups in the community, namely, the mothers and children. PHC aims at improving the health and developmental status of the population. Accordingly, it is essential that the services that meet the basic needs be available, accessible, acceptable, and most of all, affordable to the people (GRNMOHSS, 1992; Searle et al., 2009).

PHC is comprehensive health care because it reflects and evolves from the economic conditions and the socio-cultural and political characteristics of the country and its communities. In addition, it is based on the application of the relevant results of social, biomedical and health services research and public health experience and addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services (Stanhope & Lancaster, 2008; WHO, 2009). PHC shifts the emphasis away from the importance of curatively oriented

services to the greater importance of preventive and health promotive services which are aimed at meeting the health needs of the whole of society (WHO, 2009; GRNMOHSS, 1992; 2008; Searle et al., 2009).

1.9.6. Local-level primary health care

PHC at local level refers to PHC services that are based in facilities such as community health centres and clinics, as well as the mobile services to remote rural health posts or visiting/outreach points to communities situated more than five kilometres from the nearest health facility. These are the type of services the government is constantly strengthening and expanding according to the needs of disadvantaged communities (GRNMOHSS, 1992; The Official National Primary Health Care/Community Based Health Care Guidelines).

1.10. DIVISION OF CHAPTERS

The chapters in this study are divided as follow:

Chapter 1: Introduction and background of the study

Chapter 2: Literature review

Chapter 3: Research design and research methods

Chapter 4: Description and interpretation of the data

Chapter 5: Conceptual framework for the formulation of strategies aimed at supporting registered nurses in their utilisation of the nursing process when executing their roles and functions in local-level primary health care (PHC) practice in Namibia

Chapter 6: Strategies aimed at supporting registered nurses in their utilisation of the nursing process when executing their roles and functions in local level, primary health care (PHC) practice in Namibia

Chapter 7: Conclusions, recommendations and limitations

1.11. SUMMARY

The adoption of the PHC approach as a strategy to provide health care to all Namibians after independence and the subsequent orientation of health care service personnel, including nurses, to the implementation of this approach prompted the researcher to embark on this research study. The researcher, who is a community health nurse, was prompted by the realisation of how essential it is that registered nurses who work in PHC facilities execute their roles and functions optimally.

According to Burns and Grove (2005), a research problem is an area of concern where there is a gap in the required knowledge base – in this case the required knowledge base for nursing practice. In this first chapter the background to the research problem was explained. The problem was stated and the research purpose, research objectives and paradigmatic perspective described. The next chapter contains the literature review.

CHAPTER 2

LITERATURE REVIEW

2.1. INTRODUCTION

In general, a literature review is regarded as a critical summary of the existing research on a topic of interest. A literature review enables the researcher to place a research problem in context and/or provides a basis for the implementation of a specific project (Tarling & Crofts, 1998; De Vos, Strydom, & Delport, 2011; Allshoop & Saks, 2007; Guest & Scullion, 2007; Cresswell, 2008). Phelps, Fisher, and Ellis (2007) add that a literature review provides a researcher with the opportunity to argue for his/her research. This latter viewpoint was used in the organisation and presentation of the literature deemed relevant to this study.

In view of the fact that this study focused on the implementation of the elements of PHC by registered nurses by means of the nursing process, it was regarded as necessary to arrange and organise the literature referred to in this chapter around several components, namely, the elements of PHC, the nursing process, specific activities/functions a registered nurse has to carry out when implementing the elements of PHC, and managerial and administrative aspects of PHC.

The assumption on the part of the researcher was that these components could serve as a framework in terms of which to carry out the literature study. A framework was, thus, developed in terms of which to organise and present the above components and components of the study logically. The framework of the study was developed eclectically by incorporating aspects of the participant management model with the nursing process, and then relating the framework to the role and functions of the

registered nurse, specifically in terms of implementing the elements and principles of PHC.

2.1.1. Framework of the study

This study was conducted in terms of both the framework of the model of nursing process, as well as the depiction of the elements of PHC as applied to the role and functions of registered nurses and their supervisors in the PHC facility practice setting.

Figure 2.1 presents an illustration of this framework.

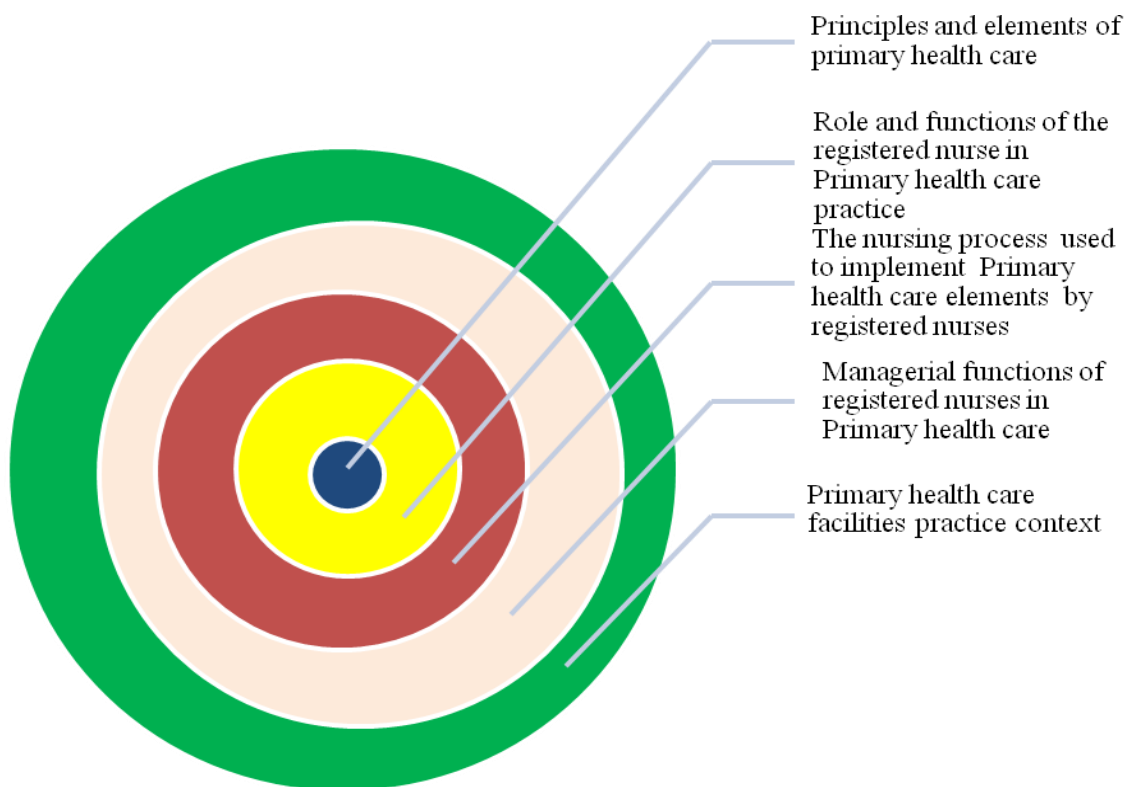


Figure 2.1: Primary health care delivery by registered nurses in health care facilities using the nursing process

In figure 2.1 the innercore represents the content, which in this study relates to the elements of PHC. The first ring that circles the core indicates that, when

implementing PHC elements, the registered nurse has to carry out specific role functions/activities that together will result in complete care of the clients to be served. The second ring following the first, the ring after the core, represents the nursing process as applied in PHC practice and connects the activities of the registered nurse in PHC to the steps of the nursing process. The third ring emphasises the managerial or administrative functions that the registered nurse integrates in her execution of the nursing process as part of her role and functions, while the fourth or outermost ring demonstrates that, the execution of the nursing process occurs within in a specific context, and this context may influence the different circles surrounding the core. This implies that the conditions in the practice setting influence the way the registered nurses in PHC execute their duties in their daily practice.

2.2. THE ELEMENTS OF PRIMARY HEALTH CARE

The concept of PHC had already been defined in chapter1, section 1.3. However, it will be discussed again at this stage, but this time with the aim to relate it to the elements and principles that are derived from this concept.

In the 1940s, governments were urged by the World Health Organization (WHO) to rationalise their highly technical approach to health care and broaden their coverage by providing better basic services (Stanhope & Lancaster, 2000; Bouwer, Dreyer, Herselman, Lock & Zeelie, 2007; WHO, 2009; Jooste, 2009).

The WHO had also in this regard identified five key elements that could assist governments in achieving this goal. These key elements are to reduce the exclusion and social disparities in health, and also to organise health services around people's needs as well as integrating health into all sectors. The final two key elements is the

pursuing of collaborative models of policy dialogue and increasing stakeholder participation (WHO, 2009).

These elements are therefore the foundational components that must be provided if people are expected to live socially and economically productive lives. These have been identified and refined by different authors over the years and have also been adapted to the needs of a specific country, community or, differently stated, to a specific context. As they are largely context dependent, it was necessary to search for specific Southern African references. The assumption was that there might be a linkage with such a source, as this study is being conducted in Namibia, and Namibia is also a Southern African country.

The first identification by Southern African authors appears to have been done by De Haan (1984) and Vlok (1996). Although these two authors are from Southern Africa, their identification of the elements of PHC is in line with other international authors like Stanhope and Lancaster (2006) and Sines et al. (2009). The latter authors however, went a step further, indicating that PHC is *a combination of primary care and public health care* made universally accessible to individuals and families in a community, with their full participation, and provided at a cost that the community and the country can afford.

In figure 2.2 on the following page, a representation is provided of the identified elements.

The elements of PHC, as discussed in the following subsections, must be provided on the basis of the four principles, namely, **equity**, which seeks to ensure that all shall have equal access to basic health care and social services provided by the state; **accessibility**, which is the aim to extend health care services to all, with special

attention being given to the disadvantaged regions of the country and to train community-based health workers so as to reach isolated small communities in rural areas; **affordability**, which states that PHC services should be provided free of charge to all citizens; and **community involvement and participation**, which advocates for the involvement of communities in health and social services provided at their level, with the aim to make the communities masters of sustainable PHC (Stanhope & Lancaster, 2008; Rashid, 1999; Moseley, 2003).



Figure 2.2: Elements of primary health care

With regard to PHC as community-based health care (CBHC) in Namibia, three fundamental principles are emphasised based on the Official National PHC/Community-based Health Care Guidelines (1992):

- **Participation, collaboration and appropriateness**, which emphasise the importance of community participation, intersectoral collaboration, appropriate technology and personnel orientation and training.
- **Self-reliance**, which has the aim that PHC/CBHC should build self-reliance in the people and create the widest opportunities for all to realise their full potential.
- **Improved socioeconomic conditions, poverty elimination and equity** whereby the emphasis is put on improving socioeconomic conditions and on eliminating poverty and underdevelopment.

To explain why the principles mentioned above are important, reference is made to a study done in Korea by Ko et al. (2011) to determine how individually tailored education for low income adult diabetic patients contributes to improved knowledge of this condition and how it improved patient behaviour, thus contributing to better living. This individually tailored education programme was possible only through nurses visiting patients at home and discussing individual programmes with each and every one of them, because they lived far from the health facilities. This is, in essence, community outreach services applied to diabetic patients in rural areas. The results of this study demonstrated a relationship between this tailored education and fasting blood glucose levels that was significant ($X^2 = 40.11$, $p = .005$). The conclusion was that tailored education effectively improved the patients' knowledge of diabetic patients and self-management. Therefore, regular individually tailored education on a

long-term basis by visiting nurses can provide essential education for low-income adult diabetic patients for maintaining self-management. This demonstrates how the accessibility of services for the poor and those in rural and remote areas could be increased by means of community outreach and health visiting.

According to a research report by Marks (2011), research findings of five combined papers reported that are reasonably diverse, and cover both the nature of common health problems and/or their solutions in schools, as well as college venues. They highlight the fact that health in schools is determined by both individual and collective health behaviours, and multiple rather than single stakeholders are needed to promote the implementation of efficacious programmes and their sustainability.

The first element that will be discussed is health education.

2.2.1. Health education

Health education is a process that includes the purposeful delivery of health-related information, directed at imparting knowledge and skills that are necessary to empower people in such a way that they will value health and be receptive to changes in behaviour that will optimise health practices (Urden, Stacy,& Lough, 2006;Jooste, 2010;Cottrel & McKenzie, 2005).

The WHO adds to the statement of Urden et al. (2006) by stating that it is also an active process that must be scientifically sound and based on the current attitudes and understandings of the people to be educated. Also, it must focus on goals which seem to them to be important, and which can be realised within their capacities and resources (De Haan, 1984; Stanhope & Lancaster, 2000; Clark, 2008;WHO, 2009).

Health education should include the principles of mental and social health, as well as empowering people to deal with their own health problems where possible and to equip them with the necessary knowledge about the diseases and other health problems which are common in their community in order that they may take appropriate steps to prevent their occurrence or, if they do occur, to seek early medical advice (De Haan, 1984; Clark, 2008; Bouwer et al, 2007; WHO, 2003; 2009; Silverman, Kurtz, & Draper, 2008 ; Quinn & Hughes, 2007; Rily, 2008).

If we look at the above statement, it can also be addressed as health promotion. Although health education is an element of PHC, the question to be asked is if this concept is not too narrow for overall population health. Is a concept like health promotion not more appropriate? This is so mainly because the traditional health education approach focuses more on changing individual behaviour, which is important, while health promotion involves interventions that address the social determinants of health (Whitehead, 2009). Moreover, there has been an ongoing concentration on health education rather than a broader health determinants approach to health promotion (Irvine 2007; Piper, 2008).

According to Irvine (2007) and Whitehead, (2009), nurses have not yet demonstrated a clear comprehension of the strategies of empowerment, community development and sociopolitical action in implementing health promotion.

Furthermore, published research has focused on nurses' attitudes to, knowledge of, and belief about health education and health promotion. These studies have thus not sought to analyse the influence exerted by the contexts in which nurses conduct their health education and health promotion (Irvine, 2007; Piper, 2008).

In nursing care practice, it is expected that a registered nurse give the community members health education that should include the promotion of physical activities and fitness, prevention of risky behaviour such as smoking and alcohol and the abuse of other drugs, mental health promotion, the importance of surveillance and data system, and the dangers of violence and abusive behaviour (Cottrel & McKenzie, 2005; Warner, 2009; Fawcett & Waugh, 2008; Wittenberg, 2009; Quinn & Hughes, 2007; DuToit & Van Staden, 2009; Haralambos, Holborn, & Heald, 2008).

Although no study has been done in Namibia on how behaviour change could be promoted, research carried out by Butler, Rayens, Zbang, and Hahm (2010) in the USA, among family members of lung cancer patients who wanted to quit smoking, demonstrated that the presence of a health problem such as lung cancer in a family could be used as a teachable moment for the family members because they are experiencing the severity of the disease as observed in the sick family member. Such exposure could serve as motivation to stop engaging in the risk behaviour under discussion.

The results of this study demonstrated that the effect of disease in relatives on motivation to quit smoking is high. Most of the participants of this study indicated that their relative's illness had increased their motivation to quit smoking, with 71–72% of participants planning to quit within the next six months. Therefore, this was regarded as a teachable moment for smoking cessation in the context of lung cancer diagnosis.

Another research study by Daniel and Wilbur (2011) among Indian immigrants with the aim to correlate lifestyle and physical activity (PA), demonstrated lower physical activities among immigrants which contributed to obesity and lifestyle diseases.

Hence, there is the need for public health nurses to increase their knowledge and awareness of factors that affect lifestyle in order to develop targeted interventions to improve the lifestyles of at-risk groups.

Studies conducted in Namibia on health education by and for health workers indicate that health education has not been sufficiently researched (Iiyambo, 2005; Neshuku, 2005). This has also been mentioned in chapter 1 section, 1.5.

The vital elements of nutrition and food supply are discussed in the following section.

2.2.2. Nutrition and food supply

Nutrition is the science that studies the processes by which the body takes in and utilises nutrients (De Haan, 1984; Lathan, 1997; Marshal & Bangert, 2008; Lutz & Przytulski, 2011). A nutrient is a substance in food used by the body to promote normal growth, maintenance and repair. The nutrients needed for health can be divided into six categories, three of which are collectively called major nutrients and make up the bulk of what we eat. These three are carbohydrates, lipids and proteins. The fourth and fifth categories are the vitamins and minerals of which only minute amounts are required. Water is regarded as the sixth category of nutrients (Clark, 2008; Lathan, 1997; Gibney, Lanham-New, Cassidy, & Vorster, 2009; Berman et al., 2008; I-TECH, 2007).

A simplified diagram, presented in figure 2.3, is advocated by the Ministry and Health Social Services in Namibia to demonstrate the different food groups to patients and clients.



Use Namibian Food Groups for Every Meal

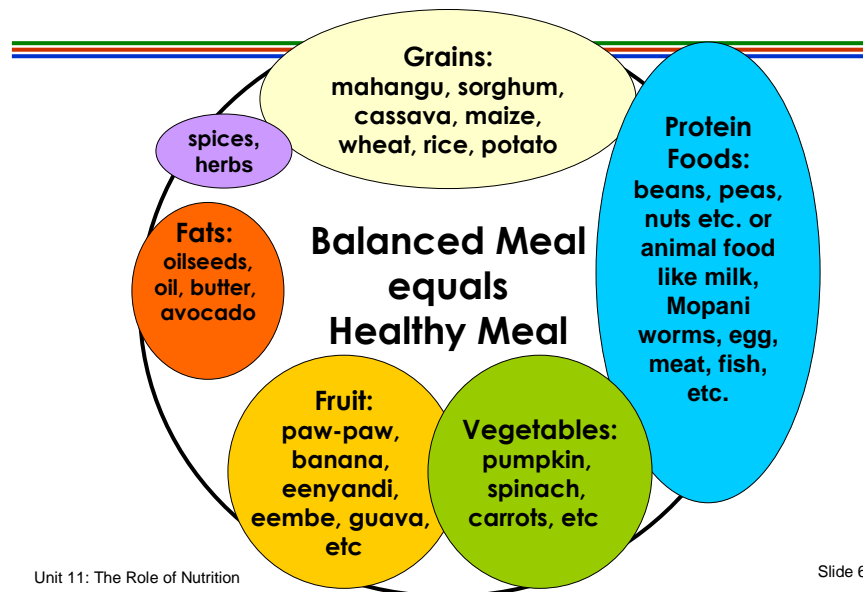


Figure 2.3: Food groups recommended for a balanced diet by the MOHSS in Namibia

Source: Adapted from I-TECH (2007)

This specific element could be easily assessed by the registered nurse, who is in the ideal position to promote sound nutrition. At the very least, the registered nurse should be conversant with the body mass index (a measure of kilograms per m²) as a formula to assess body fat status and total body fat (Lathan, 1997; FAO, 2001; Seidel, Ball, Dains, & Benedict, 2006; Lutz, & Przytulski, 2011; Lawrence & Wosley, 2007). Deviations in this index will alert registered nurses to either possible obesity-related health problem or malnutrition. As malnutrition is a serious problem and is the cause of many health problems, intersectoral cooperation is essential when it comes to providing food and promoting proper nutrition. This intersectoral cooperation requires additional professional interpersonal skills as well as the mandate to be a role player. Part of this cooperation may mean negotiating for the provision of staple foodstuffs at low prices and growing vegetables, whereas long-term solutions involve, among other

things, improved socioeconomic conditions and food production (De Haan, 1984; GRN National Planning Commission, 2007; GRN, 2004; Jauch et al., 2009; GRNMOHSS, 2007). Natural disasters such as floods disrupt agricultural processes and the transportation of food to those needing it, thus causing increased food insecurity (WHO, 1972; WHO, 2009; Lanthan, 1997; Lawrence & Worsley, 2007; Whitney, DeBruyne, Pinna, & Rolfes, 2007; GRN National Planning Commission, 2005; 2007).

Another cause for concern regarding food insecurity is the HIV/AIDS pandemic with its effect on the production capacity of the people, making them more vulnerable to food shortages at the household and family level and, consequently, at country level (Jauch et al., 2009).

Food and food production continue to be a source of concern. In recent years, food borne illnesses have been associated with *Salmonella* and *Escherichia coli* in chicken, eggs, and hamburger. Good food preparation practices, such as washing food and adequate cooking temperature and time, can prevent the food borne diseases associated with most pathogens. Other food worries include the presence of pesticides in food, bovine growth hormones (given to dairy cows), low-level antibiotics (given to beef cattle, pigs and chickens), irradiation of food, and genetically engineered crops (Stanhope & Lancaster, 2006; Lawrence & Worsley, 2007; Whitney et al., 2007; Lanthan, 1997 ; Gibney et al., 2009; UNICEF; WHO; UNESCO & UNFPA, 1993).

Regarding this element the registered nurse should encourage self-help activities for households such as cultivating vegetable gardens and keeping small livestock to ensure food security and, ultimately, good health (FAO, 2001; Molden, 2007; Amanor & Moyo, 2008).

Baskin, Zunker, Worley, Dial, and Kimbrough (2008) report on a research study done in an American school titled, “Design and implementation of a pilot obesity prevention program in a low-resource school: Lessons learned and research recommendations”. This involved a participatory process involving school administrators, teachers, parents and students, and resulted in the design of a programme salient to the target population and responsive to the school's limited financial and human resources. The programme was positively viewed by both students and school staff alike. Challenges for implementing the programme included maintaining classroom management with very large class sizes and limited school staff, and difficulty in actively engaging parents in program implementation. Although this was a paper not suitable for generalisation, it supports the feasibility and acceptability of obesity prevention interventions in schools.

Another vital element in health promotion is water and sanitation.

2.2.3. Water and sanitation

Water is the most essential resource for the survival of humans. However, water is easily contaminated, and two general types of water contamination are chemical pollution and biological pollution (Clark, 2008; Stanhope & Lancaster, 2000; Gilbert & Reynolds, 2008; Shepherd, 1998). Chemical pollution is usually a concern in industrial regions, and although the context of this study is not known to be industrial in nature, many small and medium-size enterprises are located in this area. The main source of biological pollution is the waste products of humans, namely faecal material and garbage that swarm with pathogens. The causative agents of cholera, typhoid fever, bacterial and amoebic dysentery, giardiasis, cryptosporidiosis, infectious hepatitis and poliomyelitis can all be spread through contaminated water (Black, 2008; Gladwin & Trattler, 2009).

In the area in which this study was conducted, flooding occurs on a yearly basis, and is referred to as the *Efundja*. During this period, flood waters from the Angolan basin drain into the northern parts of Namibia and Botswana, creating the possibility for the spread of water borne diseases. As safe water is one of the basic needs of any community, the provision of an adequate and pure water supply is a problem that is particularly pressing in the rural areas of developing countries, such as Namibia. It is thus well established that there is a marked relationship between the lack of pure water and disease. Apart from the diseases mentioned earlier, there is also the possibility of contracting roundworm and bilharzias, as well as the major contributor to morbidity and mortality in Namibia, malaria.

Just as water or incorrectly managed water can lead to health problems or worse, so too, can a lack of it. One of perhaps the earliest manifestations of a lack of water is poor personal hygiene and the escalation of certain conditions, such as pediculosis, scabies, trachoma, leprosy and yaws (Gilbert & Reynolds, 2008; Schwartzberger & Werchniak, 2009; Wittenberg, 2009).

The above discussion has highlighted the crucial role that water plays in the provision of PHC. In more affluent communities water and the safety of water are taken for granted, and as registered nurses may be regarded as more affluent, they need to undergo a sort of a “mind-shift” to remain sensitised to the fact that people in certain communities may lack proper water resources

The situation concerning safe water supply in Namibia is as follows: The results of the 2001 Namibia Population and Housing Census indicate that, at that time, 87% of all households in Namibia had access to safe water. More than half of the households had piped water within their compounds, while about another 35% of them obtained

their water from public pipes and boreholes. Urban households were relatively better off than rural ones with regard to the availability of piped water in their compounds. On the other hand, the rural areas had a relatively higher proportion of households with access to public piped water as well as boreholes. Some regions were relatively better off than others in terms of water sources for drinking and cooking. For example, most of the households in the central and southern regions had piped water in the compounds. However, one out of ten households in the rural areas depended on natural sources of water such as rivers and streams for drinking and cooking. The northern regions relied more on public pipes and boreholes. The regions which were shown to be relatively worse off were Kavango, Kunene and Ohangwena. In the Kavango region, three out of ten houses obtained their water from natural sources, that is, rivers and streams. In the country as a whole, the figures indicate that nine out of ten households had access to safe drinking water. For public health purposes, water from pipes and boreholes, except those with open tanks, is regarded as safe for drinking and cooking. GRN Central Statistics Office, 2003; Heyns, Montgomery, Pallet, & Seely, 1998; Sherbourne, 2010; GRN National Planning Commission, 2005; 2007; Namibia Non-Governmental Organizations Forum, 2008). (See Annexure 3 for details.)

Internationally, Namibia has been ranked as the third last country out of fifteen selected African countries facing challenges with pure water supply, according to the UNDP report 2004–2006 (Hemson, Kulindwa, Lein, & Mascarenhas, 2008; Merson, Black & Mills, 2006).

In addition to the assessment of the safety of drinking water, authors such as Clark (2008) advocate that water should also be assessed for safety regarding swimming,

fishing and the watering of vegetables. This is necessary because some waterborne diseases spread through this mode irrespective of whether the drinking water for that specific community is safe or not.

Sanitation is a term that refers to environmental hygiene. It encompasses issues to do with the management and disposal of household refuse and domestic waste water and the disposal of human excreta, sewage treatment and soil conservation and the prevention of environmental pollution (WHO, 2005; 2009). Another description is provided by the WHO (1972), De Haan (1984) and Merson et al. (2006), who describes “sanitization” as the reduction of microbial populations to levels considered safe by public health standards. Sanitation depends on the type of housing and maintenance, as well as the condition of other premises in the environment, because if these are not kept in a good sanitary condition, the health of the inhabitants is put at risk.

In 2001, census data indicated that more than half of the households in the country have no toilet facilities. Instead they utilised the bush. Only 44% of households in the country used flush or long-drop toilet facilities. However, there were notable differences between urban and rural areas. Over 80% of the households in the urban areas use flush toilet while in the rural areas it was less than 10%, while over 78% of rural households used the bush as against 17% in urban areas. Over 80% of the households in Caprivi, Kavango, Ohangwena and Omusati regions have no access to toilet facilities (GRN Central Statistics Office, 2003). (See Annexure 4 for details.)

The registered nurse must therefore be cognisant with ways to reduce these microbial populations. In this regard registered nurses will experience an extension of their scope of practice when having to assist a community with aspects of water and

sanitation. This might involve extensive liaison and collaboration efforts. The first aspect that needs to be conveyed to community members has to do with water purity, and specifically how to purify water on a small scale

Purification of water on a small scale

The simplest method and the easiest to understand is the *boiling method*. Boiling water for five minutes will destroy most pathogens but will not kill spores. If the water is required for domestic purposes only, this is of no consequence, but if completely sterile water is required it must be distilled, as even boiling for twenty minutes will not destroy spores.

Boiling makes water less palatable because it removes the dissolved gases from it, but this can be remedied by pouring the water from one container into another, the two containers being held some distance from each other. This process will “aerate” the water.

Water can also be *distilled* but this is not a very practical method to demonstrate to community members.

Filtration is also a method that registered nurses will not necessarily demonstrate, but they might, in collaboration with health care inspectors, be required to assess existing filter systems.

The final purification method that should be familiar to the registered nurse is the process of *disinfection*. On a small scale, disinfection of water may be achieved by the addition of small quantities of chemicals such as chlorine, permanganate of potash or tincture of iodine. The water is then allowed to stand for a short time, after which it is safe to drink. Many commercial preparations are available for the sterilisation of

water and these should be used according to the directions on the labels. They are very useful when travelling or camping in areas where the water supplies are likely to be contaminated (Merson et al., 2006; Wittenberg, 2009).

Large-scale water purification

Knowledge on methods for large-scale purification is basically utilised in the assessment of a community, as well in situations where a consultative function is expected. Large-scale purification makes use of a combination of the following processes. One method is the storage in *open tanks*. Other methods used in this regard are large-scale filtration, using sand filters and mechanical filters, as well as large-scale disinfection, using chlorination, by applying chlorine to large-scale water sources in the form of gas (which is the state in which it occurs naturally), paste, solution of chloride of lime (*bleaching powder*) or tablets. The terminology utilised in all of these processes is to be understood by registered nurses only as part of their consultative roles, and not necessarily as being a direct nursing role. Another component of sanitation has to do with sewage treatment. This could be a complicated or fairly simple task. On the more “complicated” side are techniques such as primary, secondary and tertiary sewage treatment (WHO, 1972; 2009; Kortenbout, Mtshali, Van Dyk, Van Wyk, Basson, Leech, & Mchunu, 2009). In the context of this study, registered nurses might be more inclined to assess the adequacy of more simple methods of sewage treatment.

2.2.4. Mother and child health care including family planning

Mother and child health services, including reproductive health, are among the essential components of a comprehensive health care service, because mothers and children are vulnerable groups who make up a large portion of the community. The health of women and children is an important contributory factor to the overall health

of a nation. The implementation of the PHC programmes and the integrated management of childhood illness are very important here to improve the health of these target groups. This type of health care service is one of those elements of PHC that constitute priority targets for the Millennium Development Goals (MDGs) to which world leaders (international community) committed themselves to achieve by 2015. The MDGs emanated from the historic Millennium Declaration, which was adopted by 189 countries at the UN Millennium Summit in September 2000 (WHO, 2003; 2005; Searle et al., 2009; GRNMOHSS, 1991; 2009; McKinnon, 1997). (See Annexure 23 for a list of the MDGs). For Namibia, MDGs 4 and 5 are important as they deal with the reduction of child mortality and the improvement of maternal health respectively (GRN Office of the President, 2004).

The WHO (2005), Kibel, Saloojee, and Westwood (2007), and Ireland, Power, Woods, and Desai (2006) call for an integrated approach to child health care through integrated management of childhood illness (IMCI), which has proven to bring about a significant reduction in morbidity and mortality in under-fives.

Mother and child health services should include pre-natal care, services for delivery, post-natal care, family planning, child health and school health services. The different activities which form part of this element require high expectations and skills from the registered nurse in order to safeguard the health of the mother, to ensure the delivery of a live and healthy baby, to promote breastfeeding, and to encourage the establishment of a satisfactory mother-child relationship (De Haan, 1984; WHO, 2005; The South African Red Cross Society, 2009; Fraser & Cooper, 2009; Du Plessis, 2007; Wittenberg, 2009; Moules & Ramsay, 2008; UNICEF et al., 1993).

Good nutritional status is also an important determinant of health for mothers, babies and children under five years old (Lawrence & Wosley, 2007).

Family planning services, in particular, require competent registered nurses, as the aims and objectives of these services are to ensure that every baby is a wanted baby, to assist sub-fertile couples to have children, to safeguard the health of mothers, to promote stable family life, and to prevent social disorganisation. There are many methods of family planning available, and after having been given all the relevant information, a couple should be left to decide which method they find most acceptable (De Haan, 1984; WHO, 2005; Weeks, 2008; Kendall, 2010).

According to the results of a survey by the MOHSS on factors contributing to maternal mortality and the prevalence of missed maternal deaths in Namibia, a woman in Namibia is said to be almost 100 times more likely to die during pregnancy than a woman in Europe. These deaths are associated with three delays, namely, delay 1, which includes issues such as delay in seeking appropriate medical help for an obstetric emergency for reasons of cost, lack of recognition of an emergency, poor education, lack of access to information and gender inequality; delay 2, which includes delays in reaching an appropriate facility for reasons of distance, infrastructure and transport; and delay 3, which includes delays in receiving adequate care when a facility is reached because of shortages of staff, or because electricity, water or medical supplies are not available (GRN:MOHSS, 2011).

Utilisation of available maternal health care services is a concern throughout the world, as some of these services are not fully utilised (WHO, 2009). A study conducted by Abor, Abekah-Nkrumah, Sakyi, Adjasi, and Abor (2011) titled "The socioeconomic determinants of maternal health care utilization in Ghana", with the purpose of

examining the socioeconomic determinants of maternal health services utilisation in Ghana, indicated that, generally, most women in Ghana undertake the required visits for antenatal services and also take both doses of the tetanus toxoid vaccine as required by the WHO. However, the results also showed low levels of usage in terms of the other maternal health care services (i.e. prenatal care, delivery at a health facility and postnatal care). There is clearly an urgent need to develop innovative strategies that will help upscale intervention especially for improvement in the use of these services by women in Ghana.

In Namibia, the state has assumed responsibility for family planning, and these services are available free of charge at many hospitals and clinics. In urban areas, child health clinics supervise the health and development of children from birth to two years. In rural areas, where child death rates are high, 'under-5' clinics are an essential part of the health services. Immunisation, health education in all aspects of child nutrition and hygiene, the early detection and treatment of disease, and the promotion of breastfeeding are some of the measures which are taken to safeguard the health of infants (GRN MOHSS, 1995; 2001).

There should be accessible and affordable facilities for pre-natal care; health education; services for safe delivery; post-natal care; family planning; breastfeeding promotion; education on safe weaning practices and school health services.

2.2.5. Control of endemic diseases

An endemic disease is one which is constantly present in a defined geographical area. The number of cases may fluctuate over time, but the disease never dies out completely (Clark, 2008; Kortenbout et al., 2009). Malaria is a common example of

this type of disease (Stanhope & Lancaster, 2000; Stanhope & Lancaster 2010; Schaaf & Zumla, 2009).

The possible role of registered nurses in this regard may be deduced from the factors that influence the actual incidence of an endemic disease. These factors are the environment, genetic susceptibility, behavioural factors, number of people who are immune, the virulence of the pathogen, and the reservoir or source of infection (Boerma, 1991; Merson et al., 2006; Black, 2008; Schwartzenger & Werchniak, 2009; Nail & Peate, 2009; Moules & Ramsay, 2008; Jackson, 2002). The WHO (2011) urges health workers including registered nurses to be vigilant in counter-acting outbreaks of endemic diseases and also to take precautionary measures in this regard. Of the factors mentioned here, perhaps the main impact is made by the behavioural factors. This correlates with the element already discussed, namely, health education.

The WHO has engaged in several research studies internationally regarding the combating of endemic diseases and recommends that one important activity to be carried out by registered nurses in this regard is to provide health education and take part in research that is conducted to monitor resistant strains of micro-organisms, such as tuberculosis and E. Coli, as this will facilitate the timely administration of the correct anti-microbial agents for resistant strains of all types of micro-organisms (WHO, 2011).

In addition, Zucker, Choi, and Gallagber (2011) remind public health workers, including registered nurses in PHC, to contribute to the prevention of endemic diseases such as hepatitis C among substance abusers, self-drug users and all those with a history of sharing needles or those not vaccinated.

In another research study conducted in the USA by Belcher et al. (2011) titled “Education–Service Partnership to promote Best Practices in a Latent Tuberculosis Infection Program”, the researchers concluded that nurses must be prepared or trained in such a way that they contribute to the identification of patients in their practice who are at risk of developing TB infections, be aware of the strong risk factor for progression from latent tuberculosis to tuberculosis when there is HIV infection and be comfortable with the treatment that should be provided to prevent latent tuberculosis infection from developing into active tuberculosis, as recommended by the Center for Disease Prevention and Control.

Abebe et al. (2012) add that it is important to engage in active TB case finding through community outreach so that the health service can reach its target of reducing the morbidity and mortality resulting from TB by the year 2015, as a recommendation of the United Nations’ MDGs.

The role of the registered nurse is, firstly, to establish whether there are services for the prevention and control of locally endemic diseases (Kortenbout et al., 2009; Stanhope & Lancaster, 2000; Jooste, 2010), specify diseases such as HIV infections, chronic disorders, cancer, heart disease and stroke, sexually transmitted diseases, although these will differ between communities. For instance, in Namibia, malaria should be added (Stellenberg & Bruce, 2007; GRN: MOHSS, 2003; 2008).

The prevention and control of local endemic diseases include communicable and non-communicable diseases. In terms of non-communicable disease, diabetes and hypertension are common in Namibia.

According to a research study by Berraho, Achhab, Benslimane, Rhazi, Chikri, and Nejjari (2012), to determine the relationship between hypertension and type 2 diabetes

in Morocco both hypertension and diabetes predispose patients to the development of CVD and renal disease. Moreover, the presence of hypertension in diabetic patients substantially increases the risks of coronary heart disease, stroke, nephropathy and retinopathy. Indeed, when hypertension coexists with diabetes, the risk of CVD is increased by 75%, which further contributes to the overall morbidity and mortality of an already high risk population. This situation calls for registered nurses to put more effort into the prevention and control of these diseases.

Specific strategies for the prevention and control of the different diseases will have to be developed in each area, with health education and guidance being central to the delivery of such services, including efforts to contain diseases before they become epidemics or disasters (Schaaf & Zumla, 2009; Bouwer et al., 2006; Stellenberg & Bruce, 2007; Minaar, 2008; WHO, 2008).

2.2.6. Treatment of common diseases and injuries

The types of common diseases and injuries in a community are identified only by means of an applicable survey. This could be as simple as the entry statements in hospitals or clinics registers, or by more controlled epidemiological studies. This information must be accessible to registered nurses as they need to be able to plan for any type of event proactively. It might also mean that they need to determine if any additional training is required, or if the element of *health education* should be readdressed. In addition, the referral system, health staff and other resources must be available to provide the appropriate treatment for common diseases. Early tracing, treatment and referrals, where necessary, are the basis of this (WHO, 2003; 2005; Bouwer et al., 2006; Gopee, 2008; Kee, Paulanka,& Polek, 2010; GRN:MOHSS,2009; Ireland et al., 2006).

Conditions such as violence, rape and depression, which can assume serious proportions in contemporary society, also fall under this component (Motz, 2008; WHO, 2005; Bouwer et al., 2006; Sommers-Flanagan & Sommers-Flanagan, 2009). A research study by Yahaya, Soares, De Leon, and Macassa (2012), which is a comparative study of the socioeconomic factors associated with childhood sexual abuse in sub-Saharan Africa countries, of which Namibia is one, indicates that child abuse is a serious epidemic in these countries. Therefore, health care workers including registered nurses must be vigilant in their daily treatment of common diseases and injuries, to identify and to manage these cases.

Regarding child sexual abuse in Namibia, a baseline survey on sexual and reproductive health (SRH) and HIV/AIDS among adolescents and youth, which was conducted in 2002 by the University of Namibia, revealed that 12.3% of females aged 15 to 24 reported that their first sexual intercourse was coerced, while 25% of 10 to 14 year olds and 15% of 15 to 24 year olds reported that they had experienced one or more forms of sexual abuse. Moreover, forty percent of cases of rape in Windhoek in 1994 involved children under the age of 18. The MOHSS in Namibia has embarked on training of health care providers, including registered nurses, to support adolescents and youth during daily health care delivery (GRN:MOHSS, 2007)

For all cases of diseases and injuries, the principle is that the treatment should be as simple as possible, and carried out by health workers who have been suitably trained to perform such treatment. There should also be adequate facilities for prompt and efficient referral (De Haan, 1984; WHO, 2008; Stanhope & Lancaster, 2010).

As was mentioned in the previous section, tuberculosis is one of the common communicable diseases that need effort at the local level in order to be controlled

better. A study by Abebe et al. (2012) found that early case detection, diagnosis and treatment of pulmonary TB patients, who are the most infectious source, are the best ways to control TB infections. Moreover, the UNMDGs include targets to “halve the 1990 TB prevalence and death rates by 2015” and the concern now is that it will not be possible to reach this target easily, as 2015 is only about three years from 2012. One activity that could help in reaching this goal is embarking on active case findings through community outreach by health workers.

In Namibia, regular disease surveillance is carried out and statistics of relevant communicable diseases, including TB, malaria, HIV/AIDS, meningitis and immunisation preventable diseases such as measles, polio and others are regularly kept and reviewed (GRN:MOHSS,2009; 2006).

2.2.7. Supply of essential drugs

Essential drugs are defined as medicines that are the most needed for treating the most common diseases in a given population and should therefore be available at all times (Monekoso,1994; WHO, 2008; GRN, MOHSS, 2008; Lehne, 2007). In Namibia the government through the MOHSS has developed and launched the National Essential Drug List document and made it available to health care workers, including registered nurses working in PHC areas (GRN, MOHSS, 2008; 2009).

Registered nurses may under certain circumstances obtain authorisation to prescribe or supply medicines to patients under their care. For example, when they work in remote areas where a doctor is not available (Dreyer, 2007; Geyer, Mogotlane,& Young, 2009; Searle et al., 2009; Cole, Labus, Thompson, Wegerbauer,& Williams, 2008; Moules & Ramsay, 2008; Dreyer, 2007; Sines et al., 2009; WHO, 2011).

This is the case in South Africa as well as in Namibia. This authorisation on the management of essential drugs in all its facets requires registered nurses to have an in-depth knowledge on the pharmacokinetics and pharmacodynamics of these drugs. It also requires an understanding of the relevant Acts that guide them through this special authorisation, such as the Nursing Act, 2004 (Act No. 8 of 2004) and the Medicines and Related Substance Control Act (Act no. 13 of 2003). One main function in this regard is to ensure that there is always a sufficient supply of essential drugs for treatment.

2.2.8. Immunisation

Infectious diseases cause considerable morbidity, mortality and disabilities at both global and country levels. Infectious diseases, including those that are immunisable, account for roughly 11% of all disability worldwide. Disability in this regard includes difficulty in seeing, speaking, hearing, writing, walking, conceptualising, or performing any other function within the normal range. About 70% of all disabilities in the developing world is caused by only four factors: infectious diseases, malnutrition, perinatal problems, and injury. Diarrhoea, tuberculosis and measles together account for most deaths resulting from infectious diseases, while the contribution made by whooping cough is uncertain because of unreliable reporting.

Routinely available vaccines include those for measles, tuberculosis, poliomyelitis, diphtheria, whooping cough and tetanus. Vaccination must be seen as one part of a broad policy of development, because vaccination programmes and campaigns can mobilise large numbers of people and release untapped social energies, which can facilitate broader upliftment. Immunisation is a far more effective intervention in preventing death than attempted behaviour modification, for example, for ischemic heart diseases. Immunisation refers to the production of an immune response in the

host after introduction of a foreign antigen. Vaccination, on the other hand, is a term derived from the Latin word for cow, *vacca*, which refers to the first human vaccine – Edward Jenner’s cowpox virus vaccine introduced in 1798. The two terms (immunisation and vaccination are, however, used interchangeably) (Kibel et al., 2007; Ireland et al., 2006; Salisbury, Ramsay & Noakes, 2006; Black, 2008; Schaaf & Zumla, 2009).

Immunisation is a cost-effective means of improving child survival but implementation of programmes in low- and middle-income countries is variable. A study done by Canavati, Plugge, Suwanjatuporn, Sombatrungjaroen and Nosten (2011) in Thailand found that socio-cultural barriers related to perceptions of the effects of immunisation, inadequate knowledge and barriers of distance to immunisation services influence immunisation usage in children. During times of war and political unrest, the immunisation of children may also be negatively affected because of parents’ fears of arrest, not remembering immunisation appointments, and the disruption of the parental working and home environment. In addition, the children of migrants are less likely to be immunised.

In Namibia, the National Programme on Immunisation covers the following immunisation preventable diseases: tuberculosis, poliomyelitis, diphtheria, tetanus, whooping cough (pertussis) and measles. In order to prevent these diseases immunisation services should be available and accessible especially for children under the age of five. Immunisation against the main communicable diseases is essential to reduce the morbidity and mortality in children (GRN: MOHSS, 1992; Kortebout et al., 2009).

In 2006, Namibia reported polio outbreaks, which were attributed to cross-border travelling and inadequate immunisation coverage. Thirty-four suspected cases with sudden paralysis have been under investigation since 7 June 2006 and three cases have been reported as wild poliovirus. Patients in the majority of suspected cases are over 20 years old. The plans of the national health authorities in response to the outbreak included an immunisation response consisting of three national immunisation campaigns (Pat, 2006).

The registered nurse in PHC practice must ensure that all the elements of PHC are provided for. In order to achieve this, specific role functions and activities that facilitate the complete implementation of PHC elements must be carried out in daily practice; these are discussed in the next section.

In managing the elements of PHC, the registered nurse does so as part of a specific role and function description.

2.3. THE ROLE AND FUNCTIONS OF THE REGISTERED NURSE

Professional nursing is one of the most important enabling subsystems in the health care delivery system. According to Searle et al. (2009), Bhengu et al. (2008) and Barnald and Locsin (2007), professional nursing is not only a highly technological health service with preventative, promotive, curative and rehabilitative dimensions, but it is also an intermediary, interventive, supportive and coordinating service to the community.

Furthermore, within the parameters of nursing practice the nurse shares instrumental and expressive roles. The instrumental role is concerned primarily with the acquisition of knowledge about the health situation, the evaluation of such knowledge, and the

utilisation of such knowledge in search for a possible solution to the problem (Gopee, 2008; Searle, 2004; Searle et al., 2009; Cole et al., 2008; Jooste, 2009).

Apart from being of assistance to the medical practitioner, the registered nurse in PHC has also a role to play in ensuring the adequacy of the following PHC-related services. These services have already been discussed as part of the PHC elements, but will be briefly referred to again. They include a safe environment, adequate nutrition, basic preventative health care which includes immunisation, family planning, health education, as well as the encouragement of individuals to accept responsibility for their own health. In addition, it includes the care of the aged, the handicapped and the chronically ill, screening, treatment and referral, and the provision of services needed (Searle et al., 2009; McWhirter, McWhirter, McWhirter, & McWhirter, 2007; Kee et al., 2010).

All of the above should be done with the understanding that the nurse is acting in the absence of health care professionals concerned, but this does not mean that she/he is taking over the over the duty or replacing the role expectation of such health care professionals. In addition to these, the registered nurse must be prepared to relinquish some of her routine activities to lesser qualified groups of nurses and nurse assistants. Nevertheless, registered nurses should ensure that their caring functions are not neglected as they form the cornerstone of nursing. Moreover, nursing is a profession that is concerned with the care of the patient/client in totality and requires that a registered nurse would play a coordinating role in ensuring that care from all different members of the health team is well coordinated for the patient/client, thus the management function of the nurse must be well implemented. This evolving role requires evolving education. Not only must the registered nurse receive adequate

educational preparation, to enable them to accept this role, but they constantly need to think, investigate, plan, implement and evaluate all their action throughout their professional life (Searle, 2004; Searle et al., 2009; Jooste, 2009; Jooste, 2010).

The expressive role is more concerned with the establishment and maintenance of an extensive and effective therapeutic intervention. It is concerned with the organisation of the milieu, patient care and administration aspects to ensure safe and purposeful nursing care (Searle, 2004; Searle et al., 2009; Jooste, 2010; Richardson, Partridge & Barrett, 2010; Buechler, 2008).

Nurses' roles involve a set of professionally shared expectations which include beliefs about the goals and values that the incumbent has to pursue and which are governed by his or her behaviour. Role status has three components. These components are values, which include criteria for designated roles, and attitudes and activities or functions. Arising from role status are functions. The functions of registered nurses are the constellation of key activities perceived as essential for the delivery of knowledgeable, competent, legally and ethically based nursing care for a patient, family, group or community (Searle 2004; Searle et al., 2009; McWhirter et al., 2008).

According to research done by Baldwin, Lyons and Issel (2010) in the US Department of Health, regarding how to enhance the visibility and public awareness of public health nurses, it was concluded that public health nurses should care not only for patients but also for the community. This study also looked at communicable diseases and the safety of the environment with more emphasis being placed on awareness-raising for communities to take the initiative in the care of their own health. Public health nurses should carry out research that is relevant to their daily practice in order to produce evidence that will guide improved public health care. They should also

monitor the spread of diseases, keep a vigilant watch on environmental health hazards, educate the community members on how to take care of and treat themselves, and be prepared for disasters such as floods which are also common in Namibia.

With regard to the functions of registered nurses, they can be described as dependent, independent and interdependent. It is important that registered nurses understand these concepts in conjunction with the responsibility and accountability required of them in their daily practice. The nurse's dependent function is to obey the law that authorises their practice as well as the common law. Nurses are dependent on the Nursing Act and the regulations it contains for their practice.

According to Searle (1987) and Searle et al. (2009), there are two aspects to the independent function of a registered nurse. The first aspect is related to those factors which are inherent in nursing diagnosis, treatment and care – the normal prescriptive, organisational and implementation functions of the nurse. The second aspect is related to the manner in which a registered nurse performs her duties as a registered nurse. This, in turn, means that the registered nurse remains totally accountable and responsible for her actions, while the doctor may not be held accountable for the actions of the registered nurse provided that the doctor has ensured that that his/her prescription was clear. This requires that a registered nurse ensure that her knowledge and skills are up to date as regards her practice Boucher, Dreyer, Herselman, Lock, & Zeelie, 1991; Boucher et al., 2006).

The interdependent function or collaborative function encompasses the interrelationship between various members of the health team, the patient and the broader patient concepts, as well as the community, when performing certain activities needed by the patient (Searle, 2004; Jooste, 2009; Jooste, 2010; Clark, 2008;

Stanhope & Lancaster, 2006). In addition, the following functions are outlined by the government document, *Integrated health care delivery* (GRN:MOHSS, ,1995: University of Namibia1995). These functions are related to PHC. Accordingly, the registered nurse should be able to

- take an accurate history, perform a physical examination and interpret laboratory investigations in order to make a diagnosis
- recognise abnormalities and screen patients to identify those whom he or she can help and those that should be referred to a medical practitioner
- treat the symptoms, dispense certain schedules of medicines, counsel patients and teach health-promoting principles
- manage health facilities and conduct regular meetings with members of the health care team to discuss problems and matters of common concern and to review ongoing education
- carry out dependent, interdependent and independent functions and be able to maintain sound working relationships with the medical practitioner and other members of the health team
- record PHC functions in order to carry out and follow a problem-based approach with reference to the guidelines and protocols provided
- respond appropriately to the expressed needs of patients by attending not only to curative care but also to preventive, promotive and rehabilitative care
- monitor the growth and development of infants and children under the age of five and provide nutritional advice
- provide family planning services
- help prevent and control communicable diseases and other health hazards
- ensure immunisation are done

PHC provision should also ensure that certain vertical programmes are put in place in order to address the needs of certain groups or solve specific health problems and that they are adhered to. These programmes include the Expanded Programme on Immunization (EPI), the Integrated Management of Childhood Illness (IMCI), School and Adolescent Health Programme, and many more (Monekosso, 1994). The registered nurse in local-level PHC practice should see to it that all the activities of such programmes are successfully carried out and he/she should monitor and evaluate the impact that such programmes have on the communities being served.

All of these activities occur within the framework of the health care delivery system adopted by a specific country, as well as the health care context together with its existing managerial structure. In this study, the health care delivery system in Namibia is discussed in chapter 1, section 1.2; while the study context is discussed in chapter 3, section 3.5.

The following section discusses the nursing process as a tool that registered nurses should apply when implementing PHC elements.

2.4. THE NURSING PROCESS AND ITS USE BY REGISTERED NURSES IN PRIMARY HEALTH CARE PRACTICE

The nursing process may be regarded as an instrument that guides the functioning of the registered nurse. In the context of this study, the nursing process also guides the registered nurses' management of the elements of PHC. In other words, the nursing process directs the nurse in providing care to meet the health needs of clients, who may be individuals, families or communities. This process, in turn, promotes both collaboration and meaningful communication with other disciplines in the solving of problems. In addition, it is appropriate to apply the nursing process to clients of any age and in a variety of health-related settings, including schools, hospitals, home

health care facilities and clinics, and also across specialisations in hospitals or acute care settings, including intensive care units, paediatrics, labour and delivery units, medical surgical units and any other setting in which nursing care is rendered (Bouwer et al., 2006; Clark, 1996; Seaback, 2006; Stanhope & Lancaster, 2010; Geyer et al., 2009; Hinchman & Sheridan-Thomas, 2008; Ackley & Ladwig, 2008; McGloin & McLeod, 2010; Schaaf & Zumla, 2009; Berman et al., 2008).

The definition of the nursing process is consistent with the definition of a system. The nursing process has a purpose, namely, to provide a process that may be used in the delivery of quality nursing care. The nursing process consists of interrelated components (steps), namely, assessment, diagnosis, planning, implementation, evaluation and recordkeeping. These components interact in an orderly fashion, with the components all providing input, throughput, output and feedback. However, each component is a subsystem and is able to act as a separate system. The nursing process is a systematic method for assessing data, planning nursing care, implementing that care and evaluating the effectiveness of the care and, as such, it is a scientific method for problem solving and is used to guide the nurse's actions. In addition, the steps in the process are ongoing and continuous and provide for the reassessment and regulation of the process, according to the feedback from the evaluation phase (Seaback, 2006; Stellenberg & Bruce, 2007; Bhengu, Car, & Cater, 2008; McGloin & McLeod, 2010; George, 2011). Meyer, Naude, Shangase, and Van Niekerk (2009) describe the nursing process as a strategy that may be used to enhance the cognitive reasoning skills of nurses.

However, as applied in the community for the purpose of PHC, this scientific process differs from its usual application in that the nurse who is working in accordance with

the PHC approach is involved not only in the health or health problems of the individual, but also in the total needs of the individual, the family and the community (Bouwer et al., 2006; Clark, 2008; Searle et al., 2009; Goldenberg & Goldenberg, 2008; Buechler, 2008).

When utilised correctly, the nursing process model should provide direction for the nurses working in a particular area, because it should help them to gain a more comprehensive understanding of the topic underpinning their nursing actions (Clark, 2008). Although studies have been carried out on the utilisation of the nursing process in hospitals, none have been conducted on its use in PHC. However, there is need for registered nurses to use the nursing process in any area in which they practise including clinics, health centres and outreach programmes.

Figure 2.4 presents the steps of the nursing process.



Figure 2.4: The steps of the nursing process

According to figure 2.4, the nursing process comprises six steps. These steps are divided into five phases and are discussed next, but first a summary of the phases of the nursing process together with their respective steps is given as follows:

Phase 1: Assessment phase

- Step 1: Assessment
- Step 2: Diagnosis

Phase 2: Planning phase

- Step 3: Planning

Phase 3: Implementation

- Step 4: Implementation

Phase 4: Evaluation

- Step 5: Evaluation

Phase 5: Recordkeeping

- Step 6: Recordkeeping

2.4.1. Step 1: Assessment

Assessment is the first phase (step) of the nursing process and is an orderly process consisting of the identification, gathering, and organisation of subjective as well as objective data pertaining to either the patient or the situation. As such, assessment may be regarded as the input phase of the nursing process. It establishes the baseline data concerning the health status of the patient or a particular situation, for example increasing incidences of sexually transmitted diseases among teenagers, and provides ongoing information to be used in planning the patient's care (Clark, 2008; Ackley & Ladwig, 2008; McGloin & McLeod, 2010; Meyer et al., 2009). Writers such as

Pilgrim (2010), Rassool (2009), Gale et al. (2008) and Eshun and Gurung (2009) emphasise the necessity of assessing the way in which social pressure may contribute to psychological distress in human beings, thus influencing their health negatively in the long term.

In PHC practice, which uses community-based nursing as a vehicle, assessment may be described as the act of becoming acquainted with the community – family, groups, and the environment (Stanhope & Lancaster, 2010). According to Clark (2008), Eshun and Gurung (2009), Stanhope and Lancaster (2010), Gibney et al. (2009), Kibel et al. (2007), Kee et al. (2010) and Minaar (2008), the assessment step in PHC nursing practice should include the following:

Comprehensiveness

It is essential that the assessment carried out always be comprehensive and systematic so as to facilitate the diagnosis, decision-making and planning processes. When data are collected, the actual, as well as the potential, needs for collecting that data should be taken into account as these will influence decisions regarding actions and priorities.

The assessment should be both sufficiently comprehensive and applicable to individuals, families and communities. In addition, it should focus not only on the health history of clients but also consider aspects such as their nutritional status, taking into account observations such as blood pressure, pulse and respiration, health status and any social problems that may be prevalent in the families or the community (Myers, 1997; Berman et al., 2008; Clark, 2008; Stanhope & Lancaster, 2006).

Use of appropriate data collection methods and techniques

It is essential that the registered nurse use methods and techniques that will yield the necessary data. The methods and techniques used will depend on the nature of the

client and his/her situation and may include interviewing, physical examinations and the review of records.

Identification of environmental health risks/hazards

These environmental health risks/hazards include issues that are related to the safety of the drinking water used by clients in the catchment area of each health facility being served, as well as the conditions under which waste is being dealt with in the area.

Identification of health problems and health needs according to the age group of clients

This includes identifying the need for housing and shelter in the catchment area, the condition of women after delivery, the immunisation status of all infants and children under the age of five years, the need for Vitamin A by children under the age of five years, the tetanus vaccination status of all women of child-bearing age (15 to 45), the health development status of school children, the needs of patients concerning special treatment, for example, rehabilitation, and the need for home care.

Identification of the most prevalent health problems and diseases in the population

It is essential that the common health problems and the main diseases in the community be assessed so as to be able to take action should the situation so require. In addition, clients who are at risk of certain health conditions must be identified, as well as vulnerable groups such as children and marginalised communities. This includes an assessment of abuse and neglect, as well as the risk of substance abuse in the community. All the data obtained should be used to identify the health status of clients and to formulate nursing diagnosis (Clark, 2008).

In this study, the assessment phase concentrated on 19 different assessments:

- Occurrence of health problems in the catchment area
- Occurrence of most prevalent diseases in the community
- The extent of food hygiene in the area
- Nutritional status of any client
- Safety of drinking water for clients in the catchment areas
- Conditions under which waste is being dealt with in the catchment areas
- Environmental health hazards (e.g. standing dirty water)
- Need for and condition of housing in the catchment areas
- A complete history of all patients/clients that are examined
- All observations done on any patient (blood pressure, pulse, respiration)
- Health status of any patient who are diagnosed with any common disease or injury
- Women six weeks after delivery (post natal)
- Immunisation status of all infants and children under the age of five (5) years
- Need for Vitamin A by children under five (5) years
- Tetanus vaccination status for all women of child-bearing age (15–45 years)
- Health development status of school children
- Social problems in families and communities

The next step in the assessment phase is diagnosis.

2.4.2. Step 2: Diagnosis or problem identification

It is essential that the assessment carried out be both comprehensive and systematic so as to facilitate the diagnosis, decision-making and planning processes. When data are collected, the actual, as well as the potential, needs must be taken into account as these will influence the decisions made regarding actions and priorities. After an

analysis of the data that have been collected, a nursing diagnosis may be made (Seaback, 2006; Stanhope & Lancaster, 2000; Clark, 2008).

A nursing diagnosis is a statement of the client's response to a disease-causing agent or social condition and is related to aetiology that the nurse is able to diagnose and treat independently. However, the diagnosis made by the nurse in this regard is not of actual conditions such as cancer, which would be a medical diagnosis made by a doctor. A professional nurse diagnoses and treats a client's response to a medical condition such as cancer, with the nurse's diagnosis relating to factors such as inadequate nutrition, nausea, altered self-esteem, anxiety and pain, with this being the reason why such a diagnosis is known as a nursing diagnosis. A nursing diagnosis identifies an existing or potential health problem that nurses are qualified and licensed to treat. Accordingly, the term "nursing diagnosis" in the nursing process refers to the independent functions of the community nurse.

The nurse will use critical-thinking and decision-making skills in making nursing diagnoses (Seaback, 2006; Stanhope & Lancaster, 2000; Clark, 2008; Meyer et al., 2009).

In some of the literature, for example Clark (1996) and Seaback (2006), a nursing diagnosis is described as a separate step in the nursing process. However, generally, the nursing diagnosis forms part of the assessment phase.

In view of the fact that, in community health, the client is regarded as a total system with various types of needs that may influence the client's level of wellness, the nursing diagnosis will be a statement of needs rather than a list of problems. These needs will cover the entire spectrum of the health-illness continuum and may focus on a wide range of topics such as the aetiological factors or possible causes of a health

problem (Stanhope & Lancaster, 2000; Stanhope & Lancaster, 2006; Clark, 2008; Ginger & Davidhizar, 2008).

During this stage of the nursing diagnosis, priority areas and high-risk groups are identified. It is important to group the assessment data into specific categories and to view the classified data as a whole in order to make an accurate diagnosis (Stanhope & Lancaster, 2000; Viljoen & Sibia, 2009).

The behavioural diagnosis is another type of diagnosis which the registered nurse, as a health care professional, must be able to make. A behavioural diagnosis is the process in terms of which the causes of health problems are examined in order to ascertain whether human behaviour is involved in either the prevention or treatment of the medical condition concerned. In the behavioural diagnosis all the behaviours that the community should carry out for primary, secondary and tertiary prevention of the disease concerned are listed (Seaback, 2006; Warner, 2009; Schaaf & Zumla, 2009).

The following include some of the behaviours that may influence health – food and eating habits, health-seeking behaviour, alcohol and drinking, tobacco and smoking, sexual behaviour and experience, and exercise and activity. It is significant that these may often be rooted in culture (Rassool, 2009; Clark, 2008; WHO, 2002; Ipinge, 2008; Conteh, 2004).

Jha, Peto, Zatonski, Boreham, Jarvis, and Lopez (2006, cited in Clark, 2008) write about the results of a study that was conducted in England, Wales, Poland and North America on social inequalities in male mortality and the correlation between male mortality and smoking as a behaviour. The results of this study indicated that, in each of the countries, there was a twofold difference between the highest and the lowest social strata in terms of the overall risk of dying among men aged 35 to 69, with

smoking-attributed mortality accounting for nearly half of total male mortality in the lowest social stratum of each country. This, in turn, indicates how certain types of behaviour, including smoking, may have a negative effect on the quality of life. It is, thus, essential that the nurse be able, in her daily practice, to identify and help patients to modify such types of behaviour (Clark, 2008).

Another international research study was conducted by Mackert, Stanforth, and Garcia (2011) in the USA on understanding nutrition and exercise decisions, with the aim of the study being to assess the impact of social undermining on health behaviours. The study found that 50.9% of the participants indicated that their eating habits were influenced by others, including their partners or family members, and that these other individuals in their lives often played a role in undermining either their eating habits or their exercise workout programmes. For example, husbands complained when their wives' exercise programmes interfered with the household chores.

Research in Namibia has shown that certain cultural practices and beliefs, including the cultural concept that a man is superior to a woman, contribute to higher incidences of gender-based violence which may range from decisions about using a condom to whether other safer sex methods should be practised (Conteh, 2004). In addition, it has been proved that the practice of men having sexual intercourse with other men has increased the risk of STIs as a result of a higher incidence of anal lesions (GRN MOHSS, 2009; Ipinge, 2008).

It has emerged from the literature discussed above that diagnoses by registered nurses in PHC entail certain functions, namely, identification of the health and socioeconomic situation of the community; identification of the need for mobilising

the financial resources required in the provision of nursing care services; identification of the materials and supplies needed in the provision of nursing care; identification of abnormalities of pregnancy and those related to childbirth, for example, multiple pregnancies, growth retardation; identification of health problems in children under the age of five years, for example, malnutrition, diseases, and so forth; identification of the immunisations needed for children under the age of five years; identification of the health needs of school children, as well as the identification of environmental health hazards.

Thus, a registered nurse must have a sound knowledge and understanding of how to determine the status and needs of the catchment population which he/she is serving, including the status and needs of specific age groups. For example, the registered nurse should know the size of the catchment area, identify the immunisation (EPI) coverage to date in the catchment area, identify the socioeconomic situation in the community, identify the resources needed in the provision of nursing care, identify the training needs of the community, identify the training needs of the health workers, including the nurses, carry out a full physical examination of all clients, make a correct nursing diagnosis of all patients/clients and identify the disease trends reflected in the health information system records.

The diagnosis step in this study focused on the following ten functions:

- Determine the catchment population that you serve including specific age groups.
- Know the size of the catchment area in the community being served.
- Identify immunisation (EPI) coverage attained to date in the catchment area.
- Identify the socioeconomic situation in the community.

- Identify the resources needed in the provision of nursing care.
- Identify health education and training needs of the community.
- Identify training needs for health workers including nurses.
- Carry out a full physical examination on all clients.
- Make a correct nursing diagnosis of all patients/clients.
- Identify disease trends reflected in health information system records.

The planning phase is the next phase to be discussed.

2.4.3. Step 3: Planning

Planning comprises the second phase of the nursing process and is also referred to as planning, outcome or identification. Planning consists of determining either present or potential problems exhibited by the patient, as well as desired outcomes and is, as such, also the throughput phase. This planning phase transforms the data collected during the assessment or input phase into meaningful arrangements, setting guidelines for the implementation phase.

The roles and functions of a registered nurse in PHC facilities regarding planning include the following activities, namely, daily nursing care according to the needs of the target catchment population in the community being served; services according to the health information available at the health facility, including information on major health problems or causes of deaths in the catchment area; developing a teaching plan for individuals to promote health; devising programmes to manage illness of both an acute and a chronic nature; compiling an annual budget to request resources (manpower, materials); contributing to project proposals the resources needed; organising training sessions for the community on health issues, as well as training sessions for staff on relevant issues; making the necessary preparations for all health

promotion activities such as growth monitoring, home visiting, AIDS prevention and immunisation, organising nursing interventions for any health problems identified, as well as planning outreach services in the community (Tomey, 2009; Quinn & Hughes, 2007; Dickinson, 2009; Stanhope & Lancaster, 2010).

The planning phase of the nursing process in this study focused on 11 functions which are listed below:

- The nursing care daily according to the needs of the target catchment population in the community being served
- Services according to the health information available at the health facility (e.g. morbidity and mortality)
- The development of teaching plans to promote health in individuals
- Programmes to manage illnesses of acute and chronic nature
- Annual budget to request resources (manpower, materials)
- Assist with the planning of project proposals to request resources needed
- Presentation of health education and training sessions relating to community health issues
- Training sessions for staff on relevant issues
- Preparing health promotion activities (e.g. growth monitoring, home visiting, AIDS prevention and immunisation)
- Identifying nursing interventions for any health problems
- Offering outreach services in the community

The implementation phase follows the planning phase (Seaback, 2006).

2.4.4. Step 4: Implementation

The third phase of the nursing process is implementation. This phase involves the implementation of those nursing actions required to achieve the desired outcomes which were established during the planning phase (step 3). In other words, implementation refers to the nursing intervention or action taken to carry out the established plan of care and, thus, implementation constitutes the output phase. It prescribes the action to be taken, as dictated by the planning or throughput phase, and then transforms this prescription into action (Stanhope & Lancaster, 2000; 2006; Seaback, 2006; Jones, 2007).

As an expert in health-related issues, the registered nurse in PHC should also assist communities in the implementation of a planned health intervention and help select leaders or negotiate with other experts to assist in the implementation of this intervention. Implementation requires that the registered nurse apply relevant nursing theories and establish a climate of trust and open communication, as well as preparing clients to accept the planned health intervention. During the implementation phase, the registered nurse in PHC exercises her/his independent nursing functions but, because intervention is a team effort, certain dependent, as well as interdependent, functions, for example medical treatment or physiotherapy, may be involved in order to meet all the needs of a client as the situation may require (Bouwer et al., 2006; Stanhope & Lancaster, 2006).

Thus, based on the literature discussed above and on the information provided by the GRN: MOHSS (1995), University of Namibia (1995), Berman et al. (2008) and Stanhope and Lancaster (2010), the functions of the registered nurse in PHC will entail carrying out all the planned nursing intervention activities for the catchment population. These include health promotion, home visits and immunisation; making

sure that that all the planned activities are carried out; maintaining the clients' safety and comfort during the implementation of the planned activities; applying the correct nursing case management methods when implementing nursing care; ensuring that the various intervention activities are carried out by those entrusted to do so; making use of the available resources within the community when carrying out nursing intervention activities; involving family members when implementing nursing activities; ensuring that clients and their family members participate in the implementation of the nursing activities; referring clients to the health and other services available to them in the community, depending on the nature of their needs; referring clients to other experts to assist in the implementation of the plan as required; management of any health problem within the framework of her/his scope of practice; provision of health education according to the health needs of clients; provision of home care according to the needs of clients; administering treatment and medication as authorised by the Nursing Act and relevant regulations and, finally, safeguarding the rights of individual patients.

In executing all the nursing interventions required, the registered nurse should employ her nursing roles in management, teaching, environment and community assessment and care, as well as nursing research. These areas are discussed in the next section.

Management

Management in nursing involves implementing the budget requirements as planned; conducting evaluations of specific health programmes; ensuring that the resources provided for nursing projects are utilised for the correct purpose; ensuring that all the health personnel at the health facility adhere to the daily duty schedules prepared; promoting activities aimed at improving the quality of the health information system

at the health facility or within the community and utilising the health information system in implementing all activities related to the control of disease and health problems in the health area.

Teaching

Teaching by a registered nurse involves conducting training sessions for all health workers, patients/clients and the community.

Environmental/community

The promotion of environmental hygiene includes food hygiene practices, safety of drinking water; management of the housing environment in the catchment area and carrying out all activities related to the control of disease outbreaks and disasters, as well as the supporting activities related to disease prevention and health promotion.

In addition, it is essential that particular attention be focused on those with health risk factors in order to care for them more effectively.

Research

Research by registered nurses involves contributing to and taking part in studies aimed at enhancing the wellbeing of clients/patients and the development of the nursing profession. Research findings help to enhance the implementation of better care plans based on evidence (Jamerson & Vermeersch, 2012).

In this study, the implementation phase concentrated on the following 14 role functions:

- Carry out all the planned nursing intervention activities for the catchment population (e.g. health promotion, home visits and immunisation)

- Utilise the available resources in the community when carrying out nursing intervention activities
- Refer clients to the health services available in the community
- Involve family members when implementing nursing activities
- Conduct training sessions for all health workers and the community
- Carry out activities related to the control of disease outbreaks and disasters
- Implement the budget requirements as planned for
- Ensure that resources provided for nursing projects are utilised for the correct purpose
- Manage any health problem within the framework of her/his scope of practice
- Provide health education according to health needs of clients
- Provide home care according to the needs of clients
- Administer treatment and medication as authorised by the Nursing Act and the relevant regulations
- Carry out research on identified problems
- Safeguard the rights of individual patients.

The evaluation phase follows the implementation phase.

2.4.5. Step 5: Evaluation

Evaluation is the fourth phase of the nursing process and it involves determining the effectiveness of the nursing actions in realising the plan of care. As such, evaluation includes examining patient outcomes, determining the outcomes and also drawing conclusions concerning the realisation, or lack thereof, of the desired outcomes. In other words, this phase involves the continual evaluation of the assessment, planning, and implementation phases of the nursing process and is, thus, the feedback phase in

that it directs reassessment, further planning, and revision in the total process. The information obtained from evaluation is fed back into the input or assessment phase, and the cycle continues in a systematic manner (Stanhope & Lancaster, 2006; Bouwer et al., 2006; Seaback, 2006).

In essence, evaluation shows whether the intervention was effective or not and whether the objectives set during the planning phase were met. The interventions may then be either continued or terminated, as needed, and if the objectives were not met another approach may be adopted.

The evaluation may suggest that the implementation of the nursing plan was not satisfactory. In such a case the nurse (or other party involved) may make changes regarding the quality of performance so as to ensure the realisation of the intended outcomes. However, evaluation may also lead to changes in other components of the nursing process. For example, the nurse may find that the interventions were not effective because they were based on an inadequate and/or inaccurate database. If this was, indeed, the case, the nurse may want to expand the client assessment. It may also be that the plan of care was not sensitive to the constraints of the client situation and it may, thus, be necessary to modify the plan. In addition, evaluation findings may also indicate a need for changes in the way the care plan is designed.

The functions of the registered nurse in a PHC facility regarding evaluation include the following activities: Determining the effectiveness of the activities that were carried out; involving the client and his/her family members in the evaluation process; monitoring the health status of the clients at risk (vulnerable groups); monitoring incidences and patterns of common diseases and health problems in the population; evaluating the effectiveness of health promotion activities such as growth monitoring,

home visiting and AIDS prevention and control in the health area; evaluating the effectiveness of the health education given to pregnant women, for example, on breastfeeding and infant care ; evaluating the effectiveness of the nursing care service provided to clients of different age groups; evaluating the impact of operational research studies on health problems identified in the health area and utilising appropriate evaluation methods and techniques; evaluating the ways in which the materials and supplies provided for the provision of nursing care are utilised; evaluating the effectiveness of health programmes, for example, immunisation, evaluating the effectiveness of the training of the community members on health issues, for example individuals, families, community own resource persons (CORPS) and so forth regarding any health service; monitoring changes in the catchment population of the health area, monitoring changes in the occurrence and presence of health problems; evaluating the ways in which materials and supplies are used for nursing care and evaluating the health progress of all categories of patient/client (GRN, MOHSS, 1995; University of Namibia, 1995; Berman et al., 2008; Stanhope & Lancaster, 2010; Ervin 2002; Tomey, 2009; Jooste, 2010).

The focus in the evaluation phase of the nursing process in this study was on the following five role functions of the registered nurse in PHC:

- Monitor changes in the occurrence and presence of health problems in the catchment area
- Evaluate the ways in which materials and supplies are used for nursing care
- Evaluate the effectiveness of health programmes e.g. immunisation
- Evaluate the effectiveness of health education programmes
- Evaluate the progress of health in all categories of patient/client

The final phase (phase 5) in the nursing process is known as recordkeeping. This phase is also regarded as such in the Namibian context.

2.4.6. Step 6: Recordkeeping

Although records would have been kept throughout the nursing process, a fifth step of recording has been added. This was deemed necessary because the nurses are responsible for their own actions and omissions and, thus, records could serve as decisive documents in any enquiries into a negligent act on the part of a nurse. In addition, nursing literature in general is placing increasing emphasis on interaction as a component of the nursing process. This interaction component includes two aspects, namely, communication and interpersonal relationships – essential elements in any nursing activity. It is essential that every nurse working in any community be competent in interpersonal skills so as to be able to communicate with his/her clients and interview them in various situations (Bouwer et al., 2006; Clark, 1996; Stanhope & Lancaster, 2000; Meyer et al., 2009).

Recordkeeping involves making sure that all phases of the nursing process, during which the care has been provided, have been clearly and correctly documented. The recording functions of the registered nurse in PHC include keeping accurate records of all the nursing activities carried out; ensuring that all records kept are clear, easy to read and easy to understand; ensuring that the health status of the client is clearly indicated in the records; ensuring that it is easy to discover from his/her records the direction or evidence of which activities have been carried out; ensuring that records are kept of common diseases and health problems in the catchment area; emphasising that there are written health profile documents of the health area available in the health facility; determining the adequacy of the health information available at the health facility, for example concerning morbidity and mortality; recording the results

of programme evaluations carried out; documenting the training conducted for the community concerning health issues, for example individuals, families and CORPSfor any health service; documenting outreach activities as well as other activities carried out at community level, and communicating health information with stakeholders either verbally or in writing (Stanhope & Lancaster, 2006; Tomey, 2009).

The documentation step of the nursing process in this study focused on the following eight functions:

- Ensure that the profile documents of the health catchment area at the health facility are up to date.
- Ensure the correctness of the information available at the health facility (e.g. relating to mortality and morbidity).
- Document incidences of health problems and important diseases in the community.
- Document all training sessions conducted (for community and staff).
- Document all health promotion activities conducted.
- Document all nursing care activities provided
- Document all information needed for the health information system.
- Communicate all findings to stakeholders, in both a written and a spoken form.

The following authors write about supporting nurses in using the nursing process.

Van der Vyver (2007), in her research study titled “Guidelines to implementing an educational programme to internalize and operationalise the nursing process in the gynaecology wards of the training hospitals of Namibia”, found that nurses

experience difficulties related to the use of the nursing process in that they do not always see the need for it, as well as finding it time consuming. Moreover, staff shortages hamper its use and not all registered nurses have the knowledge and skills needed to apply it. Van der Vyver suggests the following guidelines for supporting registered nurses in the use of the nursing process in gynaecology and these could also be applied in the PHC setting:

A close working relationship should be established between experts in the area of nursing care, registered nurses and nurse managers, and all should be fully involved implementing the nursing process guidelines. Accordingly, the expert nurse should provide support programmes to raise awareness among registered nurses so that they know what is expected of them and can assume the role of facilitator in the internalisation and operationalisation of the nursing process.

Other authors' contributions to support for nurses in the use of the nursing process are discussed in the following paragraphs:

Despite the benefits of the nursing process, such as optimising resource management and improving the quality of care, several factors, including a lack of time for training, lack of motivation and the biomedical model, can hinder its implementation. Therefore, initiatives have to be developed to facilitate the use of the nursing process in various nursing care contexts (Lee, 2005; Paganin, Moraes, Pokorski, & Rabelo, 2008).

Perez Rivas et al. (2012), in a research study conducted in rural Spain on the implementation and evaluation of the nursing process in PHC, give the following strategies that could be used to support nurses in PHC to use the nursing process effectively. These include enhancing the quality of nursing services, giving patients

business cards to remind them about the PHC services and raising awareness in the community in this regard. As regards the enhancement of the nursing process, a welfare programme regarding discharge planning and care was established between the hospital and the community PHC centres to improve the quality and ensure the continuity of nursing care after patients have been discharged from hospital. As regards training and research, the nursing process was included as a strategic topic for research and education. This research project concentrated on the utilisation of the nursing process by nurses in different nursing contexts; as far as management was concerned, the use of the nursing process was included as an evaluation criterion to give nurses an incentive and a care plan team was established in PHC to coordinate issues regarding the use of the nursing process by nurses, including providing nurses with the necessary guidance and support.

During the implementation of a diabetes register in PHC in Sweden (2001–2005), which was introduced with the aim of improving the quality of diabetes care in the country, the lessons learnt included the identification of important factors for success, such as the initiative taken by the nursing profession itself and strong support from the leaders of the country's health care council. It is also important to introduce changes and innovations gradually and to make sure that all staff are involved so that they get a clear picture of what the intervention entails as well as what their contributions will be in that regard (Elfgren, Tornvall, & Grodzinsky, 2012).

In a cross-sectional quantitative self-report study done in Israel among primary care nurses by Drach-Zahavy (2004), which aimed at finding out the impact of primary nursing care delivery models on the performance of nurses by incorporating the role of supportive management practice, the results indicated that primary nursing as such

did not exert a direct impact on nurses' performance. Rather, the interaction of primary nursing with supervisor support was more predictive of performance: If supervisor support was high, performance was substantially higher than if supervisor support was low. This is so because a supportive primary nursing supervisor can set the direction of care delivery, help to address issues and concerns, and assist staff members with helpful information and encouragement.

The trend in nursing student training is to prepare students not only to work in a hospital setting, but also to prepare them in such a way that they are motivated to work in remote PHC settings (Edwards et al., 2004; Frenk et al., 2010; Lindeman et al., 2011).

In order to ensure that professional nurses will cope better with the challenges in PHC delivery in local, rural and remote areas, it is helpful for nursing education institutions to see to it that student nurses are prepared to meet such challenges with an open mind after they complete their studies. This is done by placing students in rural and remote areas for a period sufficient for them to become acquainted with the practice situation. In doing so, their confidence to work in rural PHC will be assured. This is true for both undergraduate and postgraduate nursing students (Bentley & Ellison, 2007; Critchley et al., 2007; Molinari & Monserud, 2008; Bennett, Jones, Brown, & Barlow, 2012).

Nursing staff shortages increase inefficiency in nursing homes. Efficiency could be increased by adopting well-designed, reliable care planning processes that can reduce cost and improve quality (Lee et al., 2009).

Primary care, which is part of PHC, faces a number of challenges. Health care needs are increasing and changing. Increasing levels of education and access to information

and market oriented policy changes lead to more demanding patients. These challenges have to be met in many cases with a limited workforce, therefore, innovation is needed. There are three main forms of innovations: organisational, process and workforce innovation. Organisational innovations are necessary because of a general trend of the increasing scale of organisational units. This, in turn, leads to a differentiation between professional work and management. Process innovations are about new ways of organising care processes, which can be an answer to changing health care needs. Patient-centred care organisation, case and disease management, as well as the integration of prevention in the care process, are examples of process innovation. The third type of innovation is workforce innovation. Here the professional role of nursing comes in. The nursing profession is changing rapidly and, as a result, task delegation occurs with tasks being transferred from secondary to primary care. Consequently, nurses are finding themselves performing roles usually performed by doctors. This innovation has resulted in the blurring of the boundaries between nursing and medicine. The role of nurses at the higher end overlaps with the role of the physician assistants. This means that nurses need to be suitably trained to meet this challenge (Groenewegen, 2008).

2.5. MANAGEMENT/ADMINISTRATIVE FUNCTIONS OF THE REGISTERED NURSE IN PRIMARY HEALTH CARE

Management is defined as the act of running and controlling a business or similar organisation or the skill of dealing with people or situations in a successful way while *administration* refers to those activities that are carried out in order to plan, organise and run either a business or any other similar institution (*Oxford Advanced Learner's Dictionary*, 2010).

The administrative process comprises a number of functions. These are general activities that constitute the work of an administrator and they apply to all administrators throughout the world. These functions are not based on the specific administrative position held but rather on the requirement that all administrators should be aware of the following in their daily practice in order to ensure effective service delivery:

- What does the organisation want to achieve? This implies that the administrator should be involved in goal setting or should, at least, be able to understand the goals that have been established by the owners of the organisation.
- How will the goals be achieved? This calls for planning the processes that are deemed to be the most efficient and effective as regards goal attainment.
- How will the work be divided among employees and who will do what, with what resources? This calls for organising and making decisions regarding authority relationships and responsibilities, mobilising resources and allocating them to different tasks.
- How will work be done? This calls for the design of work systems and the putting in place of standards so that workers know what is expected of them.
- Who will ensure that the workers remain motivated? This calls for someone to be in charge of workers and, hence, the personnel function.
- How will financial resources be collected and disbursed? This calls for someone to be in charge of the money in the organisation.
- How will the administrators ascertain whether the organisation is working effectively and whether it is focused on the goals set? This calls for monitoring and control.

The functions of administration are as follows:

- **Planning:** This involves formulating plans that are consistent with goals set. These plans should indicate how these goals are to be achieved.
- **Organising:** This is about determining the tasks and subtasks to be performed, mobilising resources and allocating these resources to the various tasks that have been identified.
- **Financing:** This involves mobilising financial resources, disbursing them and ensuring that they are controlled properly and efficiently utilised.
- **Staffing:** This involves retaining staff at work and ensuring that staff members remain motivated to perform the tasks expected of them by the organisation.
- **Designing work systems and procedures:** This involves deciding how the work should be done so that the workers follow a specific, laid-down procedure.
- **Controlling:** This refers to the process of checking continuously to make sure that all organisational effort is directed towards the attainment of goals.

However, administrators need to possess certain basic skills in order to perform these functions. These basic skills include decision-making, information, communication, interpersonal, change-management and conflict-management skills, as well as coordination and management of diversity skills.

Despite the nature of nursing practice, one of the roles of registered nurses is that of care manager/administrator of the health care services. This responsibility is also not limited to those holding the posts of managers.

This care manager/administrative function include the following: Drawing up annual nursing care plans, annual budgets and annual reports, planning, control in the areas of finance, transport, supplies and human resources, including issues such as dealing with leave and discipline in the workplace; supervision of administrative issues such as work schedules, stock taking and stock control, ensuring facility inspection and service schedules. Moreover, the care manager should ensure that information on expenditure at health facilities is made available on a regular basis in order to emphasise the cost implications of service provision.

The registered nurse should also monitor the performance of activities at the community level, as well as providing technical, material and moral support for community-based initiatives. In addition, the registered nurse mobilises external resources to support community-based initiatives (comprehensive intervention activities) and also endeavours to provide support to health personnel and facilities in the catchment area (supervision as control).

Managers focus on coordinating and integrating resources, using the functions of planning, organising, supervising, staffing, evaluating, negotiating and representation (Smith, 2007; Radcliffe, 2010; Mello, 2011; Amos et al., 2008; University of Namibia, 1995). Nurse Managers in health care organisations, including those in the management of PHC practice, should use the power vested in them to influence actions and decisions that will benefit staff as well as patients, families and communities (Jooste, 2009; 2010; Jones, 2007).

Shared governance/participative management is a recent phenomenon in the field of management and has evolved from the desire to build accountable decision making into health care organisations, especially among the nursing staff (Sullivan & Decker,

2001; Muller, Bezuidenhout, & Jooste, 2006; Byars & Rue, 2011; Van den Heuvel, Mangaliso, & Van de Bunt, 2007; Heneman III & Judge, 2009; Jooste, 2010; Amos et al., 2008; Wilson, Diedrich, Phelps, & Choi, 2011; Luzinski, 2012). Participative management refers to a system in which subordinates are involved in making decisions with guidance from their supervisors. In general, participative management involves workers in the planning and control of their own work activities, while taking into account the fact that the various types of work planning and control in which subordinates are able to participate are characterised by certain important degrees of difference. The four major types of participation by registered nurses in local level PHC include participation in goal setting, decision making and problem solving and in the development and implementation of change. For participative management to be successful, good communication and interpersonal relationships are required (Jooste, 2010; Smit et al., 2007).

PHC management implies that supervisors support others to take part in certain management responsibilities, depending on their level of readiness and in line with the legal framework of the health care organisation in Namibia.

In addition, restructuring the existing health service management structures was done to allow for the decentralisation of service delivery and the management thereof to the health care providers at the district level, including the registered nurse supervisors who are of interest to this study. By the time this study was conducted the majority of PHC supervisors – if not all – were registered nurses.

It was mentioned in section 2.3 that all the activities carried out by the registered nurses in local-level PHC take place within the framework of the health care delivery system adopted by a specific country and health care context and based on the

existing managerial structure. In the case of this study, these activities take place under the health care delivery system of Namibia, which was discussed in chapter 1, section 1.2, while the study context was discussed in chapter 3, section 3.5.

This chapter presented the literature as it was organised in terms of a specifically devised framework. The literature review addressed both the elements of PHC and the specific role functions fulfilled by the registered nurse while utilising the nursing process, the management or administrative functions of the registered nurses in PHC and the PHC facility practice setting.

The next chapter will address the research methodology adopted in this study.

CHAPTER 3

RESEARCH DESIGN AND RESEARCH METHODS

3.1. INTRODUCTION

Chapter 1 presented an overview of the study. The literature review in chapter 2 focused on aspects of PHC and the nursing process, as well as the conceptual framework of this study, which is entitled *Primary health care delivery by means of the nursing process*. In this chapter, the methodological processes used in the study are outlined.

3.2. RESEARCH PURPOSE AND RESEARCH OBJECTIVES

In view of the fact that the purpose of this study was to explore and describe the extent to which registered nurses use the nursing process in the delivery of PHC during their daily practice, as well as to develop strategies that would support registered professional nurses in their utilisation of the nursing process when executing their roles and functions in this regard, the specific objectives emanating from this purpose may be described as follow:

- To explore and describe the way in which registered nurses in clinics and healthcare centres, and at outreach posts in health districts use the nursing process with regard to PHC delivery.
- To determine the way in which supervisors view the utilisation of the nursing process by registered nurses in PHC.
- To identify the constraints that registered nurses are faced with in terms of the utilisation of the nursing process in PHC delivery.

- To develop a conceptual framework on which to base the development of strategies to support registered nurses in their utilisation of the nursing process in PHC delivery.
- To incorporate the research findings into the development of strategies to support professional nurses in their utilisation of the nursing process in PHC delivery.
- To validate the appropriateness of these strategies.

3.3. RESEARCH DESIGN AND METHODS

A research design includes an outline of what the researcher intends to do; from formulating the hypotheses or research questions and their operational implications to the final analysis of the data (Cormack, 1996; Wagenaar & Babbie, 2008; Cresswell, 2008; Babbie, 2008).

The study was conducted in four phases.

- Phase 1: Needs assessment quantitative survey
- Phase 2: Conceptualisation of findings from phase 1
- Phase 3: Development of strategies to support the roles and functions of the registered nurse in local level PHC
- Phase 4: Validation of these strategies

3.3.1. Phase 1: Needs assessment

Design

A quantitative, exploratory, descriptive and contextual design was selected to describe the way in which registered nurses fulfil their role and function in PHC during their daily practice. A quantitative approach was selected because this is a formal, objective and systematic process in terms of which numerical data are used to obtain

information (Burns & Grove, 2005; Jooste, 2009; Wagenaar & Babbie, 2008; Cresswell, 2008; De Vos, Strydom, Fouche & Delport, 2009). The data that were gathered were on the application of PHC role functions during practice by registered nurses.

Explorative

An exploratory design was selected because exploratory designs offer an opportunity to acquire in-depth knowledge of subjects about which relatively little is known (Babbie & Mouton, 2001; Wagenaar & Babbie, 2008; Babbie, 2008). In this study, the exploratory design was used to explore the views/opinion about the way in which registered nurses in state health facilities in Namibia fulfil their PHC role and functions according to the views of both themselves and their immediate supervisors.

Descriptive

The research design was descriptive because it provided an accurate portrayal or account of the characteristics of a particular individual, situation or a group. Descriptive studies provide a means of discovering new meaning, describing what exists, determining the frequency with which something occurs, and categorising information (Burns & Groves, 2005; Aschengrau & Searge III, 2008; Phelps et al., 2007; Babbie, 2008). The focus of this study was the fulfilment of PHC roles and functions by registered nurses in their daily practice.

Contextual

A contextual research design studies a phenomenon because of its intrinsic and immediate contextual significance (Mouton, 1996). The primary aim of this study was to provide a description of the views of both registered nurses in local-level PHC practice and their immediate supervisors regarding the way in which these nurses fulfil their role functions on a daily basis. The unique situation of the local-level PHC

practice of registered nurses in Namibia renders this study contextual in that the practitioners are faced with unique challenges and opportunities that should be understood from their own perspectives only as viewed by them.

3.3.1.1. Methods and techniques

Study population

The target/study population comprises the total available cases regarding which the researcher would like to obtain scientific evidence (Levine & Stephan, 2010; Babbie, 2008). For the purposes of this study, the population comprised two groups. The first group consisted of registered nurses working in local-level PHC facilities (clinics, health centres and outreach posts) and consisted of 236 registered nurses. The second group comprised 39 registered nurse supervisors, who supervised the registered nurses in these facilities.

Study sample and sample selection

A research sample refers to a selected portion of the population that is used to represent the total population because, as a result of resource constraints, it is not always possible to study the entire population. It is essential that a sample be selected scientifically and with care, as it must provide as close an approximation as possible to the characteristics of the population under study. Small and non-representative samples may give a wrong picture of the situation under study (De Vos et al., 2011; Levine & Stephan, 2010; Cresswell, 2008; Babbie, 2008). However, as a result of the restricted number of participants (registered nurses), the population and the sample were the same for this study and there was no sample selection.

Identification of supervisors

When identifying a second population to be researched in a study, it is essential that the correct participants be identified so as to ensure that the data obtained from them

will be relevant (Babbie & Mouton, 2001). In this study, the selection of the supervisors to participate in the study was based on the number of registered nurses they supervised. These supervisors were required to fill in questionnaires for each registered nurse they supervised so as to provide a picture of how they view the way these nurses utilise the nursing process in their PHC daily practice. The researcher consulted the heads of the Health Directorates, as well as the heads of the relevant health facilities, in order to identify the immediate supervisors of the registered nurses during the time they had worked at the health facilities.

Inclusion and exclusion criteria

According to the inclusion criteria, the registered nurses had to have been working in the health services for a period of one year or more, as it is recommended that newly qualified, registered nurses complete a period of approximately eight to 12 months under the guidance of a senior registered nurse to ensure they do not assume too much responsibility too soon (Searle et al., 2009). This, thus, is the reason why registered nurses who had worked for at least one year and who should be comfortable fulfilling their role functions were included in the study irrespective of the type of registered nurse education programme they had undergone or the institution where they had attained their qualification.

Immediate supervisors

In order to be able to provide information for the purpose of this study, the supervisors selected were supposed to be the immediate supervisors of the registered nurses selected for the study. Thus, for each registered nurse selected, his/her immediate nurse supervisor was also requested to fill in a questionnaire to assess the registered nurse concerned.

Inclusion criteria for the supervisors

In order to be included in the study, the immediate supervisor had to have worked/supervised the registered nurse for a period of at least two months in the health facility concerned.

3.3.1.2. Development of data collection instrument

A survey was used to gather the data through a self-report or questionnaire. This questionnaire collected information on the way in which registered nurses fulfil their role and function concerning their PHC responsibilities/duties in their daily practice.

Jooste (2009) and Creswell (2008) define a questionnaire as a set of questions on a form which should be completed by the respondents in respect of the research project concerned. In this study the questionnaires were developed using the following strategies: Firstly, the researcher conducted a literature review in order to examine the concept of PHC and also the role and function of the registered nurse in terms of PHC. Secondly, the researcher held consultative meetings with nursing service managers to obtain information on what they considered as important in the roles and functions of registered nurses in their rendering of PHC practice in Namibia. See Annexure 5 for the research tool that was used and Annexure 6 for the outcome of these consultative needs analysis activities.

The comments of the nursing service managers were scrutinised and the researcher then embarked on formulating the questions. Two questionnaires were developed. The first questionnaire was to be completed by the registered nurses while the second questionnaire was to be completed by the immediate supervisors of these registered nurses, who would indicate the way they perceived the performance of each registered nurse under their supervision. The content of these two questionnaires was the same.

Copies of the questionnaires are attached to this thesis as Annexures 7 and 8 respectively.

The questionnaires consisted of both open- and closed-ended questions and contained the following sections:

Section A consisted of biographical information –respondent’s age, duration of service as a registered nurse, gender, work area, nursing qualification, duration of service at the current health facility, health district and health region.

Sections B to G consisted of items concerning the implementation of the PHC role functions within the study framework of the nursing process.

Section B dealt with assessment; section C diagnosis; section D planning; section E implementation; section F evaluation and section G recordkeeping.

This questionnaire was designed in such a way as to yield information on all the targeted role functions that a registered nurse in local-level PHC in Namibia is expected to fulfil. The reader is referred to section 2.3, in chapter 2.

3.3.1.3. Validity, reliability and pretesting

Validity

Validity refers to the extent to which an empirical measure accurately reflects the concept it is intended to measure (De Vos et al., 2011; Babbie, 2008; Downs, 1999).

Face validity

Face validity is concerned with the superficial appearance or face value of the research instrument. In this study the researcher ensured face validity by submitting the instrument to her supervisors and also by means of a peer reviews. The supervisors agreed that the items that appeared were representative of the purpose of the study.

Content validity

Content validity is concerned with the adequacy of the content area being measured. In this study, the content validity was assured by making sure that the questionnaire adequately covered the topic under study, namely, the utilisation of the nursing process in local-levelPHC practice by registered nurses in their daily practice (De Vos et al., 2011; Jooste, 2009).

Reliability

Reliability of measurement refers to the consistency of the measures taken. A slight ambiguity in the wording of the questions may affect the reliability of a research instrument, as respondents may interpret the questions in different ways, resulting in different responses (Burns & Grove, 2005).

In this study, the research instrument was pretested to ascertain that the wording of the questions was not ambiguous. The questionnaires were also distributed to the senior nurse managers at the MOHSS in Namibia for review.

Pilot testing/pretesting

A pre-test is a trial run to determine, in so far as is possible, whether the instrument is clearly worded and free from major biases and whether it solicits the type of information required (Babbie, 2008). This pretesting is necessary to ensure the validity and reliability of the research instruments used – in this case, the questionnaires.

Pilot testing of the research instruments was carried out to ensure the validity and reliability of the instruments. This pretesting of the instruments was conducted in the health care facilities in Oshakati, Rehoboth, Katima-Mulilo, Windhoek and Otjiwarongo and ten registered nurses were asked to participate. These ten registered

nurses were not part of the main study and were randomly selected from the health facilities.

Modifications after the pilot testing

After the pilot testing had been completed a number of changes were made to certain items in the questionnaires. For example, item 44, under the planning component, which asked the participants to rate the extent to which registered nurses plan for training sessions for the community and staff members, was deemed to be confusing because it referred to the training of two categories of people and, thus, it was difficult for the participants to express their views clearly. As a result, this item was separated into two items with one item asking about the planning of training for community members and the second item (45) asking about the planning of training for staff.

The consulted statistician also recommended a change in the item that referred to duration of service (item 2) so that the item consisted of three options instead of four with the option of 1 to 2 years being included in the option of less than three years. This was deemed necessary as a duration of less than three years in service would include all registered nurses, even newly qualified registered nurses, and it is only from three years on that it is possible to say that a registered nurse has minimal experience at work. Also, if the data were divided into too many groups, this would be less meaningful in the data analysis.

The study supervisors were concerned that the questionnaires were too long and, thus, the numbers of items was reduced. Furthermore, two expert professors from another university were requested to review and verify the wording of specific items and to suggest ideas for ways in which these could be either addressed or reworded. The questionnaires were also presented to the head office of the MOHSS for input.

Accordingly, the questions were modified and adjusted before the commencement of the main study. After all the corrections had been made, the questionnaires were printed prior to being sent out.

3.3.1.4. Data collection

The data were collected making use of two questionnaires. The questionnaires were either posted or delivered by hand to the participants, and then returned by post or collected by the researcher. The respondents – supervisors and registered nurses – were requested to complete the questionnaires. One supervisor could fill in more than one questionnaire if she/he supervised more than one registered nurse.

Table 3.1: Statistics of the questionnaires sent out and returned

	Sent out	Returned	Percentage
Registered nurses	236	164	69.4
Supervisors	236	144	61.0
Total	472	308	65.2

3.3.1.5. Data analysis

After the 308 questionnaires had been returned, the data entry and data processing were completed, whereupon the researcher analysed the data using quantitative methods of data analysis.

The data analysis process

In view of the fact that this was a quantitative research study, the researcher made use of deductive analysis.

Data analysis involved the coding, categorising, ordering and systematic organising of the data in order to provide meaningful results (Walliman, 2006; Rothman et al., 2008; Levine & Stephan, 2010; Shoher, 2008; Creswell, 2008; Ott & Longnecker,

2010; Schnider, Elliot, Lobiondo, Wood, & Haber, 2003). In this study descriptive analysis techniques were used to summarise and organise the data, using tables and figures to present the summarised findings.

In addition, a *t*-test and analysis of variance (ANOVA) were performed on the data, where applicable. Student's *t*-test is a test designed to check whether the difference between two means is significant, while the analysis of variance is a test which is conducted in order to check whether there are significant differences between the means of three or more different groups in respect of a certain variable. A difference is regarded by this test to be significantly different if the probability value is less than or equal to 0.05 (Ott & Longnecker, 2010; Walliman, 2006; Levine & Stephan, 2010; Phelps et al., 2007). If three or more groups are involved, it is not easy to determine from the ANOVA exactly where the significant difference lies, although there are several post hoc analyses available to help identify the differences in this regard. For the purposes of this study, the post hoc tests that were utilised included Scheffe/Dunnett, although Tukey and LSD were also conducted as Scheffe/Dunnett did not pick any differences. The aim of using the post hoc tests is to verify whether the differences suggested by ANOVA are statistically significant and also to point out exactly where the differences lie among the groups (Ott & Longnecker, 2010; Wagenaar & Babbie, 2008).

The study findings were presented in relation to the research objectives and research questions which had, in turn, been contextualised according to both the steps of the nursing process and the elements of PHC. Aspects of community diagnosis and care, as well as management support or administrative functions, were also taken into account.

Data analysis

The descriptive data arising from the items on the questionnaires, where the registered nurses and their supervisors rated the fulfilment of the various PHC role functions by registered nurses, were analysed in order to determine the level at which each item had been rated.

The mean value was determined for each specific item (function). The mean is the sum of all the scores divided by the total number of scores and is also referred to as an average (De Vos et al., 2011; Ott & Longnecker, 2010). The mean score for each item served as a yardstick for classifying specific items as well done, required moderate action or required urgent action. All the findings were presented in a comparison format in terms of which the ratings by the registered nurses were compared to the ratings by the supervisors. Student's *t*-test and ANOVA were also performed on specific variables to determine significant differences and their related variables.

After the data analysis had been completed, the researcher identified those functions which had been well done and for which the performance needed to be sustained, the functions which had required moderate actions and the functions that had required urgent actions. This was possible because the questionnaires had been developed by incorporating the components of the nursing process, which was a subcomponent of the framework that had been devised to guide this study. (See figure 2.1 in chapter 2.)

As mentioned earlier, there were two types of population in this study, namely, registered nurses and their immediate supervisors. These two groups of participants were asked to indicate how they viewed the fulfilment of the PHC role functions by the registered nurses in the following way: The registered nurses were asked to indicate their views on how they implemented their PHC roles and functions in

accordance with the steps of the nursing process, while the supervisors were asked to indicate their views on how the registered nurses whom they supervised covered all the steps of the nursing process when they carried out their daily roles and functions in practice. The questionnaire was constructed in an ordinal format, with both numerical and descriptive response options. The reader is again referred to Annexures 7 and 8, although, for purposes of clarification, an example of the questionnaire approach is presented in table 3.2.

Table 3.2: Example of questionnaire approach: numerical and descriptive choices of rating options

Numerical	Not at all	1	2	3	4	5	To a large extent
Descriptive	Nothing	Lesser extent	Below average	Average	Above average	Excellent	Outstanding

In order for the data to be more meaningful, all the descriptive statistics tables (assessment to recordkeeping/documentation) are presented by means of the cluster descriptive method. This cluster descriptive method allows for direction and greater focus on problem areas.

Table 3.3: Example of questionnaire approach: numerical, descriptive choices and cluster descriptive groups

Numerical	Not at all	1	2	3	4	5	To a large extent
Descriptive	Nothing	Lesser extent	Below average	Average	Above average	Excellent	Outstanding
Cluster descriptive	Below average			Average	Above average		

The rating of each function was considered in the light of the percentage of participants who had rated the fulfilment of such function as below average as compared to those who had rated the same function as average and higher. If a function were rated by more than 20% of the participants as below average, then this function was categorised as a function in terms of which “urgent action is necessary”.

This implies that less than 80% of the participants would have rated the function at average and higher. However, this is not a preferred practice in a country such as Namibia where the registered nurses have been trained/reoriented in terms of the PHC approach (see section 1.3.2 in chapter 1).

Ultimately, all the various role functions of registered nurses in the local-level PHC facilities were categorised into three categories, depending the level at which fulfilment thereof had been rated by the research participants, while taking into consideration the percentage of participants who had rated the individual function at what level. The first category/group consisted of role functions that were grouped as well done. This means that ninety per cent (90%) and higher (at least 90%) of the participants had rated the fulfilment of such role functions as average and higher. The second category consisted of those functions in respect of which the fulfilment had been rated as moderate. This means that 80 to 89% (at least 80% but not 90%) of the respondents had rated the fulfilment of such functions as average and higher, while 20% or less would have assigned a rating of below average. The third category included those functions for which the results had indicated that was an urgent need for improvement as regards the fulfilment of such functions. This, in turn, implies that more than twenty percent (> 20%) – 61 responses out the total of 308 participants – of the participants had assigned a rating of below average. These categories are graphically displayed in figure 3.1.

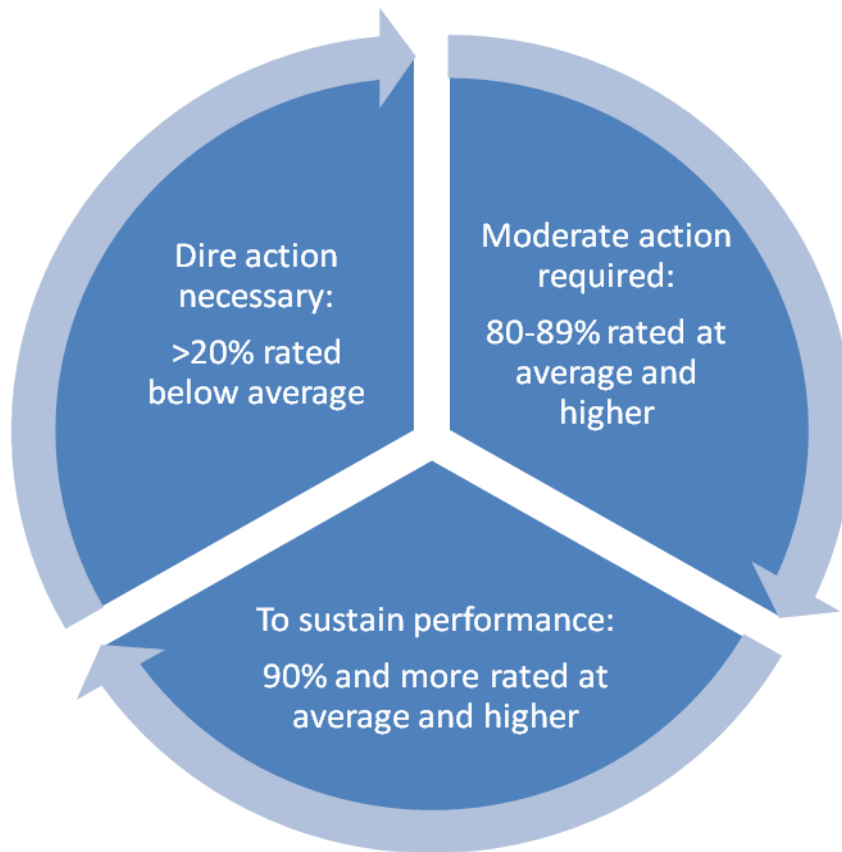


Figure 3.1: Categorisation of role functions based on the rating of their fulfilment by the participants

The above categorisation gave rise to three patterns, namely, performance to be sustained (to sustain performance: 90% and more rated at average and higher); performance in terms of which moderate action is required (moderate action required: 80–89% rated as average and higher) and performance in terms of which urgent action is required (urgent action necessary: >20% rated below average). At the end of the discussion of the results of each phase of the nursing process, a summary of the findings is presented in accordance with these patterns, namely, performance to be sustained, moderate action required and urgent action necessary.

These categories of findings were applied to all the findings, which were presented according to both the different phases of the nursing process and also the elements of PHC. The reader is advised to refer back to this section should the need arise.

The ratings of “average” and “above average” were added together and were compared to “below average”. If a function were rated by 80% or more of the participants as average and higher, the function was further grouped as follows: If 80 to 89% rated such function as average and above, the function was categorised as a function in terms of which “moderate action is necessary”, because the rating was approaching “below 80% average and higher”. If, however, a function was rated by 90% or more of the respondents as average and higher, then this function was categorised as a function in terms of which “performance should be sustained”, because the function was considered to have been well done and, thus, the fulfilment thereof needed to be kept as such.

The justification to use 80% as the lowest acceptable level of fulfilment by the respondents was as a result of the fact that, as was mentioned earlier, a higher standard of fulfilment of the PHC role functions is preferred in Namibia.

These categorisations were also possible because the researcher had applied deductive reasoning strategies, together with concept and statement synthesis, that had enabled the researcher to come up with a reduced set of concepts and statements that belonged to the same problem. The grouping of items to form problem areas/challenges also served as a guideline for the researcher in the development of the conceptual framework that is presented in chapter 5. All the strategies implemented by the researcher are suggested by Walker and Avant (1988).

The data are presented in chapter 4, from section 4.3.1 onwards.

3.3.2. Phase 2: Conceptualisation of the results from phase 1 of the study

Mouton and Marais (1996) explain conceptualisation as the definition of the key concepts in a study in order to be able to integrate the research into existing

knowledge frameworks. Conceptualisation is also explained by De Vos et al. (2011), as a category of perceptions or experiences.

The conceptual framework for the development of strategies in this study was structured according to the survey list suggested by Dickoff, James and Wiedenbach (1968). This survey list facilitated the identification and categorisation of the major concepts for further refinement, thus ensuring the logical development of the practice strategies. Dickoff et al.'s (1968) survey list includes the following components: namely, the agent, context, recipient, dynamics, procedure of the activity and terminus. Phase 2 of the study will be discussed in chapter 5.

3.3.3. Phase 3: Development of the strategies

Strategies to support the roles and functions of the registered nurse in local-level PHC were developed based on the results of the conceptualisation carried out in chapter 5.

For each challenge listed, a strategic goal, strategic objectives, suggested actions and expected outcomes were set. The strategic goal focused on a category of challenges, for example water and sanitation and other related environmental health issues, or else on the motivation and education of the community. On the other hand, a strategic objective referred to a specific aim to be achieved in relation to an isolated challenge. Thus, where there was more than one challenge identified under a specific category of challenges, it was necessary to formulate more than one strategic objective with subsequent suggested actions and expected outcomes for each strategic objective.

The suggestions of Tarimo (1991), Monekosso (1994), Ralph (2006) and Walker and Avant (1988) served as guideline documents/references when formulating the strategies.

Strategies are sets of guidelines regarding the way in which certain actions should achieve their objectives and, thus, they qualify to be included in a category of practice theory. Dickoff et al. (1968, as cited in Walker & Avant, 1988) suggest that a practice theory progresses through four phases, namely, factor isolating, factor relating, situation relating and situation producing or practice. In this study the formulation of the strategies took into account relevant existing theory and was intended to achieve what Walker and Avant (1988) refer to as the “context of discovery”. This is a term meaning that the theory constructed may be as close as possible, although not exact, to the context in which it is intended to be used.

When strategies are developed, the elements and approaches of theory building are observed. The elements of theory building include concepts, statements and theories, while approaches to theory building include concept analysis, concept synthesis and concept derivation (Walker & Avant, 1988). In this study the nursing process, the consultation process and participative management were all used in the development of the strategies. The strategies developed are described in chapter 6.

3.3.4. Phase 4: Validation of the strategies

Phase 4 of the study comprised the validation of the strategies to assess their relevance in the daily practice of registered nurses in PHC in Namibia.

The researcher conducted meetings with PHC programme administrators to obtain input on the development of strategies to implement PHC competencies in practice by registered nurses. The reason for presenting the strategies to experts was in order to comply with what Walker and Avant (1988) refer to as the “context of justification”. The context of justification means that the theory constructed fits and is relevant to

the practice in which it is intended to be used. The validation process will be discussed in chapter 6.

3.4. ETHICAL CONSIDERATION

When conducting nursing research, it is not sufficient merely to possess the knowledge and expertise required to operate in a scientific manner; it is equally important to ensure that the researcher adheres to the principles of honesty and integrity. These principles should be observed throughout the study in relation to issues involving the selection of the study purpose, research design, and the methods of measurement, the subjects, and the collection and analysis of the data, interpretation of research results, and presentation and publication of the study. The principle behind conducting research ethically is to ensure that the rights of the participants are not violated in any way (Burns & Grove, 2005; Aschengrau & Searge III, 2008; Creswell, 2008).

The researcher in this study adhered to the following requirements in an effort to ensure research ethics:

Confidentiality

Confidentiality refers to the act of keeping professional secrets in the process of conducting research in order to ensure that those people who are not directly involved in the research study will not have access to the personal information of the research participants. In other words, confidentiality is a tool to ensure the safety of the participants (Wagenaar & Babbie, 2008). In this study, the raw data were not shared in any way that may have jeopardised the safety of the participants.

Voluntarism

Voluntarism in research means that the participants will not be coerced in any way to participate in the research study (Wagenaar & Babbie, 2008). Accordingly, the participants in this study were told that they could refuse to participate in the study or could withdraw from the study at any time without any fear of coercion.

Anonymity

The anonymity of all the participants in this study was ensured in the following ways: The data from the field were not in any way linked to the individual respondent, while only data that was necessary for the project were collected (Burns & Grove, 2005; Wagenaar & Babbie, 2008; Babbie, 2008). In addition, the study findings were not shared with any other person before consent had been granted by the Namibian MOHSS. However, the research findings were discussed with the supervisors and it was intended that the study be used to improve the quality of PHC nursing by qualified registered nurses in Namibia. On completion of the study a copy of the complete study report was given to the Ministry of Health and the University of Namibia.

Freedom from harm

In terms of this principle no harm is to come to the research participants (Wagenaar & Babbie, 2008; Babbie, 2008). The participants in this study were not, in any way, exposed to either physical tests or treatment but, instead, an evaluation was carried out regarding the way in which they were executing their duties regarding PHC nursing competencies.

Informed consent

In social research, the aim of the principle of informed consent is that the research participants should be fully informed. Moreover, they should in no way be

manipulated into participating in a research study without having been provided with all the necessary information regarding what the study entails. In addition, they should be briefed about the outcome of the study on its completion. In other words, the researcher should not hide either his/her identity or his/her activities as a researcher (Wagenaar & Babbie, 2008; Babbie, 2008).

Written permission to conduct this study was granted by the MOHSS in Namibia before the data collection in phase 1 of the study commenced (see Annexure 1). In addition, the written consent of all the participants in the study was obtained or else verbal consent was obtained when written consent was not possible. In addition, the participants were provided with a detailed explanation of the study purpose, the benefits of the study and the study proceedings before the data collection began.

A letter was presented to all the participants informing them of the proposed study and requesting both them and their supervisors to take part in the research study. Performance evaluation often arouses strong emotions in those who are being evaluated and nurses are no exception. Some professionals may even view evaluation as a threat. Nonetheless, performance evaluation of this nature is useful for professional growth because it provides a formal appraisal of the extent to which a nurse is meeting the prescribed standards. Evaluation also has further purposes including recognising accomplishment, determining competencies, encouraging and motivating, as well as highlighting staff development needs (Ervin, 2002).

3.5. RESEARCH SITES

The sites for this study included state clinics, health centres and outreach posts in health districts in all the health regions of Namibia.

The perceptions about the way in which registered nurses in clinics, health centres and outreach posts fulfil their PHC nursing roles and functions were obtained from the registered nurses themselves and their supervisors. As suggested by Brink (1996), Macnee and McCabe (2008) and Allshoop and Saks (2007), the researcher did not take part in the study nor did she in any way influence the actions of those involved in the study.

In Namibia, the health district is the lowest self-contained segment of a health care system utilising the District Health Care System. A discussion on health districts was included in chapter 1. The health district was deemed important for this study because each health region consists of health districts, with a health district being where the health care services are run at grassroots level – in the community. Health districts contain health facilities such as clinics, health centres and outreach posts. A district hospital is also a health facility but is beyond the scope of this study because the study investigated only the views on the way in which PHC roles and functions are fulfilled by registered nurses in clinics, health centres and outreach posts or at the local/community level. The figure below depicts the health regions and some health districts in Namibia.

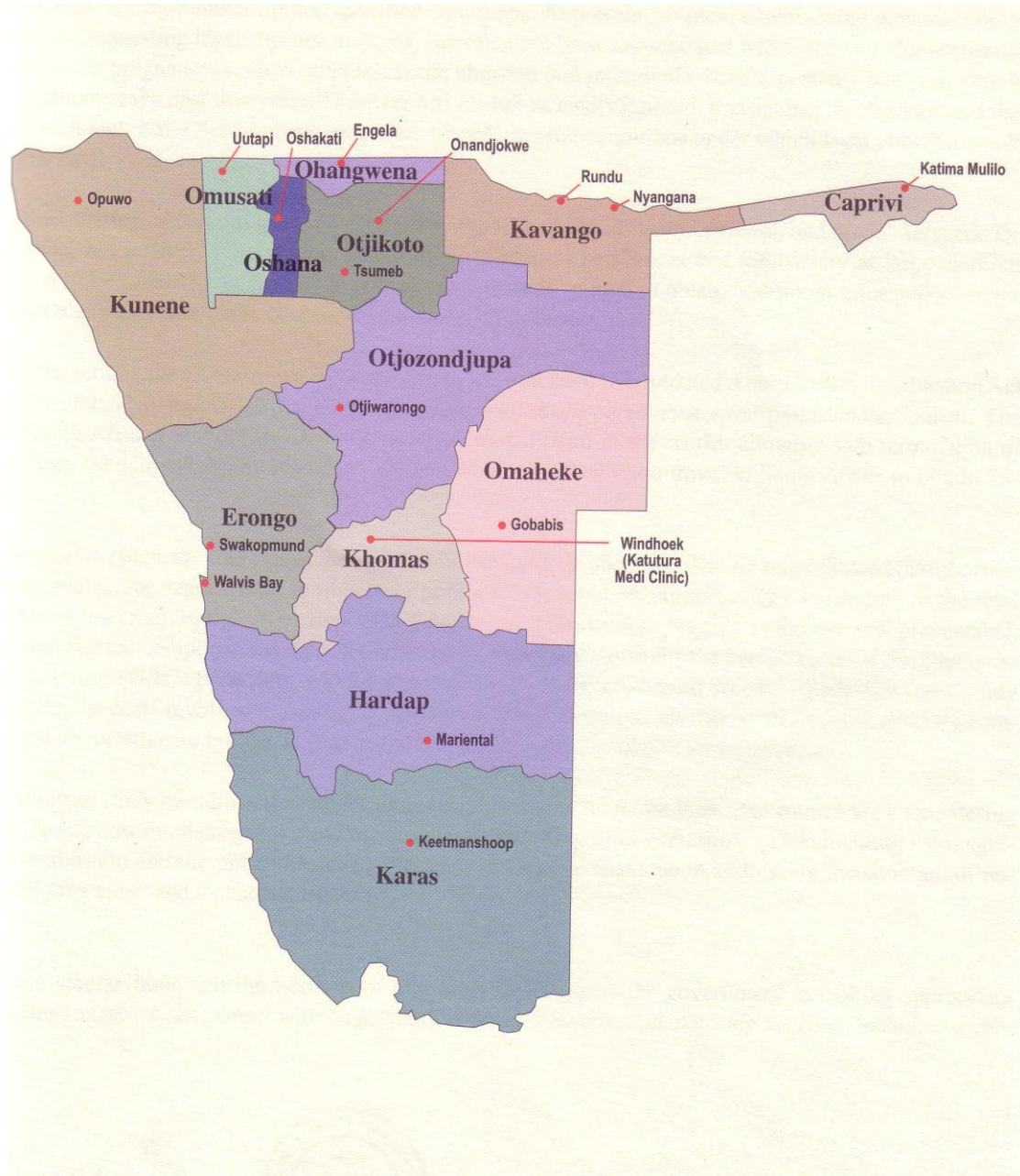


Figure 3.2: Map of Namibia indicating some of the health districts in the health regions

Source: Adapted from GRN MOHSS, July 2000: Report of a hospital-based study on abortion in Namibia (GRN, MOHSS, July 2000).

There were a total of 293 health care facilities. Table 3.4 illustrates the distribution of the PHC facilities throughout Namibia at the time of this study. These facilities constituted local-level PHC practice site in Namibia.

Table 3.4: Number of health facilities targeted in this study and the target population pertaining to phase 1

Area	Region	District	No of PHC facilities	Number of registered nurses	Available registered nurses
North East	Caprivi	Katima Mulilo	27	19	16
	Kavango	Andara	9	3	2
		Nankundu	11	8	6
		Nyangana	10	4	3
North West	Omusati	Okahao	7	13	11
		Oshikuku	18	23	20
		Outapi	7	16	14
		Tsandi	5	14	12
	Oshana	Oshakati	13	17	16
	Oshikoto	Onandjokwe	15	17	13
	Ohangwena	Tsumeb	4	4	3
		Eenhana	9	10	8
		Engela	16	17	16
Kongo		3	3	2	
Central	Kunene	Khorixas	7	6	5
		Opuwo	13	4	3
		Outjo	4	4	3
	Otjozondjupa	Grootfontein	6	6	5
		Okahandja	2	3	2
		Okakarara	4	4	3
		Otjiwarongo	4	4	3
	Erongo	Aradis	1	Swakopmund	Swakopmund
		Omaruru	4	4	3
		Swakopmund	4	5	4
		Usakos	4	4	3
WalvisBay		6	7	6	
South	Hardap	Aranos	3	4	3
		Mariental	6	7	5
		Rehoboth	3	3	2
	Karas	Karasburg	4	4	3
		Keetmanshoop	3	7	6
	Khomas	Luderitz	6	4	3
		Windhoek	10	24	19
Omaheke	Gobabis	25	5	4	
TOTAL			293	287	236

3.6. SUMMARY

Chapter 3 discussed the research design and research methods used in this study, as well as providing some indication of the phases of the study. The next chapter (chapter 4) will focus on the presentation of the results and will, thus, describe the findings of the empirical phase (phase 1) of the study.

CHAPTER 4

DESCRIPTION AND INTERPRETATION OF THE DATA

4.1. INTRODUCTION

The focus of this chapter is on the description and interpretation of the research findings. The data analysis methods were discussed in chapter 3.

The findings will be presented in the following format:

- A presentation of the demographic details of the participants.
- A discussion and analysis of the way in which registered nurses fulfil their PHC roles and functions within the framework of the nursing process and according to the elements of PHC, as well as aspects of community diagnosis and care and administrative support or management functions.
- *t*-tests and an analysis of variance (ANOVA) were carried on the results in cases of significant differences between the components of the questionnaire, for example, assessment.
- The responses to open-ended questions.
- Challenges that were identified from the research results.

4.1.1. Format in which the findings were presented

Demographic data

- Age, years of experience, gender, area of practice, qualification, years of practice, district, region and health area

Findings based on the phases of the nursing process

- Introduction, categorisation of findings based on rating, diagram of specific topics per phase, descriptive statistics per phase; figure of a summary of categorised findings per phase.

Findings based on the elements of PHC

- Health education and communication, nutrition and food supply, control of endemic diseases, immunisation against major preventable diseases, supply of essential drugs, treatment of common diseases and injuries, mother and child health, water and sanitation and other environmental issues, community diagnosis and care, management or administration

Findings of significant differences

- Student's *t*-test, ANOVA and special tests

Responses to open-ended questions

- Reasons for inadequate fulfillment of role functions

Challenges

- Areas where role functions were not adequately fulfilled

The first discussion in this chapter is on the demographic details of the participants.

4.2. THE DEMOGRAPHIC PRESENTATION OF THE PARTICIPANTS

The following nine variables were used to describe the characteristics of the participants: age, years of experience, gender, location of work (clinic, health centre, outreach or health post), qualification, years of practice in a certain area of work, health district, health region and health area. The first six variables were correlated with the implementation of the elements of PHC in order to identify possible associations between these six variables and the elements of PHC. The last three variables were related to the geographic location of the participants.

In terms of age, a large number of the registered nurses fell in the age group of 45 years and above, followed by those registered nurses aged 35 to 44, with a few only of the participants being under 35 years of age. This finding indicates that the majority of

the participants were in middle to late adulthood and, thus, that more stable personalities were supporting the service provision requirements for PHC. This finding further suggests the availability of mature supervisors who would be able to manage the execution of the elements of PHC elements in practice (Heneman III & Judge, 2009).

The majority of the participants (87% or 268 out of 308) had been in the nursing profession for a period of at least four years, while the supervisors had relatively more years of experience of service as compared to the other registered nurses. The latter finding indicates experienced supervisors who would be able to cope as a result of their prolonged exposure to the work situation, although it may also imply the possibility of resistance to change (Heneman III & Judge, 2009).

As far as gender was concerned, 19.8% (N = 61) of the participants were male and 80.2% (N = 247) female – a female to male ratio of approximately 4:1. This finding is in line with the findings of the WHO (2009), namely, that it is women who are mainly engaged in community-oriented health care services.

The majority of the participants were working in clinics as compared to those who were working in health centres, mobile teams or outreach health posts. This is in line with staffing and health facility structures.

Of the research participants, 5% (46 out of 306) only, and mainly the supervisors, had a bachelor's degree or above, while the remainder of the respondents (260 out of 306) had a diploma. Until 2007, the only way in which to obtain a nursing qualification in Namibia was by means of a university diploma with a bachelor's degree as a post basic qualification with one major subject in Community Health Nursing and a second major subject in either Health Service Management or Nursing Education.

As regards the health regions, Omusati had the highest number of registered nurse participants, followed by Ohangwena and Otjozondjupa respectively, with Omaheke, Khomas and Kunene in chronological order having the lowest number of participants. However, the number of registered nurses in Omaheke and Kunene was also low although it may merely have been a case of a low response rate in Khomas. The data for the Caprivi region were still outstanding by the time the data analysis had been completed.

The majority of the participants were from the North-West region of Namibia. This may have been because, during the period of the study, the health facilities in these health regions were better staffed with registered nurses as compared to the other health regions.

Health regions are made up of health districts. Information about the distribution of participants per health district is presented in Annexure 10 H, which illustrates the way in which registered nurses and supervisors from the health districts of the different health regions responded to the survey.

The data on the demographic information of the participants are attached under Annexure 10 A-I.

The next discussion will be on the implementation of the elements of PHC according to the nursing process.

4.3. FINDINGS ON THE FULFILMENT OF THE PRIMARY HEALTH CARE ROLE FUNCTIONS IN THE CONTEXT OF THE NURSING PROCESS

4.3.1. Introduction, orientation and overview of the fulfilment of the PHC role functions based on the phases of the nursing process

Introduction

The questionnaires incorporated, among other things, the components of the nursing process – a subcomponent of the eclectically compiled framework that guided this study (see figure 2.2 in chapter 2.)

As was mentioned in section 3.3.1.1, there were two populations in this study, namely, registered nurses and their immediate supervisors. The two groups of respondents were asked to indicate the way in which they viewed the fulfilment of the PHC role functions by registered nurses. Accordingly, the registered nurses were asked to indicate their views on how they themselves fulfilled their PHC roles and functions according to the steps of the nursing process, and the supervisors were asked to indicate their views on the way in which the registered nurses whom they supervised included all the steps of the nursing process in practice.

A total of 67 role functions were rated. The questionnaire was constructed in a scaled measure format, with both numerical and descriptive response choices. The reader is again referred to Annexures 7 and 8, sections B to G, for samples of the questionnaires for registered nurses and supervisors respectively, and to tables 3.2 and 3.3 in chapter 3 for details.

In order to ensure that the data were meaningful, all the descriptive statistical tables (assessment to recordkeeping/documentation) were presented in such a way that they are grouped together. This grouping together of the data allows for patterns to emerge and increased focus on problem areas.

Orientation regarding the format of the presentation of the data on the phases of the nursing process

It was mentioned earlier that the data were presented according to the cluster descriptive method. In addition, all the descriptive statistics tables were presented in a comparative format with a comparison always being made between the responses of the group of registered nurses and the responses of the supervisors. For example, in table 4.1 on page 122, which presents the descriptive statistics pertaining to the assessment step, item number 1, which involves an assessment of the occurrence of health problems in the catchment area, was rated below average by 13.5% of the registered nurses and by 12.7% of the supervisors. However, the same item was rated as average by 31.9% of the registered nurses and by 33.1% of the supervisors, while 54.6% of the registered nurses responses and 54.2% of the supervisors' responses rated the same item as above average. Thus, in the table, the total number of responses in each case is in brackets, just below the relevant percentage.

The last two columns on the extreme right-hand side of the table indicate the mean rating of the fulfilment of each function by the registered nurses (3.65) and by the supervisors (3.54) and, lastly, the mean rating of the fulfilment of each specific item according to the combined, total responses of the registered nurses and the supervisors together (3.60).

The results pertaining to the various role functions of registered nurses in local-level PHC facilities are presented in three categories, depending on the rating of the level of fulfilment of these role functions by the research participants, while taking into account the percentage of responses that rated individual function at what level of the cluster descriptive level. The first category/group consists of those role functions that

were rated as well done. This means that 90% and higher (at least 90%) of the participants rated the fulfilment of such role functions as average and higher.

The second category consists of those functions in respect of which fulfilment was rated as moderate. This means that 80 to 89% (at least 80% but not 90%) of the respondents rated the fulfilment of these functions as average and higher (20% or less rated the fulfilment of these functions as below average). The third category includes those functions the results of which indicated there was an urgent need for the enhancement of the fulfilment of these functions. This, in turn, means that more than 20% – 61 responses out of a total of 308 – of the participants rated the fulfilment of these functions as below average. These categories are graphically displayed in figure 3.2 in chapter 3. See also Annexure 11 for a comparison of the percentage of registered nurse and supervisor responses that rated specific items as average and higher.

These categories of findings applied to all the findings which were presented according to both the different phases of the nursing process and the elements of PHC. The reader is advised to refer back to this section should the need arise.

Before the data are presented, reference is made to a list of all 19 of the assessment functions (see end of section 2.4.1) in order to orientate the reader.

The categorised summary of findings is designed based on the three patterns mentioned earlier, namely, performance to be sustained (to sustain performance – 90% and more of the participants accorded a rating of at average and higher); performance for which moderate action is required (Moderate action required – 80–89% of the respondents accorded a rating of average and higher) and performance for

which urgent action is required (Urgent action necessary – >20% of the respondents accorded a rating of below average).

Overview of the overall fulfilment of the PHC role functions based on the phases of the nursing process

The information regarding the steps of the nursing process was obtained by means of the numerical component of the questionnaire. In terms of this numerical component the highest possible score was a 5 and the lowest possible score a 1. These data demonstrate that the mean fulfilment of the PHC role functions ranged between 2.93 (project proposal planning) and 4.70 (carry out activities related to the control of outbreaks of disease and disasters) for various functions.

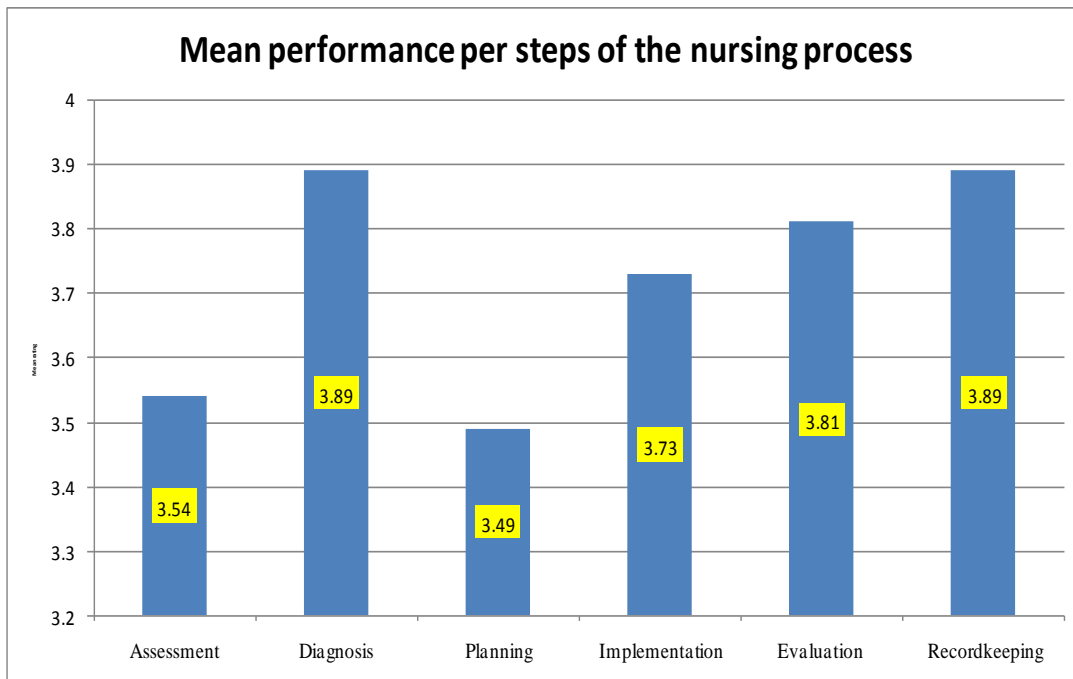


Figure 4.1: Mean fulfilment of role functions by registered nurses according to the steps of the nursing process. The means are displayed in the middle of bars. [Note: The possible highest score is 5 and the lowest possible score is 1]

The mean fulfilment of the functions according to the steps of the nursing process, which reflected the average view of performance for the all items pertaining to each step of the nursing process, is presented in figure 4.2. The means are displayed in the middle of each bar.

The assessment step/phase of the nursing process is the first component that will be presented and discussed.

4.3.2. The assessment step as a prerequisite for the implementation of the elements of primary health care

The assessment phase concentrated on 19 role functions (see the last part of section 2.4.1). The descriptive information that deals with assessment is presented in table 4.1.

In order to illustrate the way in which the total number of responses is built up for each group, let us examine an example of the same item again (item 1 under assessment) – the total number of responses for registered nurses. The calculation below will illustrate how the 13.5% was derived:

13.5% of registered nurses rated this item below average:

$$\frac{22 \times 100}{22 + 52 + 89} = \frac{2200}{163} = 13.5\%$$

The reader is referred to this illustration as it applies throughout the presentation of all the statistical tables for all the steps of the nursing process as presented in this chapter.

Table 4.1: Statistical results of the assessment step: percentages (%), means and frequencies (N)

	PERCENTAGES						MEAN		
	below average		average		above average		R/n	Sup	Total
	R/n	Sup	R/n	Sup	R/n	Sup			
Occurrence of health problems in your catchment area.	13.5 (N=22)	12.7 (N=18)	31.9 (N=52)	33.1 (N=47)	54.6 (N=89)	54.2 (N=77)	3.65	3.54	3.60
Occurrence of important diseases in the community	16.2 (N=26)	9.2 (N=13)	30.4 (N=49)	35.5 (N=50)	53.4 (N=86)	55.3 (N=78)	3.6	3.6	3.60
Safety of drinking water for clients in catchment area	24.0 (N=31)	21.9 (N=31)	24.8 (N=54)	38.0 (N=54)	50.3 (N=81)	38.0 (N=54)	3.29	3.28	3.31



Conditions under which waste is being disposed of in the area	29.8 (N=41)	28.7 (N=41)	41.5 (N=65)	39.2 (N=56)	28.5 (N=45)	30.1. (N=43)	2.91	3.06	2.99
The extent of food hygiene in the area	24.5 (N=40)	25.2 (N=36)	32.5 (N=53)	40.6 (N=58)	42.9 (N=70)	32.2 (N=46)	3.22	3.20	3.20
Nutritional status of clients	18.4 (N=30)	9.1 (N=13)	27.6 (N=45)	39.4 (N=56)	53.8 (N=88)	50.0 (N=71)	3.58	3.60	3.59
Environmental health hazards (e.g. standing, dirty water, etc.)	34.0 (N=55)	29.2 (N=42)	24.7 (N=40)	34.0 (N=49)	41.3 (N=67)	34.7 (N=50)	3.06	3.11	3.09
Need for housing & shelter in your health area	37.4 (N=59)	35.7 (N=51)	22.8 (N=36)	28.0 (N=40)	39.9 (N=63)	34.3 (N=49)	3.06	3.02	3.04
Do you take a complete history of all patients/client who you examine	6.7 (N=11)	6.3 (N=9)	19.5 (N=32)	22.2 (N=32)	73.7 (N=121)	70.8 (N=102)	4.03	3.02	4.00
All observations pertaining to a patient (BP, pulse, respiration)	7.9 (N=13)	5.6 (N=8)	13.4 (N=22)	29.9 (N=43)	78.7 (N=129)	64.6 (N=93)	4.10	3.93	4.02
Health status of any patients who are diagnosed with any disease	7.3 (N=12)	7.7 (N=11)	20.1 (N=33)	30.6 (N=44)	72.5 (N=119)	61.1 (N=88)	3.99	3.76	3.86
Check up of women six weeks after delivery (Post natal)	18.1 (N=30)	16.8 (N=24)	22.0 (N=36)	24.5 (N=35)	59.1 (N=97)	56.7 (N=81)	3.66	3.74	3.64
Immunisation status of all infants and children under the age of 5 years	4.2 (N=7)	3.5 (N=5)	13.4 (N=22)	15.4 (N=22)	82.3 (N=135)	81.1 (N=116)	4.34	4.32	4.33
Need for Vitamin A for children under 5 years	6.2 (N=10)	7.0 (N=10)	22.1 (N=36)	23.6 (N=34)	71.8 (N=117)	69.5 (N=100)	4.11	4.03	4.07
Tetanus vaccination status of all women of child-bearing age (15-45)	12.9 (N=21)	16.0 (N=23)	20.2 (N=33)	25.7 (N=37)	66.9 (N=109)	58.3 (N=84)	3.92	3.73	3.83
Health development status of school children	28.5 (N=46)	30.8 (N=44)	28.6 (N=46)	29.4 (N=42)	42.9 (N=69)	37.1 (N=53)	3.16	3.14	3.15
Social problems in families and community	23.4 (N=38)	23.8 (N=44)	34.0 (N=55)	39.2 (N=56)	42.6 (N=69)	35.0 (N=50)	3.25	3.24	3.24
Needs of patients concerning referral for special treatment(e.g. rehabilitation)	19.1 (N=31)	14.7 (N=21)	24.5 (N=40)	35.0 (N=50)	55.8 (N=91)	50.4 (N=72)	3.58	3.57	3.57
Need for home care	26.9 (N=43)	21.1 (N=30)	21.3 (N=54)	32.4 (N=46)	51.9 (N=83)	44.3 (N=63)	3.40	3.47	3.43

In accordance with the explanation given in section 4.3.1(b) above regarding the way in which the data are presented, table 4.6 demonstrates that, of these 19 assessment role functions, five were rated by 90% and more of the respondents as average and higher, six were rated by 80 to 89% of the respondents as average and higher, while eight were rated by more than 20% of the respondents as below average (less than 80% of the respondents rated these functions as average and higher).

Those assessment functions that were rated by 90% and more of the respondents as average and higher included history taking, baseline observations executed, health status assessment, immunisation status of infants and children under five years of age, and assessment for the need for Vitamin A by children under five years of age.

Those assessment functions that were rated by 80 to 89% of the respondents as average and higher included the assessments of the following: occurrence of health problems in the catchment area; occurrence of important diseases in the community; tetanus vaccinations for all women of childbearing age (15–49), check up of women at six weeks after delivery, need for referral for special treatment, and the nutritional status of clients. Nevertheless, some of the registered nurses did indicate that they felt that the assessment of the nutritional status of clients was the role of the registered nurses who work in the nutrition unit.

Those assessment functions that were rated by more than 20% of the respondents as below average included the assessment of the safety of drinking water for clients, conditions under which waste was being disposed of, the extent of food hygiene, environmental health hazards, for example, standing, dirty water, need for housing and shelter in the health area, health developmental status of school children, social

problems in families and communities, and the need for home care (see section 4.7.2.4 for a discussion in this regard).

The categories of findings regarding the assessment step are summarised below with the aim of demonstrating the patterns that had emerged from the data (see also section 4.3.1).

4.3.2.1. Categorical summary of assessment results.

Assessment: Performance to be sustained

- History taking
- Patient observations
- Patients health status
- Immunisation status for under 5s
- Need for vitamin A

Assessment: Moderate action required

- Health problems
- Important diseases
- Women after delivery
- Women tetanus vaccination status
- Nutritional status
- Need for referral

Assessment: Dire action necessary

- Safety of drinking water
- Waste disposal
- Food hygiene
- Environmental hazards

- Needs for housing/shelter
- School children developmental status
- Social problems
- Needs for home care

As far as the ANOVA results and association with the demographic variables were concerned, no statistically significant differences were found as regard any of the demographic variable and the assessment functions performed by registered nurses in local-level PHC facilities.

The next discussion and analysis will be on the diagnostic step of the nursing process.

4.3.3. Diagnosis as a prerequisite for the implementation of the elements of primary health care

The diagnosis step focused on ten functions (see the last part of section 2.4.2.). The descriptive statistical findings are presented in table 4.2. These findings indicate that, of these ten diagnosis role functions, five were rated by 90% and more of the respondents as average and higher; five were rated by 80 to 89% of the respondents as average and higher; while none was rated by more than 20% of the respondents as below average.

The five diagnosis role functions that were rated by 90% and more of the respondents as average and higher included the following: determination of the catchment population; determination of immunisation status; identification of disease trends reflected in health information system records; identification of resources needed in the provision of nursing care and making a correct nursing diagnosis of all patients or clients.

Those diagnosis role functions that were rated by 80 to 89% of the respondents as average and higher included the following: knowledge of the size of the catchment area; identification of the socioeconomic situation of the community; identification of training needs of the community; identification of the training needs of health workers, including nurses, and carrying out a full physical examination of all clients.

The categories of findings pertaining to the diagnosis step are summarised in figure 4.4 in order to demonstrate the patterns that had emerged from the data (refer to section 4.3.1).

A statistically significant difference was found regarding the length of time for which a registered nurse had worked at a health facility, and the performance of nursing diagnoses [P = 0.038 (overall) and for Group 1 (3 years or less) as compared to Group 2 (4–10 years), where the P value was 0.044 according to the Tukey HSD Test]. Thus, the implication is that the longer the length of service in a specific health facility, the more comprehensive the nursing diagnoses (see also section 4.5).

Table 4.2: Descriptive statistical summary of diagnoses results: percentages (%), means and frequencies (N)

	PERCENTAGES						MEAN		
	below average		average		above average		R/n	Sup	Total
	R/n	Sup	R/n	Sup	R/n	Sup			
Determination of the catchment population that you serve, including specific age groups	10.0 (N=16)	6.3 (N=9)	25.5 (N=41)	23.2 (N=33)	64.5 (N=109)	67.6 (N=96)	3.85	3.97	3.91
Knowledge of the size of the catchment area	11.3 (N=18)	9.8 (N=14)	19.4 (N=31)	18.8 (N=27)	69.4 (N=111)	69.4 (N=100)	3.98	3.97	3.98
Identify immunisation (EPI) coverage to date in the catchment area	7.4 (N=12)	5.6 (N=8)	16.7 (N=27)	27.8 (N=40)	75.9 (N=123)	65.3 (N=94)	4.08	3.96	4.02
Identify the socioeconomic status of the community	17.8 (N=29)	17.4 (N=25)	33.4 (N=55)	37.5 (N=54)	48.5 (N=79)	43.1 (N=62)	3.40	3.45	3.43



Identify resources needed in the provision of nursing care	12.4 (N=20)	4.9 (N=7)	23.0 (N=37)	30.1 (N=43)	64.6 (N=104)	63.7 (N=91)	3.78	3.87	3.84
Identify training needs of the community	13.1 (N=21)	9.1 (N=13)	26.1 (N=42)	35.4 (N=51)	60.9 (N=98)	55.6 (N=80)	3.72	3.69	3.71
Identify training needs of health workers, including nurses	13.5 (N=22)	6.3 (N=9)	17.2 (N=28)	31.5 (N=45)	69.4 (N=113)	61.6 (N=88)	3.85	3.77	3.82
Carry out a full physical examination of all clients	13.6 (N=22)	10.5 (N=15)	26.5 (N=43)	35.0 (N=50)	59.9 (N=97)	54.6 (N=78)	3.66	3.62	3.64
Make a correct nursing diagnosis of all patients/clients	6.8 (N=11)	4.2 (N=6)	26.1 (N=42)	29.4 (N=42)	67.1 (N=108)	66.5 (N=95)	3.88	3.88	3.88
Identify disease trends reflected in health information system records	7.6 (N=12)	10.4 (N=15)	23.1 (N=37)	32.6 (N=47)	69.4 (N=111)	56.9 (N=82)	3.90	3.70	3.80

4.3.3.1. Categorical summary of diagnosis results

Diagnosis: Performance to be sustained

- Determination of the catchment population
- Identification of immunisation coverage
- Identification of resources for nursing care
- Making a nursing diagnosis
- Identification of disease trends

Diagnosis: Moderate action required

- Size of catchment area
- Socioeconomic conditions
- Training needs for health workers
- Training needs for the community
- Physical examination

Diagnosis: Dire action necessary

- None

The next discussion and analysis will be on the planning phase of the nursing process.

4.3.4. Planning as a prerequisite for the implementation of the elements of primary health care

In this study the planning phase of the nursing process focused on 11 functions, which are listed in the last part of section 2.4.3. A detailed presentation of the descriptive statistics findings is presented in table 4.3.

Table 4.3 demonstrates that, of these 11 planning role functions, not one was rated by 90% and more of the respondents as average and higher, six were rated by 80 to 89% of respondents as average and higher, while five were rated by more than 20% of the respondents as below average (less than 80% of the respondents rated these functions as average and higher). Lippincott and Wilkins (2006), Viljoen and Sibiyi (2009) and Johnson (2007) warn that, if proper planning is not carried out, there is a greater possibility that the interventions will be unsuccessful.

Table 4.3: Descriptive statistical results of roles and functions that require planning: percentages (%), means and frequencies (N)

	PERCENTAGES						MEAN		
	below average		average		above average		R/n	Sup	Total
	R/n	Sup	R/n	Sup	R/n	Sup			
Daily nursing care in accordance with the needs of the target catchment population in the community that you serve	11.7 (N=19)	10.5 (N=15)	28.5 (N=47)	38.7 (N=55)	59.5 (N=97)	49.3 (N=31)	3.68	3.57	3.64
Services offered in accordance with the health information available at the health facility (e.g. morbidity and mortality)	11.8 (N=19)	9.1 (N=13)	28.4 (N=46)	32.4 (N=46)	59.9 (N=97)	58.4 (N=83)	3.66	3.69	3.68



Development of a teaching plan designed to help individuals to promote health	11.7 (N=19)	16.1 (N=23)	34.0 (N=55)	34.3 (N=49)	54.4 (N=88)	49.7 (N=71)	3.58	3.47	3.53
Programmes to manage illnesses of an acute and chronic nature.	10 (N=24)	22.4 (N=32)	30.6 (N=49)	32.2 (N=46)	54.4 (N=87)	43.4 (N=62)	3.51	3.32	3.42
Contribution to annual budget to request resources (manpower, materials)	34.2 (N=54)	30.3 (N=43)	28.5 (N=45)	26.8 (N=38)	36.8 (N=58)	40.8 (N=58)	2.98	3.19	3.08
Contribute to the planning of a project proposal to request resources according to needs	38.9 (N=63)	33.6 (N=48)	28.4 (N=46)	30.1 (N=43)	32.1 (N=52)	34.3 (N=49)	2.87	3.00	2.93
Training sessions for the community concerning health issues	24.1 (N=39)	14.1 (N=20)	24.1 (N=39)	33.8 (N=48)	51.9 (N=84)	50 (N=71)	3.40	3.64	3.51
Training sessions for staff on relevant issues	13.7 (N=22)	10.8 (N=15)	32.3 (N=52)	25.9 (N=36)	54 (N=87)	60.4 (N=84)	3.62	3.82	3.71
For all health promotion activities (e.g. growth monitoring, home visiting, AIDS prevention, immunisation)	12.3 (N=20)	9.8 (N=14)	19.6 (N=32)	28.7 (N=41)	68.1 (N=111)	59.5 (N=85)	3.88	3.47	3.86
Nursing interventions for any health problem identified	9.8 (N=16)	9.1 (N=13)	27.6 (N=45)	31.7 (N=45)	62.6 (N=102)	57.1 (N=81)	3.82	3.80	3.81
Outreach services in the community	24.9 (N=40)	21.7 (N=31)	17.4 (N=28)	17.5 (N=25)	57.8 (N=93)	58.1 (N=83)	3.48	3.48	3.56

The data in this table indicate that the 11 planning role functions that were rated by 80 to 89% and more of the respondents as average and higher include the following: planning for the delivery of nursing care based on the catchment population of the community; the planning of services based on the health information system data available at a specific health facility (morbidity and mortality); the development of a teaching plans for individuals designed to promote health; the planning of training sessions for staff on relevant issues; planning for health promotion activities (e.g. growth monitoring, home visiting, AIDS prevention, immunisation) and the planning of nursing interventions for health related problems which have been identified.

The planning functions which were rated by more than 20% (less than 80%) as below average include the following: planning programmes to manage illnesses of an acute and/or chronic nature; contribution to planning annual budgets to request resources (manpower, materials); contributions to the planning of a project proposal to request resources according to needs; planning of training sessions for the community concerning health issues and the planning of outreach services in the community. (See section 4.8.5 for discussions in this regard.)

In addition, a statistically significant difference was found in relation to the area of practice and how well the planning phase had been completed [$P = 0.047$]. Thus, the implication is that registered nurses who work in health centres are not involved in outreach services to the same extent as are those who work in clinics and outreach posts (see also section 4.5).

4.3.4.1. Categorised summary of planning results based on the level of rating by the participants

Planning: Performance to be sustained

- None

Planning: Moderate action required

- Daily nursing care
- Services based on the health information system (HIS)
- To develop teaching plan
- Staff training
- For health promotion
- For nursing interventions

Planning: Dire action necessary

- Programmes to manage illnesses

- Annual budget
- Project proposal
- Community training
- Outreach services

The next discussion point is on implementation phase of the nursing process.

4.3.5. Implementation of the elements of primary health care

The implementation phase concentrated on 14 role functions. The last part of section 2.4.4 presents a list of these topics, whereas table 4.4 below presents the study results pertaining to these 14 role functions. The data demonstrate that, of the 14 functions pertaining to the implementation phase, five were rated by 90% and more of the respondents as average and higher, five were rated by 80 to 89% of the respondents as average and higher, while four were rated by more than 20% of the respondents as below average (less than 80% of the respondents rated these functions as average and higher).

The implementation functions that were rated by 90% and more of the respondents as average and higher included the following: The completion of planned nursing intervention activities for the catchment population; the management of any health problem within the framework of the scope of practice; the provision of health education according to the health needs of the clients; the administering of treatment and medications as authorised by both the Nursing Act and relevant regulations and safeguarding the rights of individual patients. Those implementation functions that were rated by 80 to 89% of the respondents as average and higher included the following: Utilisation of the available resources in the community when carrying out nursing intervention roles and functions; referral of clients to the health services

available in the community; involving family members when fulfilling nursing roles and functions; carrying out roles and functions related to the control of outbreaks of disease and disasters and ensuring that resources provided for nursing projects are utilised for the correct purpose.

The four implementation functions that were rated by more than 20% of the respondents as below average (less than 80% of the respondents rated these functions as average and higher) include: conducting training sessions for all health workers and the community; implementing the budget requirements as planned; providing home care according to the needs of clients and carrying out research on problems which have been identified.

Some of the registered nurses indicated that the involvement of family members in the care of the patients was not applicable to their area of work, although the literature recommends that this is the major function of the PHC practitioner.

Table 4.4: Implementation descriptive statistical results: percentages (%), means and frequencies (N)

	PERCENTAGES						MEAN		
	below average		average		above average		R/n	Sup	Total
	R/n	Sup	R/n	Sup	R/n	Sup			
Carry out all the planned nursing intervention activities for the catchment population (e.g. health promotion, home visits and immunisation)	8.6 (N=14)	5.6 (N=8)	32.1 (N=52)	31.5 (N=45)	58.6 (N=95)	62.3 (N=89)	3.70	3.80	3.75
Utilise the available resources in the community when carrying out nursing intervention activities.	10.1 (N=16)	10.5 (N=15)	29.6 (N=47)	28.7 (N=41)	39.8 (N=95)	58.1 (N=83)	3.73	3.72	3.72
Refer clients to the health services available in the community	8 (N=13)	12.7 (N=18)	18.9 (N=31)	22.0 (N=31)	72.5 (N=119)	64.4 (N=91)	4.01	3.85	3.94



Involve family members when implementing nursing activities	12.9 (N=21)	9.2 (N=13)	27.8 (N=45)	34.8 (N=49)	58.7 (N=95)	53.9 (N=76)	3.73	3.70	2.88
Conduct training sessions for all health workers and the community	22.3 (N=36)	15.2 (N=21)	27.3 (N=44)	32.6 (N=46)	49.7 (N=80)	50.4 (N=71)	3.39	3.59	3.49
Carry out activities related to the control of outbreaks of disease and disasters	14.1 (N=23)	15.9 (N=22)	23.9 (N=39)	32.4 (N=45)	61.4 (N=100)	51.8 (N=72)	3.69	3.48	4.70
Implement the planned budget	27.5 (N=44)	21.5 (N=30)	30.0 (N=48)	28.6 (N=40)	41.3 (N=66)	47.8 (N=67)	3.20	3.42	3.30
Ensure that the resources provided are utilised for the correct purpose	16.6 (N=27)	10.6 (N=15)	24.2 (N=39)	33.3 (N=47)	59 (N=95)	53.9 (N=76)	3.60	3.68	3.64
Manage any health problem within the framework of his/her scope of practice	9.9 (N=16)	2.8 (N=4)	16.4 (N=30)	29.1 (N=41)	71.8 (N=117)	68.1 (N=96)	3.98	4.00	3.99
Provide health education according to the health needs of clients	4.8 (N=8)	3.6 (N=5)	12.8 (N=21)	27.1 (N=38)	82.3 (N=135)	68.5 (N=96)	4.26	4.03	4.16
Provide home care according to the needs of clients	22.6 (N=36)	20.6 (N=29)	23.3 (N=37)	34.0 (N=48)	53.4 (N=85)	42.6 (N=60)	3.46	3.41	3.44
Administer treatment and medications as authorised by both the Nursing Act and relevant regulations	5.5 (N=9)	5 (N=7)	14.6 (N=24)	19.3 (N=27)	79.9 (N=131)	75.7 (N=106)	4.27	4.11	4.20
Carry out research on identified problems	29.6 (N=47)	44.2 (N=62)	29.6 (N=47)	20.7 (N=29)	40.9 (N=65)	32.9 (N=46)	3.15	2.82	2.9
Safeguard the rights of individual patients	7.3 (N=12)	5.7 (N=8)	19.5 (N=32)	31.2 (N=43)	73.1 (N=120)	62.3 (N=86)	4.09	3.94	4.02

The statistical analysis performed regarding the implementation step of the nursing process identified two statistically significant differences associated with gender and area of practice/work [Gender: $P = 0.018$, t -test and area of practice: $P = 0.012$]. Thus, the implications are that, in terms of gender, being male was associated with a higher

level of implementation as compared to being female as regards the fulfilment of PHC roles and functions, while working in outreach was associated with a higher level of implementation of the PHC elements as compared to working in health centres, clinics and health posts (see also section 4.5).

However, explanations of the reasons for these findings are beyond the scope of this study, although further research may provide such explanations.

4.3.5.1. Summary of the implementation phase results.

Implementation: Performance to be sustained

- Carry out planned activities
- Adhere to scope of practice
- Give health education according to need
- Administer treatment
- Safeguard rights of individual clients

Implementation: Moderate action required

- Utilise community resources
- Refer clients
- Involve family
- Control outbreaks and disasters
- Use resources correctly

Implementation: Dire action necessary

- Training for health workers and community
- Implement budget requirements
- Provide home care
- Conduct research

The next discussion will be on the evaluation phase of the nursing process.

4.3.6. Evaluation as part of the implementation of the elements of primary health care

In this study the focus during the evaluation phase of the nursing process was on five role functions of the registered nurse in PHC. Section 2.4.5 in chapter 2 provides a list of these topics. Table 4.5 below presents a summary of the study results pertaining to the fulfilment of these role functions. The data demonstrate that, of the five role functions listed under evaluation, two were rated by 90% and more of the respondents as average and higher; three were rated by 80 to 89% of the respondents as average and higher, while none were rated by more than 20% of the respondents as below average.

The two evaluation functions that were rated by 90% and more of the respondents as average and higher include the following: evaluation of the ways in which materials and supplies are used for nursing care and evaluation of the effectiveness of health programmes, for example, immunisation.

The three evaluation functions that were rated by 80 to 89% of the respondents as average and higher included the monitoring of changes in the occurrence and presence of health problems; evaluation of the effectiveness of health education programmes and evaluation of the health progress of all categories of patients/clients. As with previous studies on health education and support in PHC that had captured similar information regarding health education, the results of this study demonstrate that the commitment of nurses in PHC facilities to health education and health education programme approaches needs to be strengthened (Iiyambo, 2005; Neshuku, 2005).

Table 4.5: Statistical results of evaluation as a part of implementing the elements of primary health care: percentages (%), means and frequencies (N)

	PERCENTAGES						MEAN		
	below average		average		above average		R/n	Sup	Total
	R/n	Sup	R/n	Sup	R/n	Sup			
Monitor changes in the occurrence and presence of health problems	12.4 (N=20)	7.8 (N=4)	25.3 (N=41)	36.2 (N=51)	62.3 (N=101)	56 (N=79)	3.78	3.64	3.75
Evaluate the ways in which materials and supplies are used for nursing care	9.2 (N=15)	9.1 (N=13)	25.2 (N=41)	33.1 (N=47)	65.6 (N=107)	57 (N=81)	3.85	3.69	3.78
Evaluate the effectiveness of health programmes e.g. immunisation	5.4 (N=9)	7.7 (N=11)	20.7 (N=34)	26.8 (N=38)	73.8 (N=121)	64.8 (N=92)	4.02	3.96	3.99
Evaluate the effectiveness of health education programmes	8.5 (N=14)	13.4 (N=19)	23.2 (N=38)	31.0 (N=44)	68.3 (N=112)	55.0 (N=78)	3.91	3.66	3.80
Evaluate the progress in the health of all categories of patients/clients	11.1 (N=18)	11.9 (N=17)	22.7 (N=37)	31.5 (N=45)	66.3 (N=108)	56.7 (N=81)	3.87	3.69	3.79

As was mentioned above, no evaluation function was rated by more than 20% of the respondents as below average. In addition, the statistical analysis performed regarding the evaluation step of the nursing process did not pick up any significant differences in the fulfilment of the PHC role functions.

4.3.6.1. Summary of evaluation results.

Implementation: Performance to be sustained

- Evaluate usage of materials and supplies
- Evaluate effectiveness of health programmes

Implementation: Moderate action required

- Monitor changes in health problems
- Evaluate health education programme effectiveness
- Evaluate health progress of patients/clients

Implementation: Dire action necessary

- None

The next discussion will be on the recordkeeping (documentation) phase of the nursing process.

4.3.7. Documentation of activities related to the implementation of the elements of primary health care

In this study the documentation step of the nursing process focused on eight functions. Section 2.4.6 in chapter 2 provides a list of these topics, while table 4.6 below presents a summary of the study results pertaining to the fulfilment of this recordkeeping function.

Of the eight functions covered under this step, three were rated by 90% and more of the respondents as average and higher; five were rated by 80 to 89% of the respondents as average and higher; while none were rated by more than 20% of the respondents as below average. Those role functions that were rated by 90% and more of the respondents as average and higher include the following: ensuring the correctness of the health information available at health facilities (morbidity and mortality); documentation of all the nursing care activities provided and documentation of all the health information required for the Health Information System (HIS). The implication is that a correct HIS will contribute to the proper planning of health services while good recordkeeping serves as an effective communication tool among health care providers and as a research tool as well as legal evidence (Walliman, 2006; Wilkinson, 2007).

The five recordkeeping role functions that were rated by 80 to 89% of the respondents as average and higher include: Ensuring that the written health profile documents pertaining to the health area and kept at the health facility are up to date;

documentation of incidences of health problems and important diseases in the community; documentation of all training sessions conducted for both the community and staff; documentation of all health promotion activities conducted and communication of findings with stakeholders (written and spoken). Not one of the recordkeeping role functions was rated by more than 20% of the respondents as below average and no statistically significant difference was found. Section 4.3.7.1 presents a categorised summary of the documentation/recordkeeping role functions.

Table 4.6: Documentation/recordkeeping results: percentages (%), means and frequencies (N)

	PERCENTAGES						MEAN		
	below average		average		above average		R/n	Sup	Total
	R/n	Sup	R/n	Sup	R/n	Sup			
Ensure that the written health profile documents of the health area in the health facility are up to date	10.8 (N=17)	14.0 (N=20)	24.1 (N=38)	27.3 (N=39)	65.2 (N=103)	58.8 (N=84)	3.83	3.69	3.77
Ensure the correctness of the health information available in the area	12.2 (N=19)	7.0 (N=10)	24.1 (N=38)	25.9 (N=37)	63.9 (N=101)	67.2 (N=96)	3.85	3.86	3.85
Document incidences of health problems and important diseases in the community	15.1 (N=24)	9.1 (N=13)	27.7 (N=44)	35.2 (N=50)	57.2 (N=91)	52.8 (N=75)	3.62	3.73	3.67
Document all training sessions conducted for community and staff	17.1 (N=27)	13.3 (N=19)	29.7 (N=47)	26.6 (N=38)	53.2 (N=84)	57.4 (N=82)	3.54	3.77	3.65
Document all health promotion activities conducted	12.1 (N=19)	13.4 (N=19)	28.7 (N=45)	28.4 (N=40)	58.6 (N=92)	57.4 (N=81)	3.67	3.68	3.70
Document all nursing care activities provided	8.8 (N=14)	4.9 (N=7)	22.6 (N=36)	33.1 (N=47)	68.5 (N=109)	60.6 (N=86)	3.95	3.88	3.92
Document all health information needed for health information system	7.0 (N=11)	4.2 (N=6)	18.2 (N=29)	20.4 (N=29)	74.8 (N=119)	374.6 (N=106)	4.10	4.14	4.11



Communicate findings with stakeholders, in both written and oral form	18.0 (N=28)	12.7 (N=18)	20.0 (N=31)	33.1 (N=47)	61.9 (N=96)	51.5 (N=73)	3.65	3.69	3.67
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4.3.7.1. Categorized summary of results pertaining to ocumentation/recordkeeping

Performance to be sustained

- Ensure correctness of health information systems (HIS)
- Document all nursing care activities provided
- Document all information necessary for HIS

Moderate action required

- Health profile documents up to date
- Document incidences of important diseases
- Document training sessions conducted
- Document health promotion activities conducted
- Communicate (written and spoken) findings with stakeholders

Dire action necessary

- None

4.4. SUMMARY OF THE FINDINGS ON INDIVIDUAL ELEMENTS OF PRIMARY HEALTH CARE (PHC), ASPECTS OF COMMUNITY DIAGNOSIS AND CARE AND THE MANAGEMENT SUPPORT OR ADMINISTRATIVE FUNCTIONS

Section 4.3 above presented the findings pertaining to the fulfilment of the PHC role functions according to the steps of the nursing process. However, in order to obtain a clearer understanding of the way in which the fulfilment of these role functions by registered nurses was viewed by the participants in relation to the individual elements of PHC, this section contains a summary in this regard. The reader is referred to

section 2.2 in chapter 2, about elements of PHC. The findings in that regard context are as follow:

4.4.1. Health education and communication

No function under this element of PHC was categorised as well done. Despite the fact that the training needs of the community had been identified the planning of community training sessions required urgent action. In addition, where patient training had been conducted, the family members had been only moderately involved. The functions that required urgent action included the following: Developmental status of school children not adequately assessed; patient education not sufficiently planned for; need for home care not sufficiently assessed; outreach services not sufficiently planned for; home care not adequately provided and education of other health workers not adequate. (Refer also to management support or administrative functions in section 4.4.10)

4.4.2. Nutrition and food supply

None of the role functions in this respect were categorised as well done. Food hygiene had not been sufficiently assessed while the assessment of the nutritional status of any client had been only moderately done (see section 4.7.2.2).

4.4.3. Control of endemic diseases

The functions related to the control of endemic disease outbreaks and disasters were moderately fulfilled. However, coupled with the poor assessment of environmental sanitation and in view of cross-border interactions, this implies that the risk of incidences of communicable diseases remains (Minaar, 2008; Fraser & Cooper, 2009) (see section 4.4.8).

4.4.4. Immunisation against major preventable diseases

The tetanus vaccination status of all women of child-bearing age (15–49) and the identification of immunisation coverage (EPI) in the catchment area were well done. The data also indicate that the registered nurses in the PHC services were identifying the immunisation status (EPI) coverage attained in the catchment area, with this knowledge enabling them to decide on what action to take in order to ensure an acceptable level of coverage of EPI vaccination antigens (GRN; MOHSS, 1998; Kortenbout et al., 2009).

4.4.5. Supply of essential drugs

Medication and other treatment were being administered as authorised by both the Nursing Act, 2004 (Act No. 8 of 2004) and the relevant regulations. The registered nurse administers those treatments prescribed by either him/herself, as well as those prescribed by other health care service providers such as medical doctors and dentists. In addition, the registered nurses uphold patients' rights.

4.4.6. Treatment of common diseases and injuries

The following role functions of the PHC elements concerned with treatment of common diseases and injuries were well done: assessment of comprehensiveness of history taking of patients who are examined; assessment of all observations carried out in respect of patient such as blood pressure, pulse, respiration; assessment/checking of the health status of any patient diagnosed with any disease; identification of resources needed in the provision of nursing care; making correct nursing diagnoses; provision of health education according to the needs of clients/patients; safeguarding the rights of individual patients when executing the nursing role functions of PHC and the recording of the nursing role functions that have been executed.

These findings imply that health problems will be identified correctly and, thus, the correct treatment of clients or, in other words, the correct implementation of care plans (Viljoen & Sibiya, 2009). Observing the rules and regulations for practice, including those set by the nursing regulatory body in the country, enhances the safety of patients under the care of registered nurses. In addition, the fact that health education is provided according to the needs identified provides an opportunity for individualised patient care.

Those functions that required moderate actions include the following: assessment of needs of patients as regards referral to special treatment (e.g. rehabilitation); planning of daily nursing care according to the needs of the target catchment population; carrying out of physical examinations on patients; utilisation of available resources in the community when carrying out nursing (intervention) role functions; referring clients to the health services available in the community and the evaluation of the progress in the health of all categories of patients/clients.

If clients are not referred as early as possible or if their condition is not reported at all, this may result in severely complicated health problems (Lippincott Williams and Wilkins, 2006; Wilkinson, 2007).

In conclusion, the results indicate that registered nurses provide adequate care in cases of disease conditions and in the provision of essential physical health care services. However, the assessment of the house/home and environment where the patients live would benefit from greater attention.

4.4.7. Mother and child health care services, including family planning

The assessment of the immunisation status of all infants and children under the age of five years and also assessment of the need for Vitamin A in children under the age of

five years were well done. However, the assessment of women six weeks after delivery (postnatal) was moderately done.

4.4.8. Water and sanitation and other environmental health issues

All the role functions to do with water and environmental sanitation carried out by registered nurses in local-levelPHC needed urgent action: the safety of drinking water for patients, the manner in which waste was disposed of in the catchment area, the presence of environmental health hazards in the catchment area and the housing needs/environment of the patients/clients were all inadequately assessed by the registered nurses (see section 4.7.2.1).

4.4.9. Community diagnosis and community care

The following functions under this component were well done: the catchment population that was being served, including specific age groups, was satisfactorily determined/diagnosed; all the planned nursing intervention activities for the catchment population (e.g. health promotion, home visits and immunisation were satisfactorily carried out/implemented/fulfilled, although it was mentioned that these were not sufficiently planned for, however, when they were planned for they were carried out; health problems were well managed within the framework of the scope of practice of the registered nurses and the disease trends reflected in the HIS were satisfactorily identified.

Taking note of the HIS data in order to discern disease trends is a good sign, as this reflects the fact that registered nurses understand that they must be vigilant about incidences of the various diseases and their trends, including unusual diseases which need to be detected as early as possible. An unusual disease refers to those diseases that are not usually expected in the country concerned and include diseases such as cholera, polio and others.

The following functions were moderately done: assessment of the occurrence of health problems in the catchment area; assessment of the occurrence of important diseases in the community; knowledge of the size of the catchment population; identification of the socioeconomic situation in the community; planning of interventions for any health problem identified; planning of health promotion activities such as growth monitoring, home visiting, AIDS prevention, immunisation; and changes in the occurrence and presence of health problems. In addition, all the health promotion activities conducted were moderately documented while incidences of health problems and important diseases in the catchment area/community were moderately recorded. However, some of the respondents indicated that knowing the size of the catchment population and identifying socioeconomic conditions were not applicable to their area of work.

However, knowledge about the various socioeconomic situations places the registered nurse in a better position to plan the appropriate nursing care services for the specific community (GRN MOHSS, March 2006; Johnson, 2007; Stanhope & Lancaster, 2006), while failure to document and to report means that other health care providers are deprived of information about the health situation. In some instances, this failure may mean that the health conditions develop into major health problems before they are contained (Stanhope & Lancaster, 2006).

Under this component, the assessment of the social problems of families and communities was not sufficiently done. In her study on the implementation of the sociology of development by registered nurses, Shikongo (2008) found a similar situation, specifically to do with the assessment of abuse (see section 4.7.2.4).

4.4.10. Management and support or administrative functions

The following functions were well done: ways in which materials and supplies had been used for nursing care were well evaluated; the effectiveness of health programmes, for example immunisation was well evaluated, accuracy of HIS at health facilities was ensured (documented); and all the health information needed for the HIS was well documented.

A cost effective health care service involves little or no waste of resources. This may involve the use of high technology resources for minor ailments that could be dealt with in a different manner. Further examples include polypharmacology, injections and antibiotics; cough remedies; use of gloves, as well as the incorrect deployment of staff who are technically qualified and are deployed in the correct job (GRN MOHSS, December, 2008).

The following were moderately done: the training needs of health workers, including nurses, were moderately identified and diagnosed; planning of services according to the health information available at the health facility regarding morbidity and mortality were moderately planned for; training sessions for staff on relevant issues were moderately planned for; moderate care was exercised to ensure that the resources provided for nursing projects were utilised for the correct purpose; the effectiveness of health education programmes was moderately evaluated; findings were communicated in a moderately efficient way to stakeholders, both in writing and orally; moderate care was exercised to ensure that patients' health profiles were kept up to date at the health facilities; while all the training sessions conducted for both the community and staff members were documented moderately.

Some of the registered nurses indicated that this task of planning training sessions for staff was not applicable to their work situation. If training needs are identified, then the training sessions for the health workers could be conducted in such a way that the needs identified may be met. As with planning sessions for the community, it is equally important to plan training sessions for the staff, while the proper planning of a training session will ensure that the implementation of the session is both well coordinated and goal oriented (Morrison, 2008; Booyens, 1999). As in previous studies, the results of this study demonstrate that registered nurses' commitment to health education and health education programme approaches needs to be strengthened (Iiyambo, 2005; Neshuku, 2005).

The following functions required urgent dire action: programmes to manage illnesses were poorly planned; the budget was inadequately planned; there were insufficient contributions on the part of the registered nurses to the planning of proposals for a project; and registered nurses did not adequately adhere to budgetary requirements. Even if registered nurses are unaware of what has been budgeted for, it is essential that they see to it that the resources provided for the various projects in their units/facilities are utilised for the correct purpose. In addition, the health service must be protected from the misuse of valuable resources that are meant to serve the community, thus ensuring sustained services. It is recommended that this practice of ensuring that resources are used for the correct purpose should be encouraged in all practice settings, including those of nursing (De Beer & Swanepoel, 1998; Booyens, 1999; Jooste, 2010). The training of health workers, including fellow nurses, by registered nurses was inadequate, while the functions of the research role were not adequately carried out by the registered nurses.

4.5. SUMMARY OF THE FINDINGS ON THE INDEPENDENT VARIABLES AND THE WAY THESE VARIABLES ARE RELATED TO THE STEPS OF THE NURSING PROCESS

The variables that were used in the study to check whether there was any relationship between these variables and the way in which the PHC role and functions were fulfilled, according to the views of the registered nurses and supervisors, are presented in Annexure 10.

These results demonstrate that the area of work/health facility type and length of service at a health facility were perceived as relating to certain differences that were observed as far as the application of the nursing process in PHC competencies in practice was concerned. The following results were found: no significant differences were found in terms of assessment while, in terms of diagnosis, the duration of service at a health facility was related to a higher level of fulfilment of the role functions related to diagnosis. Registered nurses who had worked for four to ten years at a health facility were rated as doing well, followed by those who had worked at a health facility for more than ten years, while those who worked for three years or less at a health facility performed the lowest. However, the difference between group 2 (worked at a health facility for 4–10 years) and group 3 (worked at a health facility for more than 10 years) was not statistically significant. Nevertheless, this observation was made in terms of the group of registered nurses only and not the supervisors. As regards planning, the registered nurses and supervisors whose area of work was the health centre were more inclined to perceive that the fulfilment of their planning role functions was lower than those respondents whose working areas were not the health centre. The p -value = 0.047 for planning of PHC services by registered nurses whose area of work is health centre as opposed to those who work not in health centre.

In terms of implementation, two statistically significant differences were found, namely, with regard to gender and to area of work. Firstly, men were associated with better performance than women, p -value = 0.018, while the second statistically significant difference applied pertained to working in an outreach area and implementing the nursing process. It was found that those nurses who work in outreach areas were associated with better performances as regards the implementation of role functions of the nursing process (p -value = 0.012). The observation regarding gender applied to both groups, namely, the registered nurses and the supervisors, while the observation pertaining to area of work applied to the group of registered nurses only. Finally, no significant differences were observed in terms of either evaluation or documentation/recordkeeping.

4.6. CONSTRAINTS FACING REGISTERED NURSES IN LOCAL-LEVEL PRIMARY HEALTH CARE FACILITIES AS REGARDS THE EXECUTION OF THEIR ROLE AND FUNCTIONS

These constraints were captured in the space on the questionnaire provided for participants to indicate possible reasons for inadequate performance. The following constraints were suggested:

- Shortage of registered nurses
- Registered nurses not involved in budget (even suggesting clinic needs)
- Registered nurses not briefed about the way in which budget allocation was adhered to
- Registered nurses not provided with the necessary means to carry out their functions (transport only)
- Registered nurses are not exposed to certain activities for lengthy periods of time, for example outreach
- Heavy workload, including large numbers of patients/clients to manage

- Registered nurses do not have enough time to visit communities as a result of the heavy workload at the clinics and health centres. This workload makes life extremely difficult for the nurses.

These constraints were also identified by Neshuku (2005) and Iiyambo (2005). In the study of one district conducted by Neshuku (2005), regarding support for nursing staff in PHC, lack of transport was also one of the constraints identified. However, Neshuku also identified other managerial constraints, such as inadequate telephone communication and working space, as challenges that were contributing to the difficulties faced by registered nurses. The findings of this study, when compared to those of Neshuku (2005), may have implications for a possible improvement in the management of PHC services in Namibia, or alternatively could mean that the challenges faced by registered nurses in local-level PHC facilities differ from those faced at the hospital level of PHC delivery.

4.7. LEVELS AT WHICH VARIOUS PRIMARY HEALTH CARE ROLES AND FUNCTIONS ARE FULFILLED ACCORDING TO REGISTERED NURSES AND SUPERVISORS, AND THE CHALLENGES IDENTIFIED

4.7.1. Levels at which various primary health care roles and functions are fulfilled according to registered nurses and supervisors

Of the 67 PHC nursing role functions across the different phases of the nursing process, 20 (30%) were categorised as well done (see Annexures 12 and 15), 30 (45%) were categorised as moderately well done (see Annexures 13 and 16), and 17 (25%) were categorised as requiring urgent action (see also Annexures 14 and 17 for details). These findings are graphically depicted in figure 4.2. The ratings by the registered nurses and supervisors did not show a statistically significant difference, except as regards three role functions, namely, planning of programmes to manage

illness, planning of training sessions for the community and training of health workers and community members.

In the case of the planning programmes to manage illness, the data indicated that the registered nurses rated themselves higher as compared to their supervisors, who indicated that they felt that the planning of programmes did not merit a rating of average and higher. However, as regards the planning of training sessions for the community, the registered nurses rated their performance lower than did their supervisors, whose rating in this regard suggested they were quite happy with the way in which the registered nurses had been fulfilling this role function. Lastly, the training of health workers and community members was also rated more highly by the supervisors as compared to the registered nurses (see Annexure 14: Functions needing urgent actions).

Levels at which PHC role functions are fulfilled

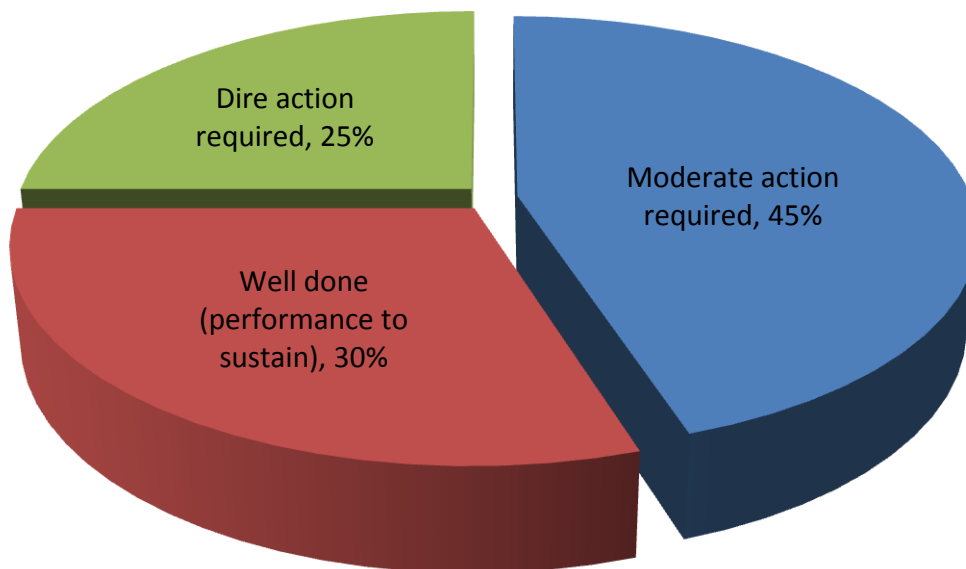


Figure 4.2: Levels at which various PHC role functions are fulfilled by registered nurses in local-level PHC facilities in Namibia

4.7.2. Challenges identified

As presented in the table in Annexure 17, the challenges identified fall into the following groups of PHC elements: water and sanitation and other environmental health issues (environmental hygiene); nutrition and food supply; health education and communication; community diagnosis and care; management and support or administrative function including research (see also sections 4.3.2.1, 4.3.3.1, 4.3.4.1, 4.3.5.1 and 4.3.6.1 respectively, on assessment – recording).

In a similar study conducted in 2005 on support in the form of resources made available by the MOHSS to PHC workers in the Onandjokwe District in the North West Health Region, Namibia, it was found that a lack of resources hampered the fulfilment of certain of the PHC activities by registered nurses. As regards the management component of PHC, Neshuku also uncovered further managerial issues, including a lack of telephone communication and work space. These managerial issues were not picked up in this study (Neshuku, 2005).

Another study conducted by Iiyambo in 2005, which focused on investigating information needs and accessibility of information of health workers in rural health centres, Iiyambo found that health care workers at this level realised what they needed to learn, but there was a need for information to be prepared in writing so as to enable health workers to be able to read the information for themselves (Iiyambo, 2005).

When the challenges identified by the results of this study were considered in relation to the steps of the nursing process, the areas of concern were found to be assessment and planning. This finding, in turn, may imply that the diagnosis, implementation and evaluation may also be deficient in some areas because assessment and diagnosis guides all the functions which are implemented in order to solve the problems

identified in PHC nursing (see graph on the phases of the nursing process – fig. 4.2).

In the next subsections, the challenges identified by this study will be discussed.

4.7.2.1. Challenges relating to water and sanitation and other environmental health issues (environmental hygiene)

The data demonstrate that there is a lack of involvement on the part of registered nurses to assessing or taking part in the nursing role functions as regards water and sanitation and other environmental health issues (environmental health promotion/hygiene). The study results indicate that registered nurses do not adequately assess issues regarding environmental hygiene, such as the safety of drinking water, waste disposal, environmental health hazards and the housing conditions of clients in the catchment area. Some of the respondents did not have sufficient time to discuss these issues with the patients/clients while, in some instances, there was no contact between registered nurses in local health facilities and community health workers. The registered nurses claimed that, as a result of a lack of transport and the heavy workload at the health facilities, they did not find time to do assessment related to environmental health in the catchment areas (see section 4.6 and also Annexure 18). In addition, some of the respondents were of the opinion such environmental health assessment in the catchment area is the function of the health inspectors.

When these results are examined in relation to the other functions that have to do with the assessment of health and disease conditions, as well as the personal services provided to patients, the data suggest that more effort is needed in the assessment of the home environment of the clients.

In a similar research study conducted by Neshuku (2005) on the support in the form of resources made available by the MOHSS to PHC workers in the Onandjokwe District

in the North West Heath Region, Namibia, it was found that a lack of resources hampered the fulfilment of certain of the PHC activities by health care workers. Clark (2008) also writes that, in many instances, nurses are so caught up in the functions related to client management and care that they may forget to carry out an assessment of the environmental issues that can affect health. Clark reminds nurses how essential this function is.

The data also suggest that it appeared as if the overlapping that exists between the role functions of the registered nurse in PHC and those of the health inspector, who also has a stake in community care, was not clear to every registered nurse as some of the registered nurses indicated that the said officials should be taking care of all issues related to the safety of drinking water, housing, and other aspects of environmental sanitation in the area.

A summary of the challenges relating to water and sanitation and other environmental health issues as they relate to registered nurses follows:

- Insufficient assessment of the safety of drinking water for patients/clients.
- Insufficient assessment of waste disposal in the catchment area by registered nurses.
- Inadequate assessment of environment health hazards.
- Poor assessment of housing conditions for patients/clients in the catchment area.

4.7.2.2. Challenges regarding nutrition and food supply

The research findings regarding nutrition and food supply showed that registered nurses do not adequately assess food hygiene, with some of the respondents indicating that their heavy workloads meant that they did not have enough time to do this or that

this function was the responsibility of the health inspector. The data also suggest that the registered nurses were more concerned about the way in which the patients/clients were fed than they were about the quality of food hygiene in the catchment area. However, the literature suggests that registered nurses have a duty to ensure that their patients in the catchment area consume nutritious, well-balanced and hygienic foodstuffs (Johnson, 2007; WHO, 1987; GRN MOHSS, 2006; Whitney et al., 2007; Gibney et al., 2009).

A summary of the challenges relating to nutrition and food supply follows.

4.7.2.3. Challenges regarding health education and communication

The study results indicate that there was inadequate participation in the activities related to the motivation and education of the community on the part of registered nurses. The registered nurses did not conduct adequate assessments of the developmental status of school children; they did not sufficiently assess the needs for home care; they did not sufficiently plan the education sessions of patients; they did not adequately conduct the training/education of fellow health workers; they did not adequately plan for all types of outreach services and there was inadequate provision of home care.

In a similar study conducted by Neshuku (2005) on support in the form of resources made available by the MOHSS to PHC workers in the Onandjokwe District in the North West Health Region, Namibia, it was found that a lack of resources hampered the fulfilment of some of the PHC health activities by health care workers. However, her study also identified inadequate health education as one of the challenges facing health care workers.

Another study which was conducted by Iiyambo in 2005 focused on investigating the information needs and accessibility of information of health workers in rural health centres in the Omusati and Oshana regions. This study found that health care workers in rural health centres knew what they needed to learn, but that there was a need for information to be prepared in writing so as to enable them to read for themselves (Iiyambo, 2005).

Planning outreach services in the community

Outreach services are concerned with increasing access to PHC services in the community. Many of the respondents indicated that they did not feel that this function was adequately carried out. The MOHSS has a system in place in terms of which there is a team which is responsible for the outreach services in each health district (GRNMOHSS, 1992). This may, in fact, be one of the reasons why the study results indicated that the implementation rate of this activity was low. However, for those registered nurses who served in the mobile/outreach team, the results indicated that they had fulfilled the outreach functions well (see table 4.7 ANOVA by outreach).

The issue of staff shortages was mentioned as a contributing factor as regards the nurses in the clinics and health centres not finding an opportunity to conduct outreach visits owing to high patient turnover at the health facilities. However, some of the supervisors expressed doubts about these claims.

A summary of the challenges relating to health education and communication as regards registered nurses follows:

- Inadequate assessment of the development status of school children.
- Insufficient planning for patient/client education.
- Insufficient assessment of needs for home care.

- Inadequate planning for outreach services.
- Insufficient provision of home care.
- Insufficient education of other health workers.

4.7.2.4. Challenges regarding the identification of social problems in families and communities

According to the study results, the assessment of social problems in families and communities in the catchment area was inadequately carried out. This may suggest that the social life of families may deteriorate without the provision of proper support (refer to health education, counselling, etc). As was mentioned earlier in section 4.4.9, Shikongo (2008) made a similar finding in her study on “Assessing how registered nurses apply the sociology of development in their practice”.

Despite the fact that a lack of transport was pointed out as the main reason why these roles and functions as regards the identification of social problems in families and communities were not adequately fulfilled, some of the supervisors claimed that there was also a degree of lack of commitment on the part of some registered nurses to strengthen their roles and functions in this regard, as there were situations in which these may have been fulfilled even when no transportation had been organised.

A summary of the challenges relating to the assessment of social problems in families and communities/community diagnosis and care follows.

4.7.2.5. Challenges regarding management and support or administrative functions

These challenges include the following: insufficient involvement of registered nurses in the role functions related to management and support or administration; registered nurses do not plan sufficiently for programmes managing illness; registered nurses do not take sufficient part in budget planning; registered nurses do not take sufficient part in the planning of project proposals; registered nurses do not take adequate part in the

implementation of the budget; registered nurses do not take sufficient part in the training and education of health workers and registered nurses do not take sufficient part in research activities. In addition, a shortage of staff and a lack of transport were also cited as challenges in this regard.

As was mentioned in section 4.6, similar challenges were identified by Neshuku (2005), although her list of the challenges in PHC management reflect more constraints than those reflected by the results of this study.

Inadequate participation in programme planning on the part of registered nurses

Proper planning for programme activities facilitates the correct and prompt implementation of these programmes and this, in turn, ensures the realisation of the programme objectives (Johnson, 2007; Stanhope & Lancaster, 2008; Jooste, 2010). The results of this study indicate that the registered nurses felt that they did not contribute to programme planning.

Registered nurses do not take sufficient part in budget planning

The registered nurses indicated that they did not participate sufficiently in budget planning, while the supervisors claimed there was also, to a certain extent, a lack of/inadequate awareness in some instances.

However, there is always the danger that, if the registered nurses are not included, they may feel they are not part of the planning process and there may be a lack of support for programme implementation, as well as a lack of care in handling resources. However, the study results indicate that the registered nurses in Namibia are reasonably efficient in ensuring that the materials and equipment are used for the correct purpose (see section 4.3.5.1 (implementation) and section 4.3.6.1 (evaluation)).

Registered nurses do not take sufficient part in the planning of project proposals

As in the case of budgeting, the planning of proposals is also position linked and not every registered nurse takes part in the development of project proposals. In fact, some of the registered nurses indicated they were not even aware of those functions happening in the health facilities, while others maintained that it is the responsibility of the supervisors to take care of such functions.

Registered nurses do not take sufficient part in the implementation of the budget plan

Programme planning, budgeting and proposal writing are all activities that are position linked, while, in the MOHSS in Namibia, not all the activities relating to these services are visibly decentralised, a situation that may cause some health workers to feel uninvolved if proper communication at facility level is not ensured (GRN, 1992; Official National Primary Health Care /Community Based Health Care Guidelines).

Registered nurses do not adequately participate in the training and education of health workers

The education of health workers is the best tool with which to update knowledge and skills, a condition that is required for enhanced practice (Mason-Whitehead & Mason, 2008; Jooste, 2010). However, the study results indicate that this function was not well done, a situation that may imply a lack of proper care in this regard.

Registered nurses do not take sufficient part in research activities

Research provides evidenced-based information to guide decision making and innovation. However, the study results indicate that registered nurses are not conducting research. The reasons cited for not conducting research included the following: no time to do so as a result of heavy workload at the health facility, lack of knowledge, ignorance regarding when and where to do it and not involved. However,

the implication is that if research is not conducted problems may go unnoticed, no solutions to problems will be found and/or no improvements will be effected. However, the supervisors also claimed that there was an element of inadequate insight to recognise the contribution to research at facility or community level by, for example, keeping accurate statistics/health information; analysing the disease trends reflected in the daily clinic records of patients; recording all cases seen; and reporting suspected outbreaks.

Insufficient resources (staff and materials) and facilities to ensure adequate fulfilment of primary health care nursing role functions

The registered nurses and the supervisors cited inadequate staffing and a lack of transport as the main reasons why most PHC functions were not sufficiently implemented. They also indicated that heavy workloads at the health facilities in the presence of shortages of registered nurses made life more difficult at this level of PHC practice. Nevertheless, the supervisors also claimed that there was an element of a lack of/inadequate commitment on the part of some of the registered nurses because there were instances in which the health facility was not always overcrowded and yet no health education was being given. Some of the supervisors also felt that some of the registered nurses needed support as regards prioritising duties.

The possible dangers associated with insufficient staffing, coupled with heavy workloads, include the staff, in this case the registered nurses, being overworked and developing burnout syndrome; poor quality of services and, subsequently, demotivation (Booyens, 1999; Morrison, 2008).

A summary of the challenges regarding management and support or administration as they relate to registered nurses follows:

- Insufficient planning of programmes to manage illness
- Insufficient involvement in budget planning
- Insufficient participation in the planning of project proposals
- Inadequate participation in budget implementation
- Inadequate planning for outreach services
- Insufficient education of other health workers
- Shortage of staff
- Inadequate transport
- Not taking part sufficiently in research activities

4.8. SUMMARY

From the results that were analysed, it is clear that registered nurses in local-level, PHC practice in Namibia fulfil most of the roles and functions expected of them. However, they do face some challenges which make it difficult for them to execute some of their roles and functions in this regard. This situation was evident in the views of both the registered nurses and their immediate supervisors and in the ratings they accorded to the various items in the questionnaires. The challenges were categorised according to the five elements of PHC and management, namely, water and sanitation and related environmental health issues; nutrition and food supply; health education and communication; community diagnosis and care; and management support or administration, including research. It is, thus, essential that strategies to address the challenges identified be developed. In the next chapter, a conceptual framework for developing strategies to support the roles and functions of registered nurses in local-level PHC facilities will be described based on the challenges that were identified.

CHAPTER 5

CONCEPTUAL FRAMEWORK FOR THE FORMULATION OF STRATEGIES AIMED AT SUPPORTING REGISTERED NURSES IN THEIR UTILISATION OF THE NURSING PROCESS WHEN EXECUTING THEIR ROLES AND FUNCTIONS IN LOCAL-LEVEL PRIMARY HEALTH CARE (PHC) PRACTICE IN NAMIBIA

5.1. INTRODUCTION

The purpose of this chapter is to conceptualise the empirical findings which arose from phase 1 and which reflected the execution of the role and function of the registered nurses using the nursing process in local-level PHC practice. The ultimate aim of the study is to develop strategies to support registered nurses in their execution of their role and functions regarding daily PHC practices.

A conceptual framework organises a visual representation of the events taking place in a certain situation in such a way that they are made clear to the readers. It is possible, from what is presented in a framework, to obtain a clear idea of the situation as well as the actions that may be taken to ensure that matters work in the best way possible (Babbie, 2008). Based on the study findings and the literature review, the researcher in this study identified certain areas that required improvement in respect of the fulfilment of the roles and functions of registered nurses in local health facilities in the health districts. Based on the above background, a conceptual framework for the study was developed, with the strategies formulated to support the registered nurses in utilising the nursing process in their daily PHC practice being based on this framework.

Questionnaires were used to gather the relevant information and the five main areas in terms of which registered nurses need support in executing their roles and functions were revealed. These areas included water and sanitation and other environmental health issues; health education and communication, including outreach activities; nutrition and food supply; community diagnosis and care as well as management support or administrative functions in PHC, including research and the education of health workers, and fellow registered nurses. These main areas were arrived at by classifying the concepts that related both to the elements of PHC and the management of such services with the classification of the concepts being the result of a logical reasoning process on the part of the researcher.

5.2. THE CONCEPTUAL FRAMEWORK FOR DEVELOPING STRATEGIES

The conceptual framework for the development of strategies in this study is structured according to the survey list suggested by Dickoff et al. (1968). This survey list facilitates the identification and categorisation of major concepts for further refinement, thus ensuring the logical development of the practice strategies. In addition, Dickoff et al.'s (1968) list includes the following components: the agent, context, recipient, dynamics, procedure of the activity and terminus. These components are presented in figure 5.1

Agent: The agent is the researcher, who, in this study is both an educator and a registered nurse. Thus, in the context of this study, the researcher, as agent, in consultation with the Director for Primary Health Care in the MOHSS, had to provide the activity, namely, the strategies to support registered nurses in fulfilling their roles and functions in PHC.

Recipient: The recipient is the person whom, in the context of this study, the strategies will benefit – the registered nurses and their supervisors, who were also registered nurses, but serving in supervisory positions in order to ensure that the roles and functions of the registered nurses in PHC were being satisfactorily fulfilled.

Procedure: In the context of this study the procedure refers to the facilitation of the development of strategies to be used by registered nurses and supervisors in their utilisation of the nursing process as regards the implementation of the PHC elements.

Context: For the purpose of this study, the context refers to the environment of the health facilities in health districts in which PHC is being delivered outside of hospitals.

Dynamics: In the context of this study the dynamics refer to the challenges being faced by registered nurses in their daily fulfilment of their roles and functions. The dynamics indicated by the registered nurses and their supervisors who participated in this study include the following:

- Registered nurses in local-level PHC facilities do not adequately assess issues regarding environmental health, for example, the safety of drinking water.
- Not enough discussion with patients/clientson issues regarding environmental health.
- At times little or no contact with community health workers.
- Assessment of waste disposal not carried out by a number of registered nurses.
- Other environmental health hazards, including unhygienic conditions and noise, also inadequately assessed.
- Inadequate assessment of housing conditions of clients in the catchment area.

- Registered nurses do not carry out sufficient education of both patients and fellow health workers.
- Inadequate assessment of the developmental status of school children.
- Poor assessment of social problems of families and communities in the catchment area.
- Inadequate assessment of need for home care.
- Insufficient planning for outreach services of all types.
- Inadequate provision of home care.
- Lack of participation by registered nurses in health service management functions, including planning of PHC delivery, budgets and writing proposals

Some nurses were unaware of the existence of such functions while others felt that these were the responsibilities of supervisors.

- Inadequate staffing is one of the main reasons why the implementation of most of the functions pertaining to PHC is inadequate.
- Registered nurses do not carry out sufficient research.

Thus, if the roles and functions of registered nurses as regards the provision of PHC services are to be sufficiently fulfilled in their daily practice, it is essential that strategies and action plans be developed and implemented, with these strategies and action plans being based on overcoming the challenges that have been identified and which are listed above.

Terminus: In the context of this study the terminus refers to the outcomes that will result from the implementation of solutions to the challenges encountered in the daily practice of registered nurses in local-level PHC facilities.

These components will be discussed in more detail below but, first, figure 5.1 presents a diagrammatic presentation of the components.

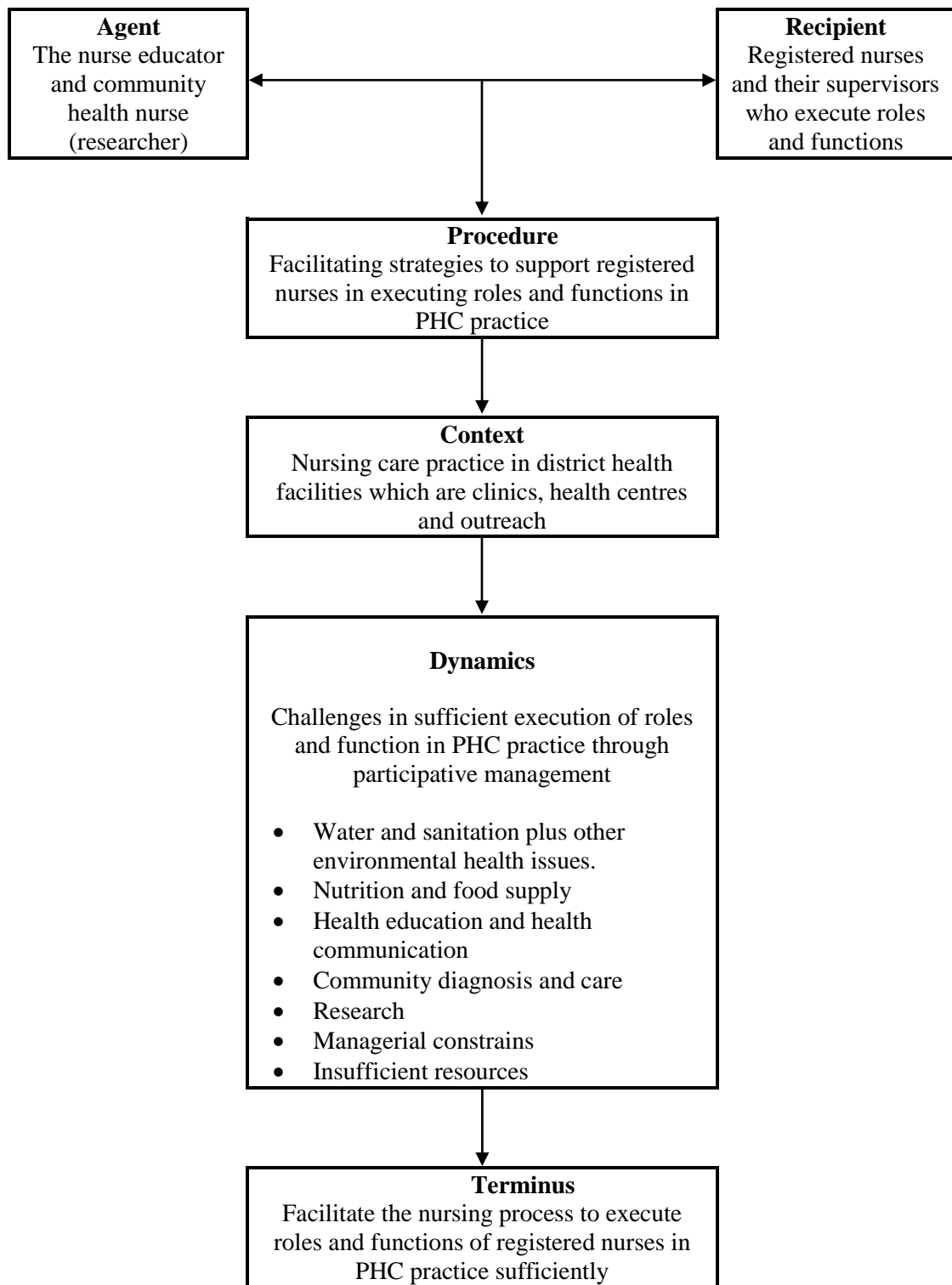


Figure 5.1: The reasoning map

5.2.1. Agent: Researcher

For the purpose of this study the researcher, who is both an educator and a registered nurse, is the agent and, thus, she is the one who provides the activity, namely, the strategies to support registered nurses in utilising the nursing process to implement the elements of PHC in their daily facility practice.

In order for the agent to facilitate the development of such strategies, it requires, firstly, that the researcher, as the agent, possess the personal qualities needed to build good interpersonal relationships with the recipients, namely, the registered nurses and their supervisors. Secondly, as an advanced community nurse practitioner, the researcher should have a clearly identifiable clinical role in guiding and supporting the registered nurses in local-level PHC practice. It emerged from the study results that the registered nurses needed guidance and support with regard to utilising the nursing process in their daily PHC practice. This was evident in the views they expressed concerning their inadequate execution of certain of the elements of PHC.

An agent is an individual who creates awareness amongst service providers of the acceptable quality of the services offered through governance, integrity and dignity and effective cooperation among team members. Mathis and Jackson (2000) are of the opinion that an agent is a person whose presence has a positive effect on something that is being implemented, for example strategies. This statement correlates with the fact that, in this study, the researcher is the agent who will develop the strategies (procedure) to support registered nurses and their supervisors in the fulfilment of their roles and functions with regard to local-level PHC.

Figure 5.2 illustrates the various roles assumed by the agent when facilitating the development of such strategies.

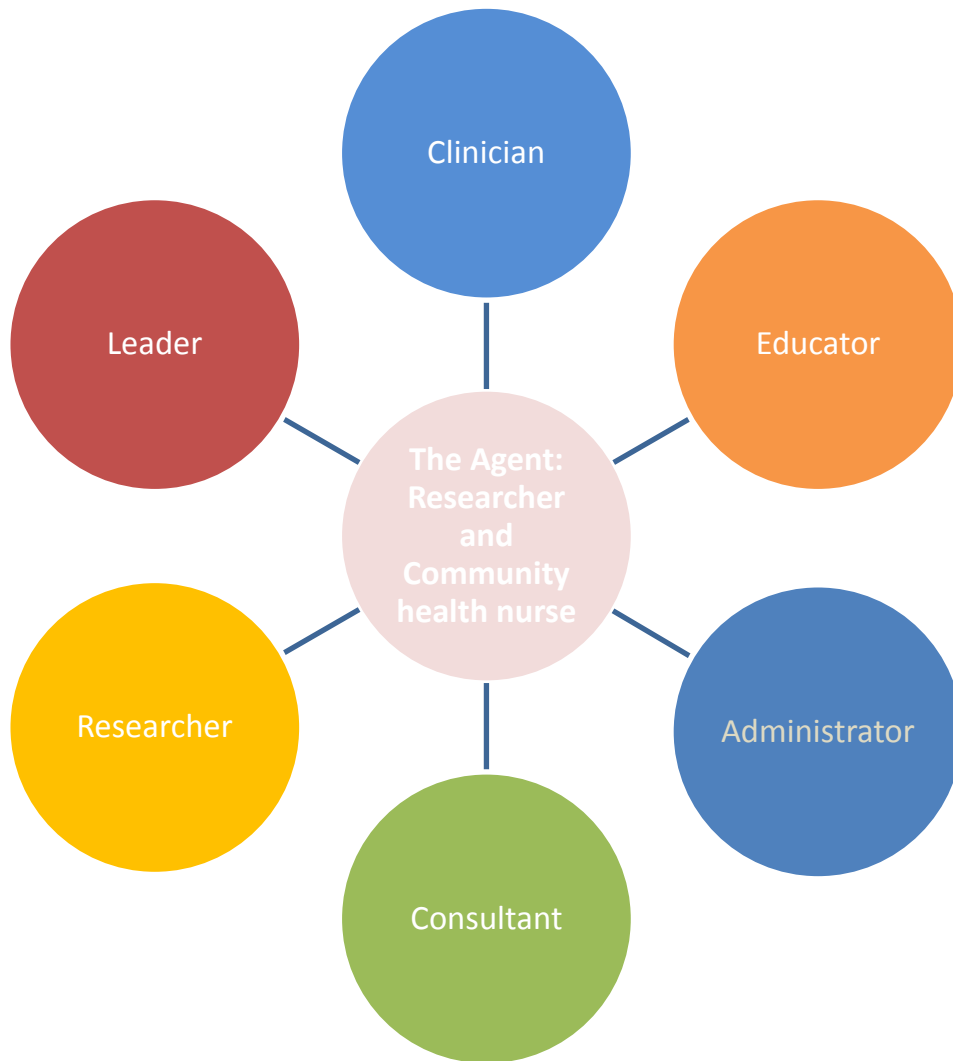


Figure 5.2: The agent

The agent, in facilitating the development of strategies, is enabled by her capacity to serve as leader, educator and consultant (Stanhope & Lancaster, 2006) in empowering registered nurses to fulfil their roles and functions. In addition to these three roles, the agent also fulfils the three roles of clinician, administrator and researcher. All these roles together enabled the agent to contribute to the empowerment of registered nurses in local-level PHC.

Six roles enabled the agent to facilitate the development of the required strategies. In figure 5.2 the four roles of leader, researcher, consultant and educator are highlighted, indicating the active role of the researcher in developing strategies during the research

study, while the roles of clinician and administrator are not coloured and these indicate that the researcher recognised that she was not in charge of the PHC practice or administration/management thereof, but that she is a mere nurse professional, who was able to serve as a resource person to the registered nurses and their supervisors. The agent was aware that the final decision to accept or reject the strategies developed lay with the registered nurses and their supervisors, as well as the managers in PHC.

The six roles of the agent are discussed below:

Leader: As a leader, the agent served to facilitate the adoption of a culture that would reinforce the slogan that effective nursing leaders understand the concept of service leadership. This, in turn, involves encouraging the implementation of all steps taken to ensure sure that the customers (clients) come first, even if this may bring about some changes/adjustments in the organisational bureaucracy (Stanhope & Lancaster, 2006; Hess & Cameron, 2006; Tomey, 2009; Amos, Ristow, Ristow, & Pearse, 2008; Geyer et al., 2009; Gopee, 2008; Jooste, 2009; Smit et al., 2007).

Educator: In the context of the study, the agent, as educator, advises on the facilitation of identifying at risk groups within a community, the implementation of health education and the promotion of a healthy lifestyle for individuals, families, aggregate groups and the community, as well as for health care workers (Stanhope & Lancaster, 2006; Tomey, 2009; Geyer et al., 2009; Smit et al., 2007).

Consultant: As a result of her knowledge and experience in clinical nursing, education, research and administration, the agent, as consultant, is able to serve as a guide to both the registered nurses in PHC facilities and to their supervisors on issues regarding the assessment of individuals, families, groups and communities in order to

identify problems and propose possible innovations to client services (Stanhope & Lancaster, 2006; Amos *et al.*, 2008; Jooste, 2009).

Clinician: In her capacity as clinician the agent has a responsibility to advise and offer suggestions on best practices regarding the overall assessment, planning, development, coordination and evaluation of innovative programmes to meet the community health needs identified (Stanhope & Lancaster, 2006; Mank, 2006; Gopee, 2008).

Administrator: In her capacity as administrator the agent may suggest actions on administrative matters within the PHC context, including suggestions on issues related to decision making and problem solving, advising on the management of personnel as well as health programmes that include budgeting, establishing quality control mechanisms and programme planning and influencing the policies, public relations and marketing of PHC services (Stanhope & Lancaster, 2006; Tomey, 2009).

Researcher: In her capacity as researcher, she identifies, defines and investigates clinical nursing problems and report findings. She also encourages peer relationships with other professions and contributes to health care policy and decision making. In addition, she carries out relevant research studies that will contribute to improved nursing practice in local-level PHC (Stanhope & Lancaster, 2006). Jamerson and Vermeersch (2012) identify the following three main roles of the research facilitator, namely, conducting research; developing research capacity and building a research culture within the organisation.

One of the essential personal qualities of the agent in terms of implementing the strategies developed is the ability to build good interpersonal relationships with all

concerned in managing PHC. Thus, in terms of her relationship with others, the agent should be able to

- establish and maintain positive relationships based on mutual trust
- work collaboratively
- display a supportive facilitation by showing concern and interest
- communicate effectively
- be sensitive to the needs of registered nurses
- be transparent (Stanhope & Lancaster 2000; Tomey, 2009; Ginger & Davidhizar, 2008).

The agent, who in this study is also the researcher and a lecturer, should have both advanced knowledge of PHC services and the nursing process, as well as the skills required to act as a leader. Advanced nursing practice is characterised by a depth and breadth of knowledge in a specific field, in this case, nursing and PHC, as well as the ability to incorporate this knowledge into teaching, theory and practice, leading and consultancy. In other words, the advanced nurse practitioner guides the practice of nursing (Stanhope & Lancaster 2000). Accordingly, the strategies developed must be of such a quality that they will support and motivate the registered nurses to make a difference in local-level PHC practice.

In addition, it is essential that the agent possess certain characteristics that will empower and support the strategy development process in terms of registered nurses' use of the nursing process. These characteristics will be discussed in the following sections:

Competency

According to Tomey (2009), Amos *et al.* (2008), Geyer *et al.* (2009), Berman *et al.* (2008) and Smit *et al.* (2007), it is essential that, in the context of this study, the agent have expert knowledge and skills as regards her role of guiding and supporting the registered nurse in fulfilling her roles and functions in PHC practice.

Leadership

Nurse managers need effective leadership, interpersonal, organisational and political skills. With today's strong emphasis on teamwork, partnership and coalition, management skills are focusing increasingly on coaching and leading empowered groups. Thus, the leadership essential to these roles involves identifying a vision and influencing others to realise the vision, while considering the wellbeing of clients, flexibility and the ability to interact comfortably with different types of people and cultures (Hess & Cameron, 2006; Daft, 2010; Tomey, 2009; Amos *et al.*, 2008; Geyer *et al.*, 2009; Gopee, 2008; Jooste, 2009; Smit *et al.*, 2007).

Critical thinking

Critical thinking involves values and also renders assumptions explicit and encourages creativity and innovation (Ivancevich, Konopaske, & Matteson, 2008; Tomey, 2009; Pretorius, 2008; Jooste, 2009; Berman *et al.*, 2008; Smit *et al.*, 2007). In terms of facilitating the strategies developed in the context of this study, critical thinking is required because it encourages reflection on the connections between the sociocultural and biophysiological aspects of both health status and health care services.

5.2.1.1. Concluding statement for the agent

In conclusion, the agent – the researcher in the context of this study – is the person who developed the strategies designed to support registered nurses in their roles and

functions in local-level PHC practice. This, in turn, required that the agent (researcher) established a special relationship with the recipients and, furthermore, it required characteristics such as competency, leadership, perseverance and trust.

5.2.2. Recipient (registered nurses)

According to Dickoff *et al.* (1968), the recipient is defined as the person who receives. Thus, in this study, the recipient refers to those persons who will benefit from the strategies, namely, the registered nurses who practise in local-level PHC facilities and their supervisors who are also registered nurses but who are serving in supervisory positions in order to ensure that the roles and functions of the registered nurses in PHC are being satisfactorily fulfilled.

In figure 5.1 the recipient represents the core components of nursing care, namely, professional roles and functions, professional values and professional characteristics. According to this figure, both the registered nurses and the supervisors of PHC are the rightful owners of PHC practice.

The discussion of the recipient will, thus, be based on the core components of nursing care as depicted in figure 5.3 below:



Figure 5.3: The core components that guide the nursing care provided by the recipient

5.2.2.1. The roles and functions of the recipients

It is clear from the study results that registered nurses do not always fulfil their roles and functions in PHC delivery. Thus, if the registered nurses are to be the beneficiaries of the strategies designed to support them, it is essential that they revisit these roles and functions as professional nurses, both in terms of the characteristics that are required of them to fulfil these functions and the professional values they will need.

As mentioned earlier, in this study, the registered nurses in local-level health facilities where PHC is provided were the recipients of the activity, namely, the strategies aimed at supporting their execution of their roles and function in fulfilling the PHC elements using the nursing process as a framework. The registered nurses in this case may also be the supervisors. It became clear from the study results that the registered

nurses were encountering certain obstacles in their execution of their roles and functions in the provision of local-level PHC. These obstacles included the following:

- Inadequate assessment by registered nurses of water and sanitation and other environmental health promotion.
- Insufficient assessment of food hygiene.
- Insufficient participation by registered nurses in activities related to the health education and health communication (motivation and education) in the community, including outreach services.
- Inadequate assessment of the social problems of families and the community as a component of community diagnosis and care.
- Inadequate involvement in functions related to management or administration, including financial planning and management, and a lack of skills as regards conducting research and insufficient training of fellow health workers, including other nurses.
- Insufficient number of nursing posts to ensure quality nursing care by registered nurses.

These obstacles were derived from the summaries of the challenges that registered nurses and supervisors were experiencing. In this study, the registered nurses were viewed as partners in various relationships, including with their colleagues, supervisors, sub-professional nurses, multisectoral team members, the researcher, patients/clients, students and non-governmental organisations. Accordingly, the recipient is expected to fulfil certain roles and functions and to possess certain characteristics in order to maintain effective relationships. In the following sections

the roles of the registered nurses in local-level PHC will be discussed, followed by a discussion on the functions of the registered nurse.

Roles of the recipient

PHC nurses are part of a community of health nurses (Vlok, 1996; Stanhope & Lancaster, 2000; Stanhope & Lancaster, 2008; Clark 2008; Tomey, 2009; Berman *et al.*, 2008) and their primary mission is to improve the health of the population through health promotion, the prevention of illness and injury and the protection of the public from a wide variety of biological, behavioural, social and environmental threats. The purpose of these activities is to promote the good life in all of its physical, social, psychological, cultural and economic aspects, while focusing on caring for the aggregates. Aggregates in the context of PHC refer to sub-groups of a population who share common characteristics or health challenges, such as pregnant adolescents and the elderly. It is, thus, essential that the PHC nurses are informed about the needs of the individuals and families in a community, with the ultimate aim of improving the health of the entire population.

As regards community PHC, registered nurses apply the principles of public health in their approach to nursing care (Clark 2008; Ginger & Davidhizar, 2008; Fraser & Cooper, 2009; Rassool, 2009; Goldenberg & Goldenberg, 2008; Eshun & Gurung, 2009; Liampotong, 2007; Quinn & Hughes, 2007; Du Toit & Van Staden, 2009). See Annexure 19 for the core functions of public health. A research study conducted by Baldwin *et al.* (2010), on ways in which to enhance the visibility and public awareness of public health nurses in the United States Department of Health, concluded that public health nurses should care not only for patients but also for the community. In addition, they should be aware of both communicable diseases and the safety of the environment with more emphasis on awareness raising for the

community in terms of the members of the community taking initiatives in the care of their own health.

The roles and functions of PHC nurses are categorised on the basis of the primary focus of nursing care as being client-oriented, delivery-oriented or population-oriented (see figure 5.4).

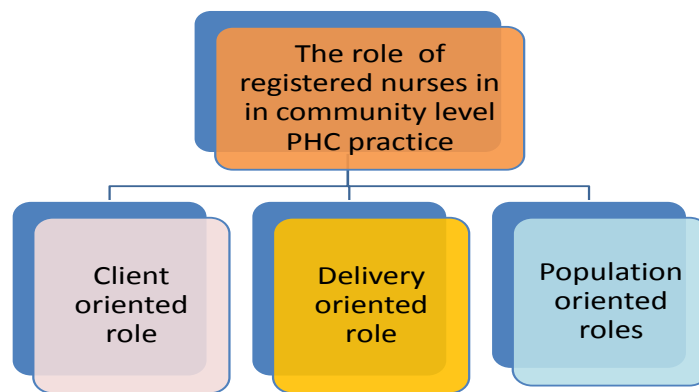


Figure 5.4: The primary focus of community PHC nursing as rendered by the recipient

The various role functions that must be fulfilled by registered nurses as regards each role will be described in the next section, but first they are listed in the table below:

Table 5.1: The role of the recipient

Category of role	Role functions
Client oriented	Care giver Educator Referral resource Counsellor Role model Case manager
Delivery oriented	Coordinator/care manager Collaborator Liaison Educator



Population oriented	Case finder Leader Change agent Community mobiliser Policy advocate Social marketer Researcher Educator
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Client-oriented role

The client-oriented role involves the direct provision of services to individuals and families and, occasionally, to groups of people. It does not, however, entail the exclusive provision of population-focused services, but instead uses services to individuals and families as one way in which to improve the health of the population. Population-focused nursing is, thus, grounded in individuals and families. The client-oriented community health nursing roles include those of caregiver, educator, counsellor, referral resource, role model, primary care provider, and case manager (Tomey, 2009; Gopee, 2008; Jones, 2007; Stanhope & Lancaster, 2008).

Caregiver: This role involves applying the principles of epidemiology and the nursing process to the care of clients at any level – individual, family, group, or community. It also includes assessing the needs of clients, making nursing diagnoses, and planning appropriate nursing interventions, including various nursing procedures, and evaluating the nursing care provided and its outcome. When these principles are applied to the care of the population, it entails planning programmes designed to improve health (Tomey, 2009; Jooste, 2010; Bhengu et al., 2008; Gopee, 2008; Silverman et al., 2005; Stanhope & Lancaster, 2008).

Educator: This role facilitates the learning that leads to positive health behaviour on the part of clients. However, the role also involves educating, students and health

professionals, including fellow registered nurses (Tomey, 2009; Jooste, 2009; Berman *et al.*, 2008; Stanhope & Lancaster, 2008).

Counsellor: This role includes helping clients to choose viable solutions to their health problems. In other words, it involves helping them to utilise the problem-solving process and to decide on the most appropriate course of action.

Referral resource: This role entails the process of directing clients to the resources required to meet their needs. These resources may be other agencies that are able to provide the necessary services or the resources of information, equipment, or supplies that the client needs and that the community health nurse is not able to supply (Gopee, 2008; Berman *et al.*, 2008; Stanhope & Lancaster, 2008).

Role model: The role involves either consciously or unconsciously demonstrating behaviour to others who perform a similar role to the registered nurse, for example other nurses and other members of the health care team (Tomey, 2009; Gopee, 2008; Jones, 2007; Stanhope & Lancaster, 2008).

Case manager: As case manager, the registered nurse coordinates and directs the selection and use of health care services to meet client needs, maximises resource utilisation and minimises the expense of care (Gopee, 2008; Jones, 2007; Berman *et al.*, 2008; Stanhope & Lancaster, 2008).

Delivery-oriented roles

These are roles designed to enhance the operation of the health care delivery system, thus resulting in better care for clients. These delivery-oriented roles include the following:

Coordinator/care manager

This role includes organising and integrating services to meet client needs in the best and most efficient manner possible. This, in turn, involves determining who is providing care to the client, where the services overlap and where gaps in the care may be occurring as well as communicating with other providers regarding the particulars of the client situation and client needs; arranging events such as meetings and conferences to disseminate information, bringing agencies together and coordinating individual client care (Tomey, 2009; Jooste, 2010; Gopee, 2008; Jones, 2007; Shober, 2008; Berman *et al.*, 2008; Stanhope & Lancaster, 2008).

Collaborator

In this role the registered nurse facilitates a good working relationship among the members of the health care team. Thus, this function differs from the coordination of care services which is limited to the registered nurse's area of work (Tomey, 2009; Gopee, 2008; Jones, 2007; Berman *et al.*, 2008).

Liaison

In terms of this role the registered nurse provides a connection, relationship or inter-communication between the various health and social agencies involved in the care of a client (Tomey, 2009; Jooste, 2009; 2010; Jones, 2007; Berman *et al.*, 2008).

Educator

As an educator the registered nurse facilitates learning that leads to positive health behaviour on the part of clients but also provides education for students and health professionals, including fellow registered nurses (Jones, 2007; Berman *et al.*, 2008; Stanhope & Lancaster, 2008). (See client-oriented roles discussed above.)

Population-oriented roles

These roles are directed towards promoting, maintaining and restoring the health of the population and include:

Case finder

This role involves identifying individual cases, occurrences of specific diseases or other health-related conditions requiring services as well as suggesting and implementing appropriate responses to each case, for example food poisoning (Fawcett & Waugh, 2008; Stanhope & Lancaster, 2008).

Leader

As a leader the registered nurse influences the behaviour of others and selects an appropriate leadership style. In addition, this role involves assessing the leadership needs of followers and applying the leadership style appropriate to both the followers and the situation at hand (Daft, 2010; Jooste, 2009; 2010; Jones, 2007; Berman *et al.*, 2008).

Change agent

A change agent is a person who facilitates others to change a bad situation to a good situation and to cope with any sudden deviations from daily condition in such a way that the situation will not be too disruptive (Daft, 2010; Shober, 2008). The registered nurse in PHC serves as a change agent, working with individuals, families, groups and communities in the delivery of health care.

Community mobiliser

This role involves the sensitisation and awakening of community groups so as to enable them to identify common goals and mobilise the assets required to implement strategies that address local concerns. In addition, the registered nurse, as community mobiliser, promotes the active participation of community members in identifying and

solving problems of concern (Shober, 2008; Clark, 2008; Stanhope & Lancaster, 2008).

Coalition builder

This role involves facilitating the process of creating either the temporary or permanent alliances of individuals or groups in order to achieve a specific purpose as well as facilitating community-wide problem solving and collaboration, particularly as regards policy and programme development (Tomey, 2009).

Policy advocate

Advocacy is about finding a voice for those who are not able to speak for themselves in order to defend themselves, especially the poor, the weak or the vulnerable (Stanhope & Lancaster, 2010; Daft, 2010; Jooste, 2010; Berman *et al.*, 2008). Thus, as a policy advocate the registered nurse works for and argues on behalf of either policy formulation or changes in policy that influence the health of population groups.

Social marketer

As a social marketer the registered nurse uses social marketing techniques to influence the voluntary behaviour of target audiences with the aim of improving either their personal welfare or that of society (Daft, 2010).

Researcher

The role of researcher involves critically reviewing relevant research and its application to practice, identifying researchable problems, designing and conducting research studies, collecting data and disseminating research findings. The aim of this behaviour is to improve the health of the total population (Stanhope & Lancaster, 2008; Guest & Scullion, 2007).

Educator

This role involves facilitating the learning that leads to positive health behaviour. Thus, clients and others are provided with the information and insight that enables them to make informed decisions on health matters. In addition, this role includes educating students and health professionals, including fellow registered nurses (Jones, 2007; Berman *et al.*, 2008). (See also client-oriented roles and delivery-oriented roles above.)

Qualities of the recipient

If the recipient is to carry out his/her duties properly, then he/she should possess the following qualities:

- A sense of responsibility in terms of making contact with or involving the community in matters related to their health care through community leaders, and endeavouring to instil a spirit of cooperation in the families in the community so that they support the activities related to environmental hygiene.
- Be open to communication with supervisors about the areas in which the registered nurses feel they need support.
- Should be advocates of health promotion initiatives related to the care of adolescents and school children.
- If necessary, use private time to assess environmental issues in surrounding communities.
- When interacting with patients, endeavour to assess the issues related to household hygiene and also socioeconomic issues.
- Develop a strong conviction that, as a professional nurse, it is possible to aspire to greater things.

- Those registered nurses in supervisory positions should take the initiative to serve as role models for their subordinates (Coetzee *et al.*, 2007; Rily, 2008).

Functions of the recipient

Registered nurses have dependent, independent and interdependent roles and functions (Searle *et al.*, 2009).

These roles and functions are described in the following sections:

Dependent functions

The dependent function of the registered nurse involves obeying the law which authorises her practice, as well as the relevant common and statutory laws, while remaining accountable for every function which he/she, as a professional person, carries out and/or those functions which he/she neglects to fulfil sufficiently in his/her expected role. This expected role is based on the provisions of the Nursing Act, 2004 (Act No. 8 of 2004) and the regulations that authorise the practice of the registered nurse (Searle, 1987; Jooste, 2010; Searle *et al.*, 2009; GRN, 1990).

As regards the elements of PHC, a registered nurse is expected to ensure that, in her daily practice, she focuses on all the functions that should be carried out for the wellbeing of patients/clients in the catchment area he/she serves, while utilising the nursing process as a framework to guide the care rendered (see section 2.4 chapter 2).

Independent functions

According to Searle (1987) and Searle *et al.* (2009), there are two aspects to the independent function of a registered nurse. The first aspect is related to those factors which are inherent in nursing diagnosis, treatment and care – the normal prescriptive, organisational and implementation functions of the nurse. The second aspect is related to the manner in which a registered nurse performs her duties as a registered nurse,

irrespective of whether these are independent or interdependent functions. This, in turn, means that the registered nurse remains totally accountable and responsible for her actions, while the doctor may not be held accountable for the actions of the registered nurse provided that the doctor has ensured that that his/her prescription was clear. This requires that a registered nurse ensure that her knowledge and skills are up to date as regards her practice. In addition, the registered nurse will refuse to participate in illegal and/or unethical practices (Tomey, 2009; Jooste, 2010; Barnald & Locsin, 2007; Searle *et al.*, 2009).

Once a registered nurse has accepted the prescription or direction from the doctor or other member of the health care team, she has made a commitment in terms of interdependent action and has a duty to carry out this action, while accepting full responsibility for her actions (Tomey, 2009; Searle *et al.*, 2009).

The fulfilment of the PHC role functions requires that the registered nurse carry out all the duties in this regard and, based on the nursing process, maintain a good working relationship with the doctor and other members of the health team, as well as ensuring that the rights of the patients/clients are respected (Shober, 2008).

Interdependent functions

The interdependent function refers to the interrelationship between the registered nurse and the other members of the health team in the interests of the patient and relates primarily to the interdependence of the registered nurse and the doctor, the nurse and the supplementary health service personnel, and the nurse and the pharmacist. The nurse is neither a servant nor a subordinate of the doctor attending a patient, except in the case of the medical superintendent and his/her deputies or others who may have been placed in a service position in direct authority over the registered

nurse. However, in a doctor–nurse–patient relationship, the relationship is a collegial one between the doctor and the registered nurse, with both being responsible for the patient and his/her safety. As a registered professional practitioner the registered nurse is personally accountable to the registration authority – the Namibian Nursing Council – to the patient, and to society under the law of the Republic of Namibia. In addition, the registered nurse is administratively responsible to his/her employer (Searle, 1987; Tomey, 2009; Searle *et al.*, 2009; Nursing Act No 8 of 2004; GRN, 1990).

This responsibility of the registered nurse, as mentioned above, is also true for PHC delivery. The nurse has a specific coordinating function to ensure that the patient is rendered all the services he/she needs from the various members of the health team. In addition, the registered nurse is accountable for both his/her acts and omissions regarding this responsibility, while the doctor is not accountable for the acts carried out by the registered nurse. However, the doctor is expected to ensure that his/her prescriptions, instructions or requests are recorded, clear, valid, within the law and that the person to whom he/she has entrusted his/her prescriptions or instructions understands them and is able to implement them in the best interests of the patient (Searle, 1987; Tomey, 2009; Jones, 2007).

In nursing practice, the nurse shares the instrumental and expressive roles with the doctor while, as regards the nurse–doctor–patient relationship in the health care continuum, the work of the doctor and the nurse may overlap. Both the doctor and the nurse have an instrumental as well as an expressive role. The instrumental role is concerned primarily with the acquisition of knowledge regarding the health situation, the evaluation of such knowledge, and the utilisation of this knowledge in the search

for a possible solution to the problem. In other words, this role involves observation, diagnosis, therapeutic planning and intervention and the selection, on scientific grounds, of the nature and extent of the therapeutic intervention. On the other hand, the expressive role is more concerned with the establishment and maintenance of an extensive and effective therapeutic environment and includes administrative aspects relating to the establishment of a safe, restful, pleasant and purposeful environment, with special emphasis on the exclusion of medico-legal hazards, and the ensuring of maximum physical and psychological safety.

The expressive role aims to reduce patient tension by accepting the individual as he/she is, with full recognition of his/her individuality, fears, hopes and recovery potential and by supporting the patient through the basic nursing care, thus demonstrating the concern of the nurse for the patient. In addition, this role involves identifying the health needs of the patient correctly, obtaining appropriate assistance from other health professionals and carrying out all therapeutic interventions and nursing care in the right manner (Tomey, 2009; Bhengu *et al.*, 2008; Barnald & Locsin, 2007; Searle *et al.*, 2009). This should include an assessment of any social pressure and the way in which this social pressure may be contributing to psychological distress in the patient, thus influencing his/her health negatively in the long run (Pilgrim, 2010; Fawcett & Waugh, 2008).

The doctor's role is primarily instrumental and, to a lesser extent, expressive. On the other hand, the role of the registered nurse is primarily expressive and, to a lesser extent, instrumental, except where the registered nurse is functioning in the role of either doctor or pharmacist, in the absence of one or both of these health practitioners. In certain instances, tasks that should be carried out by the doctor or the pharmacist

are performed by a registered nurse. However, it is emphasised that, whatever instrumental role the registered nurse carries out in the absence of either the doctor or the pharmacist or other members of the health care team, it is essential that the registered nurse bear in mind that she is fulfilling this role as a nurse and never claim to be a doctor or otherwise (Tomey, 2009; Geyer et al., 2009; Searle *et al.*, 2009).

Registered nurses should always remember not to neglect the expressive role, as inefficiency or negligence in the expressive function gives nursing a poor image. On the other hand, fulfilment of these roles makes nursing a caring profession. The varying roles of the registered nurse, with so much more emphasis being placed on the instrumental role, and so much of the expressive role being delegated to semi-skilled nurses, will, inevitably, have an adverse effect on the image of nursing in the future, if not properly addressed (Jooste, 2010; Searle *et al.*, 2009).

5.2.2.2. The professional characteristics that the recipient should possess

Curiosity

Curiosity refers to a strong desire to know about something while intellectual curiosity refers to the act of using a person's ability to think in a logical way and to understand things (*Oxford Advanced Learner's Dictionary*, 2010). As leaders in the nursing profession, it is essential that registered nurses make use of this trait to enable them to take risks. In addition, curiosity facilitates change and will teach the registered nurse not to spend his/her time doing things based on facts and not on their own feelings rather than wasting time on matters that will not work (Carroll, 2006; Searle *et al.*, 2009).

Enthusiasm

Enthusiasm may be defined as a strong feeling of excitement and interest in something and as a desire to become involved (*Oxford Advanced Learner's*

Dictionary, 2010). A registered nurse should, thus, be passionately enthusiastic about future possibilities and inspire his/her fellow nurses and draw them into a common effort to make those future possibilities a reality (Carroll, 2006; Searle *et al.*, 2009).

Motivation

Motivation is the reason why an individual behaves as he/she does. It may also be defined as the will to do something, especially anything that involves hard work (*Oxford Advanced Learner's Dictionary*, 2010). In the context of this study, motivation involves the registered nurse having a strong will to do everything possible so as to render the best PHC service delivery. Individual actions are guided by personal goals and it is incumbent on the registered nurse to strive for excellence and to be committed to the realisation of goals (Stanhope & Lancaster, 2010; Tomey, 2009; Searle *et al.*, 2009; Smit *et al.*, 2007). However, the advanced community nurse should be regarded as a facilitator and should not be expected to do everything.

Responsibility

Responsibility is defined as a duty to deal with or take care of something so that the individual concerned may be blamed if something goes wrong (*Oxford Advanced Learner's Dictionary*, 2010). In other words, this concept means to act based on the expectations in a particular situation and it may be applied to an individual to whom some duty or responsibility has been delegated by a person in authority and who will be subject to a penalty in the case of a default (Searle, 1987; Tomey, 2009; Searle *et al.*, 2009). It is, thus, essential that the registered nurse take responsibility for his/her own learning and for the learning of his/her subordinates/fellow workers (Clark, 2008; Geyer *et al.*, 2009; Bhengu *et al.*, 2008; Searle *et al.*, 2009; Coetzee *et al.*, 2007).

Accountability

Accountability is defined as a status in terms of which an individual must take responsibility for his/her decisions or actions and also be expected to explain these decisions or actions when asked to do so (*Oxford Advanced Learner's Dictionary*, 2010). In other words, accountability means that it is incumbent on the person to whom the responsibilities have been assigned to account for her/his actions. In terms of PHC, the registered nurse is expected to account for his/her acts and/or omissions, as must any other nurse in practice (Searle, 1987; Tomey, 2009; Geyer *et al.*, 2009; Searle *et al.*, 2009).

Good interpersonal relations

The interpersonal dimension of nursing includes certain affective elements and interaction skills, as well as the ability to collaborate and communicate effectively with others, as the situation requires (Clark, 2008; Tomey, 2009; Smit *et al.*, 2007; George, 2011). It is, thus, essential for the registered nurse in PHC to employ these skills and abilities effectively in his/her interactions with other members of the health care team, as well as the patients and their families (Ivancevich *et al.*, 2008; Daft, 2010; Geyer *et al.*, 2009; Barnald & Locsin, 2007; Searle *et al.*, 2009; Smit *et al.*, 2007).

Bearing in mind that that the PHC nurse is a community health nurse, Clark (2008) adds more attributes (characteristics) that a community health nurse should possess. These include population consciousness, orientation to health, autonomy, creativity, continuity, collaboration, intimacy and variability.

Population consciousness

As a community health nurse, a nurse in PHC should possess a consciousness beyond the needs of and services to individual clients and families and always be aware of the

way in which the health of an individual relates to the health of the total population and vice versa. In addition, she should identify specific family problems and deal with them accordingly as well as making a constant effort to enhance the health and socioeconomic conditions of the population he/she is serving (Clark, 2008, p. 10).

Orientation to health

Although community health nurses frequently help clients to resolve existing health problems, their major goal is to promote the client's highest possible level of physical, emotional and social wellbeing. Health promotion, as practised by community health nurses, encompasses both the promotion of self-care behaviours on the part of the client and advocacy for the social and environmental conditions that promote health (Stanhope & Lancaster, 2010).

Autonomy

Autonomy refers to the ability to make decisions independently and to engage in constructive activities. It is also referred to as self-directedness. In view of the fact that community health nursing care is typically provided in the client's environment, the active participation of the client is required, while the community health nurse should anticipate and foster the active involvement of the community at large in the determination of health policy and the planning of service delivery. Community health nurses also exercise a considerable degree of professional autonomy by relying on their own judgement to decide on an appropriate course of action as, in some situations, they may be the only available provider of health care (Stanhope & Lancaster, 2010; Tomey, 2009; Geyer *et al.*, 2009; Searle *et al.*, 2009).

Creativity

Creativity refers to the skill and ability to think through a problem and to find a way in which to be productive, even in a resource-constrained setting (Tomey, 2009).

Community health nurses are dealing with increasingly complex problems at the individual/family and the population levels and, thus, it is essential that they possess creativity in order to be able to deliver services, even in a resource-constrained context (Mank, 2006; Geyer et al., 2009; Searle *et al.*, 2009).

Continuity

Continuity refers to the opportunity to be engaged with somebody, or with an activity, for a sufficiently long time (Stanhope & Lancaster, 2010). Community health nurses must have the flexibility to work with clients until both parties feel that the services are no longer required. As a result of the extended nature of this relationship between client and community health nurses, these nurses are able to evaluate both the long-term and short-term effects of nursing interventions for the individual, family or the community (Clark, 2008; Berman *et al.*, 2008; GRN MOHSS, 1992, Official Primary Health Care/Community Based Health Care Guidelines).

Collaboration

Collaboration refers to working together in a relationship involving different sectors with similar objectives (Mank, 2006; Daft, 2010). Community health nurses are often engaged in collaborative efforts with individuals, the community or sectors as regards identifying community needs and planning the services required to meet those needs (Daft, 2010; Clark, 2008, p. 11; Tomey, 2009; Searle *et al.*, 2009).

Intimacy

Intimacy refers to a state of being when one has both the opportunity and the ability to establish a close relationship and a feeling of togetherness with another person or a group of persons – a common occurrence in community nursing practice, including local-level PHC practice. This, in turn, enables the registered nurse at this level to obtain a more accurate idea of the factors affecting the client's health, unlike in

hospital settings where the client's behaviour may be modified by the unfamiliarity of the health care environment. Thus, this implies that the PHC nurse should carry out his/her activities within the community in a more flexible manner, as the situation may require (Clark, 2008).

Variability

Variability refers to the fact that one is able to deal with different situations and persons or groups of persons in a meaningful way (Mank, 2006). This characteristic is important for PHC nurses because they deal with diverse clients at different levels (individual, family or population group) and from different ethnic backgrounds in a wide variety of settings. This variability requires a broad knowledge base to enable the individual concerned to adapt effectively to this diversity and to be able to prevent or alleviate the health problems of groups of people as well as individual members of society (Clark, 2008; Berman *et al.*, 2008).

5.2.2.3. Professional values of the recipient

Searle (1987), Hess and Cameron (2006), Tomey (2009), Jooste (2010) and Searle *et al.* (2009) are all of the opinion that the nurse should be assisted to acquire a sound professional philosophy about her work and the meaning of human needs. This is deemed necessary so that the nurse will view nursing as a caring profession and not merely a job. In addition, this philosophy should remind her that he/she should never be dominated by his/her emotions, and should also instil the following values:

Poise

Poise refers to a calm and confident manner with control over one's feelings and behaviour (Geyer *et al.*, 2009).

Courage

Courage refers to the ability to face pain or opposition, without showing fear (*Oxford Advanced Learner's Dictionary*, 2010; Daft, 2010; Tomey, 2009; Amos *et al.*, 2008).

Faith

Faith refers to a trust in somebody's knowledge or a belief that what one does as a person is correct (*Oxford Advanced Learner's Dictionary*, 2010; Tomey, 2009; Geyer *et al.*, 2009).

Understanding

Understanding refers to the knowledge that an individual has about a particular subject or situation (*Oxford Advanced Learner's Dictionary*, 2010). As regards PHC, understanding will enable the registered nurse to function independently as a health care professional (Searle *et al.*, 2009).

Caring

Caring is defined by the *Oxford Advanced Learner's Dictionary* (2010) refers to being kind and helpful and showing that one cares about other people. Thus, a caring profession is explained as an occupation that involves looking after or helping other people.

Nursing is a caring profession and, as such, requires that the registered nurse in PHC demonstrate care and concern for individual clients and for the community at large. It is, thus, important for the registered nurse to remain close and warm and to use the sense of touch when dealing with clients, as these are some of the qualities that give nursing its caring nature as a profession. These attributes should, therefore, also be fostered in PHC (Mank, 2006; Stanhope & Lancaster, 2010; Tomey, 2009; Geyer *et al.*, 2009; Searle *et al.*, 2009).

5.2.2.4. Concluding statements for the recipient

Registered nurses practise within organisations that have goals, values and missions. Integration into an organisation's value system and identification with the organisational goals mean that employees should execute their roles and functions in such a way as to develop feelings about the adequacy and quality of their performance, similar to the goals, values and missions of the organisation they work for. In view of the fact that the study has concluded that certain roles and functions are not executed effectively in PHC delivery, it is clearly necessary to strengthen the role and function of the registered nurse (recipient)

The scope of practice of a registered nurse in Namibia is provided for through either a government notice or a regulation known as the "Scope of Practice of People Registered as Nurses, Midwives and Accoucheurs". These regulations indicate both the areas of functions and omissions that are punishable by law.

5.2.3. Procedure

The development of strategies is based on the problems which have been identified as a result of research evidence. In addition, strategies should be formulated in accordance with specific principles while taking into account the challenges in the environment in which the strategies will be implemented as well as the risks and benefits involved (Rossow, Le Roux, & Groenewald, 2003; Amos *et al.*, 2008).

In this study the nursing process framework facilitated the development of strategies to be utilised by both registered nurses and their supervisors in the fulfilment of their PHC roles and functions. The nursing process has features of participative management, which emphasises the involvement of workers in planning and decision making in their daily work (Muller *et al.*, 2006).

It emerged from the results of the data analysis in chapter 4 that the purpose of the strategies envisaged is to support registered nurses in their roles and functions of PHC practice by utilising the nursing process, while embracing participative management as a tool in order to improve the quality of nursing practice in PHC.

Table 5.2 below presents the stages and steps involved in the development of the strategies in this study while figure 5.5 depicts the procedure.

Table 5.2: The stages and steps involved in the development of strategies in this study

Stages	Steps
Stage 1: Strategy formulation	Step 1: Research findings on how registered nurse utilise the nursing process in their daily PHC practice
	Step 2: Identification of challenges faced by registered nurses when utilising the nursing process in daily PHC practice
	Step 3: Reasoning map/identification of dynamics and strategies to address challenges
	Step 4: Setting of objectives according to which strategies were formulated
	Step 5: Description of strategies
Stage 2: Validation of strategy	Step 6: Validation of the relevance of strategies by experts in PHC

At the operational level, registered nurses are expected to function independently within their scope of practice and by utilising the nursing process. The strategies address the areas in local-level PHC practice that require support as they were revealed by the study findings. The tools that are needed for successful utilisation of the nursing process in local-level PHC include communication, interactive decision making, shared governance, interpersonal relationships, and organisational transformation (Ginger & Davidhizar, 2008).

5.2.3.1. Concluding statement for the procedure

It is hoped that the strategies will enhance the role and function of the registered nurse in the utilisation of the nursing process when providing PHC services. The tools to use when utilising the nursing process, which include communication, interactive decision making, shared governance, organisational transformation and empowerment, will increase both job satisfaction and self-competence as well as bringing about an improvement in the standard of practice.

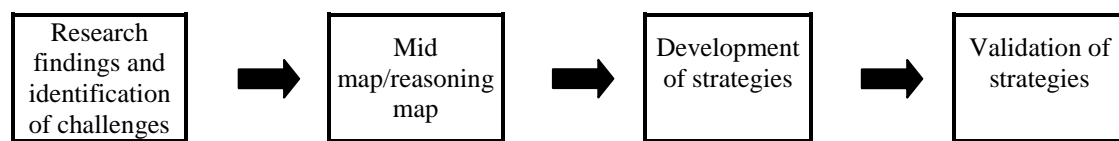


Figure 5.5: The procedure

5.2.4. Context

For the purpose of this study, the context was defined as the environment of the health facilities in which PHC is delivered outside of the hospital, the legal framework in which the services are delivered, and the policies and procedures governing these services (see figure 5.6).

The context of this study included health clinics, health centres and outreach posts, all of which are considered to be operational-level PHC facilities in the context of the district health care delivery system. In these health facilities, the fulfilment of the roles and functions of registered nurses in PHC is planned according to the health policies, such as the “Official National Policy Guidelines on Primary Health Care/Community Based Care” and other policy documents that direct that PHC services are delivered as an integral part of the health care system for the whole country and that it is incumbent on registered nurses in local-level facilities to observe

the existing chain of command from central level downwards (GRN MOHSS, 1992; 1995; Hopwood, 2008).

In health care organisations, it is essential that one be aware that all countries have organisational structures and political administrative structures comprising three hierarchical levels, namely, central, intermediate and local, and also a health development framework that fits the linkages between these hierarchical facilities and health and socioeconomic development. The aim of having such organisational structures is to create channels of communication and chain of commands so as to ensure that every health care provider knows where to report and to whom he/she is accountable (Blass, 2009; Daft, Kendrick & Vershinina, 2010; Daft, 2010; Tomey, 2009; Amos *et al*, 2008; Searle *et al.*, 2009; Gopee, 2008; Smith *et al.*, 2007).

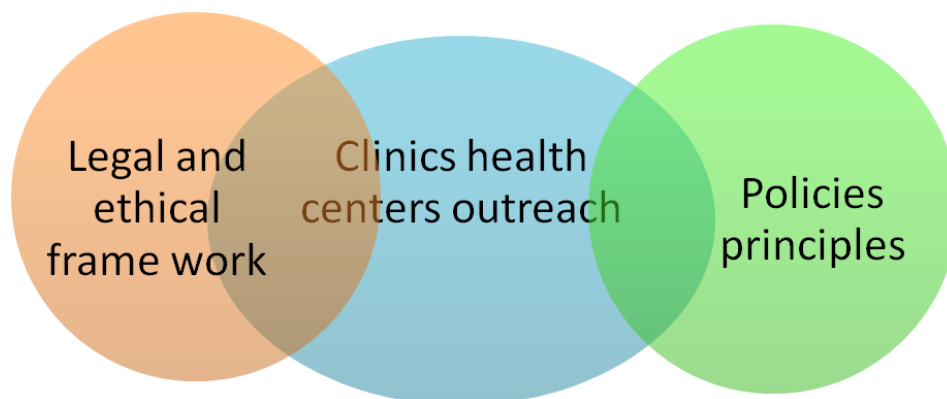


Figure 5.6: The context

Health-related activities are organised for individuals, families and communities and are managed within local government areas, zones or districts. The structures and institutions at the local, intermediate and central levels provide three types of overlapping support for the community health initiatives, namely, operational, technical and strategic management support. It is at the local level (operational level) that all resources are pooled for the implementation of PHC (GRN MOHSS, 1995).

Technological options are selected at the intermediate level and, if necessary, are adapted before being applied to PHC; at the same time, at the central level strategic choices are made for the utilisation of the available resources as regards the purchase of traditional or modern technologies. It is also at the central level where management improvement efforts are initiated and/or sustained. However, other health-related sectors and universities, as well as non-governmental organisations, all assist in strengthening the health services at all three levels.

In Namibia the levels of health care delivery include:

- Local/community level (health centres/clinics/outreach points). This level is the operational level for registered nurses in local-level PHC.
- Districts with their clinics and health centres as well as other health and non-health related sectors that contribute to or have a stake in PHC delivery.
- Intermediate level which is also referred to as the regional level. This level provides all the technical support for the districts.
- Central level – the national level – as the MOHSS (refer to section 1.2 and section 3.5 respectively). Figure 5.6 depicts the context.

The Directorate of Primary Health Care is responsible for policy making and channels all output through the regional level to reach the operational level. It is expected that the health services at the operational level should be provided in such a way that the proper channels of communication and chains of commands are adhered to. As regards the participants in this study the chain of command entails the following: orders should flow from the national level to the regions and from the regions to the districts and from district level to health facility level. The response from the bottom will follow the same channel upwards. Even with the development or utilisation of the

strategies to be discussed in chapter 6, all these levels should be involved and, in the interests of reinforcement, the order should be generated from national level down through the regions to the districts and then to the individual health facilities.

The first level of contact with the district health services include individuals, families and communities, while the second level in this regard is the clinic or health centre and, at the third level, the district hospital. For the purpose of this study the focus will be on the first level of the district health services, namely, at community level, together with the clinics and health centres because the functions expected of the registered nurses at all these levels are the same (GRN MOHSS, 1995).

In Namibia, all patients seeking health care have the right to access to care which, in turn, is provided in accordance with the PHC approach. These rights are detailed in the patient charter of rights. Registered nurses fulfil their roles and functions in PHC facilities according to the provisions of the Nursing Act 2004 (Act no. 8 of 2004), as outlined in the Government Gazette of the Republic of Namibia.

The Constitution of the Republic of Namibia (The Constitution of the Republic of Namibia (GRN, 1990) has declared health to be a fundamental right of every Namibian/person seeking health care in Namibia. The government acknowledges that it is essential that everybody in the country be in a good state of health. However, in view of the fact that it is not possible to take for granted that health care services will be made accessible to everybody, as is the intention of the government, the right to basic health services has also been included in the list of fundamental human rights enshrined in the Constitution of the Republic of Namibia. This, in turn, will enable the public/community members to demand their right to health (The Constitution of the Republic of Namibia (GRN, 1990).

As was mentioned above, the patient charter of rights defines all the rights a patient has when seeking health care services at state health facilities. It also suggests the procedures to be followed should either a patient or family member feel that her/his rights have been violated and that he/she would, therefore, like to launch a complaint in this regard.

Both the Nursing Act 2004 (Act No 8 of 2004) and the scope of practice are legal documents that direct the conduct of registered nurses and other groups of sub-professional nursing categories in Namibia in their provision of nursing care. These documents provide clear outlines regarding the criteria for admission to nursing studies, as well as the minimum requirements for training courses for registered nurses, the duration of such training courses, every training/education programme, and the curriculum content for each education programme, the pass/promotion criteria as well as the scope of practice for those registered. The Nursing Council is a regulatory body for the nursing profession that serves to protect the public from both unethical practices and malpractice on the part of registered nurses, as well as protecting the public from harmful practices, including the practice of the profession by individuals who are not registered (Nursing Act No 8 of 2004).

5.2.4.1. Concluding statement for the context

The context in which PHC services are delivered comprises clinics, health centres and outreach posts and they are offered within the existing legal and ethical framework in terms of which PHC should be delivered. Cooperation, shared decision making and communication will enable registered nurses to fulfil their roles and functions in local-level PHC.

5.2.5. Dynamics

Dynamics may be defined as the way in which people or things behave and react to each other in a particular situation (*Oxford Advanced Learner's Dictionary*, 2010). As such, dynamics refer to motivating forces in any field (Muller, 2001). Regarding the fulfilment of PHC role functions in local-level health facilities, the dynamics may be identified as the interactions between registered nurses and their patients/clients and other members of the multidisciplinary health team about the way in which registered nurses interact with/relate to their environment as well as the difficulties/challenges posed by the lack of material and human resources required for the better fulfilment of the PHC role functions (see figure 5.7).

In figure 5.7, the two arrows from the upper square (black) leading into the two separate compartments, which are orange and pink, indicate that the challenges fall into two main groups, namely, areas where the nursing process is not adequately utilised to address PHC issues and managerial constraints. An asterisk indicates that the challenge is applicable to both groups of challenges.

The role and function of the registered nurse in PHC delivery is based on the PHC services, with the nurses utilising the nursing process to execute their roles and functions. However, it is not possible to utilise the nursing process in a vacuum and, as already indicated, there are steps to be followed in the process and the presence of certain dynamics which influence the utilisation of the nursing process.

In addressing these challenges, the dynamics include aspects such as interactive decision making, shared governance, organisational transformation and empowerment. Thus, cooperation and interaction between nurse supervisors and registered nurses are necessary if an environment (context) is to be created that is

conducive to the nurses' effective execution of their roles and functions as regards the following PHC services: water and sanitation and other environmental health promotion services; health education and communication, including outreach services; nutrition and food supply; community diagnosis and care and management support or administrative functions, including research as a management tool in nursing (refer to section 4.7.2 in chapter 4).

A shortage of registered nurses and a lack of transport, as well as heavy workloads were pointed out as factors influencing the fulfilment of registered nurses' roles and functions in PHC.

A shortage of nursing staff in the face of heavy workloads is associated with overworked nursing staff and a tendency to develop burnout. This, in turn, leads to poor quality of the nursing services provided. A lack of necessary resources, such as transport, is discouraging for health care providers, as it renders registered nurses unable to fulfil their outreach functions. The role and function of the registered nurse to provide PHC services within the framework of the nursing process encompasses aspects such as providing services based on the elements and principles of PHC and applying PHC management skills in the process of care delivery (Booyens, 1999; Morrison, 2008; Tomey, 2009; Geyer *et al.*, 2009).

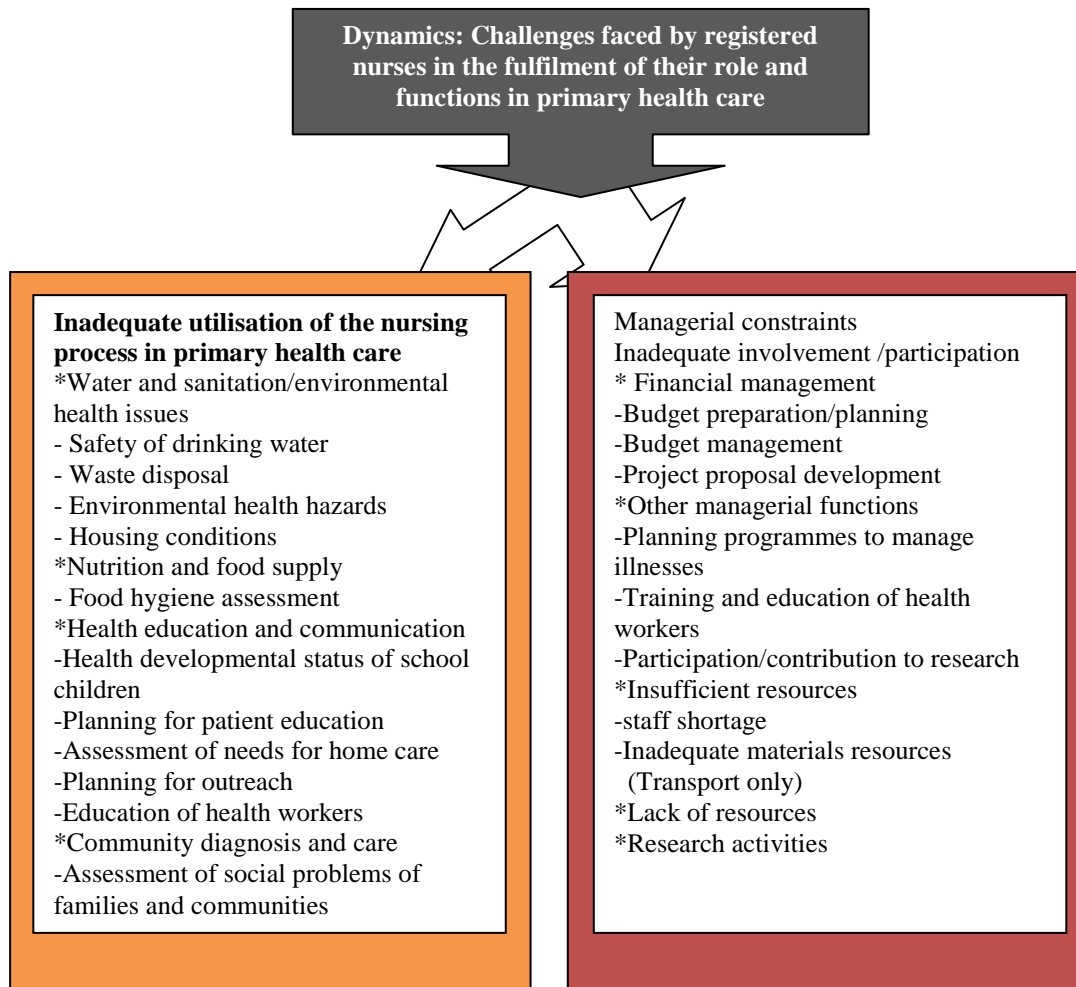


Figure 5.7: Dynamics

The challenges, as indicated in figure 5.7, are largely concerned with PHC management.

Participative PHC management involves dynamic interaction between the supervisor and the registered nurses with the aim of creating an environment that is conducive the effective execution of the registered nurse's role and function in PHC. The idea of participative management is consistent with the nursing process, which emphasises interaction and communication.

Facilitating this type of environment refers both to adequate support and to the interpersonal relations that promote PHC service delivery and ensure that the service being rendered addresses all the elements of PHC, namely:

- Environmental health
- Safe water and sanitation
- Provision of essential drugs provision
- Housing
- Treatment of common diseases and injuries
- Health education
- Control of endemic diseases
- Mother and child health, including family planning
- Nutrition
- Immunisation against preventable diseases

Supporting the registered nurse in the execution of his/her role and function with regard to PHC services delivery refers to adequate support as regards the application of the nursing process in the assessment and execution of services related to water and sanitation and other environmental health promotion services; health education and communication including outreach services; nutrition and food supply; community diagnosis and care and management support or administrative functions, including financial management, human and physical resource management and research activities.

In addition to support, human and physical resources are required if the registered nurses are to execute their roles and functions in terms of the framework of PHC. The tools that are required for the successful utilisation of the nursing process in

addressing the challenges at community and local-level PHC include communication, shared governance, organisational transformation and empowerment (Daft *et al.*, 2010; Amos *et al.*, 2008; Geyer *et al.*, 2009; Ginger & Davidhizar, 2008; Searle *et al.*, 2009).

The ways in which these tools may be used in the successful utilisation of the nursing process are suggested in section 7.2.4.2, chapter 7, which deals with the conclusions and recommendations regarding the strategies formulated.

5.2.5.1. Concluding statement for dynamics

Support for participation and collaboration in the provision of PHC by registered nurses is required in order to create an environment that is conducive to the registered nurse fulfilling his/her role and function by utilising all the steps of the nursing process, namely, assessment, diagnosis, planning, implementation and record keeping. Also, support from the supervisors is necessary in order to enable registered nurses to participate in interactive decision making, shared governance, organisational transformation and empowerment through communication.

If the roles and functions of registered nurses are to be adequately fulfilled in their daily practice regarding the provision of PHC services, it is essential that strategies and action plans need be developed and implemented, and based on overcoming the list of challenges that have been identified above.

5.2.6. Terminus (outcome)

Terminus refers to the end result of a study (see figure 5.8). In this research study these end results emanated from the solutions found for the challenges encountered by registered nurses in their daily practice in local PHC facilities. It is hoped that these

solutions will enable both these registered nurses and their supervisors to fulfil their PHC nursing roles and functions sufficiently.

The main purpose of the study was to scrutinise the reasons why some of the role functions of the registered nurses in PHC community/local-level facilities were not being sufficiently fulfilled, particularly in the areas of water and sanitation as well as other environmental health-related issues; health education and health communication, including outreach, nutrition and food supply; aspects of community diagnosis and care and management or administration, including research, education of health workers and outreach services. These are the areas of challenge which were identified by the results of this study.

Thus, the researcher/advanced community health nurse is obliged to facilitate participative management so as to ensure registered nurses and their supervisors in local-level PHC practice execute their roles and functions effectively.

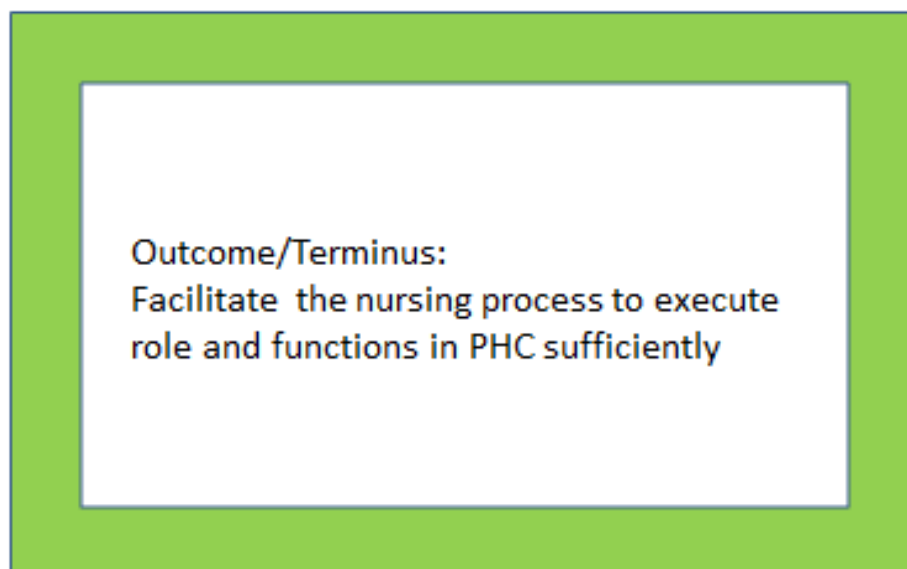


Figure 5.8: Outcome/terminus

Both registered nurses who practise in local-level PHC facilities and their supervisors are faced with certain challenges that make it extremely difficult for them to fulfil all the roles expected of them.

Nevertheless, the finding that most of the other role functions in this same area of practice were either well or moderately done, despite these challenges, is encouraging in terms of holding out the hope that these PHC nurse practitioners will also be able to enhance the fulfilment of the role functions that were not sufficiently fulfilled if they are provided with the necessary support and advice, particularly as regards written strategies that may serve as references in their daily practice. The registered nurses should be able to identify specific areas of challenges in their daily PHC practice and relate these challenges to guidelines on how these challenges may be dealt with better.

It is essential that registered nurses who work in local/community level PHC facility be prepared to teach other registered nurses and fellow health workers, as well as patients and families, how to keep abreast of PHC delivery by promoting health and preventing diseases, especially through the maintenance of a safe environment. In addition, the registered nurses should advocate for those resources that will make possible the provision of essential services, including an adequate number of registered nurses and transport facilities. The registered nurses should also be involved in the planning and management of the PHC services while the research knowledge and practical skills of registered nurses need to be strengthened so as to enable them to fulfil their PHC role functions in accordance with the specific needs of a specific community.

5.2.6.1. Concluding statement for the terminus

It is essential that registered nurses working in local/community level PHC practice be supported if they are to fulfil all the expected role functions of a registered nurse at this level. It is, therefore, necessary for them to be provided with a set of strategies in terms of which those functions that require urgent actions may be better fulfilled. However, it is acknowledged that there were functions that were either well or moderately done. In addition, it is important that the registered nurses bear in mind a broader picture of the community and, thus, that they take into account the way in which individual health or ill health may be related to the health of the population as a whole.

5.3. SUMMARY

In this chapter, the conceptual framework for developing strategies, which was based on the theory of Dickoff *et al.* (1968), was discussed. The role of the agent, who is an advanced community health nurse, educator and researcher, was also discussed. It emerged that this role as agent involved facilitating the development of strategies to support the role and functions of the registered nurses in local-levelPHC. The recipients in this study, who were both the registered nurses who work in local-levelPHC and their supervisors, have the role to improve the functions that were not sufficiently fulfilled according to the results of this study. They observe the proposed strategies to enhance practice in the areas of concern, but they have to decide whether they toadopt the strategies proposed or not.

The procedure is about the development of strategies to support the roles and functions of the registered nurse in local-levelPHC. The context is state clinics, health centres and outreach posts where PHC is implemented. The dynamics are the challenges that have been identified and which should be addressed by the strategies

that are to be developed. The outcome is the end result of the process. It is also referred to as terminus. These strategies will be discussed in the next chapter.

CHAPTER 6

STRATEGIES AIMED AT SUPPORTING REGISTERED NURSES IN THEIR UTILISATION OF THE NURSING PROCESS

6.1. INTRODUCTION

In the previous chapter the conceptual framework for developing strategies to support the role and function of the registered nurse in local-level PHC was discussed. This chapter will discuss the development of these strategies. The chapter focuses on the following two main objectives, namely, to incorporate the research findings into the development of strategies to support the registered nurses in their utilisation of the nursing process in local-level PHC delivery and to validate the appropriateness of these strategies.

6.2. OBJECTIVES OF THE STUDY

The objectives of this study were to

- explore and describe the way in which registered nurses in health district clinics, healthcare centres and outreach posts utilise the nursing process in PHC delivery
- determine how supervisors view the utilisation of the nursing process by registered nurses in PHC
- identify the constraints that registered nurses face in their utilisation of the nursing process with regard to the delivery of PHC
- develop a conceptual framework on which to base the development of strategies to support registered nurses in their utilisation of the nursing process with regard to PHC delivery
- incorporate the research findings into the development of such strategies

- validate the appropriateness of these strategies.

6.3. MAIN AREAS OF CONCERN

The results of this study revealed the following challenges that should guide the development of strategies. These challenges are grouped according to the main areas of concern based on the elements of PHC practice and the use of the nursing process by nurses:

Areas of concern in environmental health issues

- Insufficient assessment of safety of drinking water for patients/clients by registered nurses.
- Inadequate assessment of waste disposal in the catchment area by registered nurses.
- Inadequate assessment of environmental health hazards by registered nurses.
- Poor assessment of housing conditions for patients/clients in the catchment area by registered nurses.

Area of concern as regards nutrition and food supply

- Inadequate assessment of food hygiene in the catchment area by registered nurses.

Areas of concern pertaining to health information and motivating the community

- Inadequate assessment of developmental status of school children.
- Inadequate planning for patient's and health workers' education.
- Inadequate assessment of patients' needs for home care.
- Inadequate provision of home care by registered nurses.

Area of concern as regards outreach

- Inadequate planning for outreach services by registered nurses

Area of concern as regards the identification of social problems in families and communities/community diagnosis and care

- Inadequate assessment of social problems of families and communities

Area of concern as regards research

- Inadequate participation in research activities by registered nurses

Areas of concern as regards managerial and administrative aspects of PHC

- Shortage of staff and heavy workload
- Lack of resources: staff and transport
- Financial management

The reader is also referred to Annexure 20 for a summary of the challenges identified and strategies developed.

6.4. DEVELOPMENT OF THE STRATEGIES

Introduction

The strategies were developed based on the nursing process framework, as applied in community nursing, and also by applying a participative management approach of which consultation is an extremely important aspect (Clark, 2008; Lancaster, 2006; Jooste, 2010). For the purpose of this study, a participative management process was adopted in the consultations which were held with registered nurses and their supervisors in order to create a shared vision on the part of all those involved in the process of enhancing the utilisation of the nursing process in local-level PHC practice. A shared vision was deemed necessary in order to bring about the necessary commitment to bring about the required enhanced practice (Searle *et al.*, 2009).

The process of strategy development

Immediately after the data analysis and interpretation stage had been completed, a meeting was held with the fifteen senior registered nurses responsible for the implementation of PHC programmes in Oshana region under chairmanship of the Chief Health Programme Administrator for PHC in that region. The purpose of this meeting was to share the results of the study highlighting the main areas of concern reflected in the data.

- A draft document on proposed strategies was also tabled and inputs were received. The instrument that appears in Annexure 22 of this document was used to capture remarks that were used to improve the draft strategies. Further discussion of inputs was also done at the meeting.
- Copies of the results and the draft strategies were sent to the registered nurses in the other regions, together with instructions requesting their input on the strategies. Their responses were also incorporated in the final document.

Meanwhile, a committee comprising the Health Programme Administrators in

PHC was established. At the first meeting of this committee the researcher presented the members with both the results of the study and a draft document detailing the proposed strategies.

- In addition, the procedure that had been followed in the development process was explained. The members of the committee were asked to study the document, discuss it with their subordinates and provide feedback by the next meeting.
- At the next meeting feedback was provided and all the comments were incorporated in the document. The document was then finalised before being sent out for validation.

6.4.1. AIM OF THE STRATEGIES

The overall aim in developing the strategies was to enhance the utilisation of the nursing process by registered nurses in their implementation of the elements and principles of PHC during their daily practice.

6.5. DESCRIPTION OF THE STRATEGIES

The strategies that were developed were based on the areas of concern as identified above. Three overarching strategies were developed based on the pattern of areas of concern as presented under section 6.3. These strategies will be presented in the next sections:

6.5.1. Strategy 1: Addressing the factors that contribute to challenges that hinder professional nurses in maximally utilising the nursing process in their daily health care practice

Goal: To enable registered nurses overcome constraints that hinder them from achieving maximal utilisation of the nursing process in their daily PHC delivery

6.5.1.1. Strategic Objective 1: To maximise opportunities for registered nurses to use all phases of the nursing process when dealing with community and environmental health issues

This objective aims at addressing the following PHC functions that were poorly done; these are presented as follows:

Assessment of aspects of environmental health (water and sanitation)

The following will be assessed in each health facility catchment area:

- the safety of drinking water
- conditions under which waste is disposed of
- environmental health hazards
- housing conditions
- food hygiene
- Social problems concerning families and communities.

Assessment of the safety of drinking water

More than 20% of the participants in this study rated the assessment of the safety of drinking water as below average, with some of the registered nurses maintaining that this function should be carried out by the environmental health officer and not by nurses.

Although this is classified as a function of the environmental health officer, once a need is identified the registered nurse should plan how the purification of water could be taught to households.

Section 2.2.3 in chapter 2 states that, despite the fact that 87% of all households in Namibia have access to safe water, some households are still experiencing certain challenges relating to the accessibility of safe drinking water sources, a situation that is complicated by floods and migration (GRN National Planning Commission, 2003; Sherbourne, 2010; GRN National Planning Commission, 2007; Cubitt & Joyce, 1999; Heyns et al., 1998; Cloke, Crang, & Goodwin, 2009; Weeks, 2008; Kendal, 2007; Namibia Non-Governmental Organisations Forum, 2008).

It is essential that every effort be made to identify the population affected by such factors and to assist them with alternative methods of ensuring that water is safe for consumption.

Assessment of waste disposal

Section 2.2.3 in chapter 2 discussed the issue of waste management. There are many diseases associated with improper waste disposal (Black, 2008; Wittenberg, 2009), as well as several adverse outcomes which can prove fatal.

Registered nurses should be aware of the conditions under which waste is disposed of in the catchment area and they should take a leading role in the prevention of any diseases that may arise from improper waste disposal if the nursing care they are rendering is to be complete (Clark, 2008; Geyer et al., 2009).

Census data from 2001 indicate that more than half of the households in Namibia have no toilet facilities and are forced to make use of the bush (GRN National Planning Commission, 2003), a situation that facilitates the spread of sanitation-related diseases (Rothman et al., 2008; Stanhope & Lancaster, 2010; Gibney et al., 2009; Minaar, 2008; Nail & Peate, 2009). Hence, there is a need to advise households on how to improve living conditions under such circumstances.

Nurses should develop plans on how to teach clients about hygiene even if people make use of the bush as toilet.

Assessment of environmental health hazards

As mentioned earlier, the term 'health hazards' refers to conditions that are offensive, injurious or dangerous to health. It is expected that registered nurses identify such hazards and take necessary action (Clark, 2008; Du Toit & Van Staden, 2009; Stanhope & Lancaster, 2010; Geyer et al., 2009; Wittenberg, 2009).

Assessment of housing conditions

A house is a shelter which serves as a source of both physical and psychological wellbeing, including a sense of self-concept and identity for individuals and families in communities. Thus, a house is an important component of the living environment and may, either directly or indirectly, affect health (Stanhope & Lancaster, 2010; Clark, 2008; Schaaf & Zumla, 2009; Kendall, 2010).

Throughout the world, there are very few countries that experience no constraints regarding the provision of adequate housing for all their citizens. This state of affairs may be exacerbated by rural–urban migration and by natural disasters such as floods (Stanhope & Lancaster, 2008; De Beer & Swannepoel, 1998). Namibia is experiencing similar problems, although the Government of the Republic of Namibia is making every effort to provide better houses for all. However, there are still certain challenges and some households live in substandard houses without proper sanitation facilities or adequate ventilation (GRN National Planning Commission, 2003; 2007; Namibia Non-governmental Organisations Forum, Basic Income Grant Coalition, 2008).

It is expected that registered nurses assess the types of house to be found in the catchment area so that they will be in a position to plan on how to advise the community concerned on ways in which to mitigate the problems of ill-health that may be associated with the type of housing/dwelling in which their clients live.

Assessment of food hygiene

The study results indicate that the assessment of the extent of food hygiene by registered nurses needs to be enhanced. It is important to note that if food is not hygienic it may cause diarrhoeal diseases and these, in turn, may contribute to

malnutrition (Lawrence & Worsley, 2007; Whitney *et al.*, 2007; Gibney *et al.*, 2009; Kibel *et al.*, 2007; Kee *et al.*, 2010; Minaar, 2008).

Clark (2008) describes the role of the nurse in food hygiene and states that he/she is expected to be an advocate for both patients and the general community as regards the safety of foodstuffs. She emphasises that all nurses should be vigilant and should serve as both a guide and an advocate for patients, communities and the government in this regard. This advice is also applicable to registered nurses working in local-level PHC in Namibia. In that regard, registered nurses are expected to plan for and implement the plan accordingly.

Assessment of social problems in families and communities

A family is an important unit/group in the community and contributes to the wellbeing of both individuals and the community as a whole (Motz, 2008; Stanhope & Lancaster, 2010; Geyer *et al.*, 2009; Kendal, 2007; Kendall, 2010). Namibia is a country with multiple, diverse communities and different types of families which are affected by the diverse cultural practices as well as the current situation as regards the effects of the HIV/AIDS pandemic. Nuclear families, extended families, single-parent families and child-headed families are the most prevalent type of family found in Namibia today (Cubitt & Joyce, 1999; Udjo, 2003; Otaala, Davitz, Otaala, & Davitz, 2004; Jauch *et al.*, 2009; GRN National Planning Commission, 2007).

Family life is put at risk by the occurrence of medical problems such as chronic diseases, which may be physical or mental, including mental handicaps, alcoholism and drug abuse; sociocultural problems such as broken homes, refugees or migrants, extremely large families and socioeconomic problems such as unemployment, poverty and insanitary homes (Stanhope & Lancaster, 2010; Warner, 2009; Fawcett & Waugh,

2008; Rassool, 2009; Goldenberg & Goldenberg, 2008; Bower & Waxman, 2010; Gale et al., 2008; Eshun & Gurung, 2009; Kendal, 2007; Liamputong, 2007; Kendall, 2010; Du Toit & Van Staden, 2009; Haralambos, Holborn, & Heald, 2008). Thus, in PHC/community-based care, the identification of social problems in both families and communities is an important component of community diagnosis leading, in turn, to effective family and community care (Coleman *et al.*, 2007; Geyer *et al.*, 2009; Stellenberg & Bruce, 2007; Jooste, 2009; McWhirter *et al.*, 2000; Kibel *et al.*, 2007; Moules & Ramsay, 2008; Rassool, 2009; Goldenberg & Goldenberg, 2008; Buechler, 2008).

Nurses working in the community are expected either to apply and adapt or to transfer the knowledge and skills used in hospital settings to the assessment of clients and families in the community (Myers, 1997; Chilton *et al.*, 2004; Clark, 2008; Dickinson, 2009; Stanhope & Lancaster, 2010; Geyer *et al.*, 2009; Gopee, 2008; George, 2011).

The assessment of social problems in families and communities facilitates the provision of early support to the families or communities concerned, as it enables the identification of problems (Jooste, 2009; Kibel *et al.*, 2007; Moules & Ramsay, 2008; Stellenberg & Bruce, 2007).

Implementation/actions to be taken to effect outcomes

- In-service education should be provided to all registered nurses to inform them about their contribution to the assessment of the safety of drinking water.
- Where possible, health ambassadors (volunteer home visiting team for TB/HIV) should be consulted as regards collecting and sharing information about the safety of water when they do home visits to patients living with TB and people living with HIV/AIDS in the community.

- PHC managers should provide in-service training on the way assessments should be done through history taking, home visits and site visits. Assessments should be carried out on any collections of waste, wastewater, unauthorised dumping sites, dirty places or places where rubbish has accumulated, as well as contaminated sources of water, meat, etc. Vendors of hazardous food should also be identified.
- The training/education institutions for student nurses should emphasise the importance of the above assessments in training, while it is essential that all nurses entering local-level PHC practice learn to apply these assessments in their daily practice.
- In their regular supervisory support visits PHC supervisors should include issues to do with this function of housing assessments in order to provide the necessary support to the health facility registered nurses in this regard. In addition, they should find out how nurses are doing in this regard and reward/recognise best practices.
- Management should explore the possibility of making transport available for registered nurses so as to enable them to carry out home visits and health education. However, where possible, support nurses should find ways in which to carry out these home visits even under conditions where there is no transport available.
- Communication channels and working relationships between the MOHSS and the relevant authorities, for example local authorities, that have a stake in the regulations related to food hygiene should be made known to the registered nurses so that they will be in a position to identify ways in which they may enhance the performance of their roles in this regard. In addition, registered

nurses should be encouraged to serve as advocates for patients by recommending the assessment of suspected cases of bad food hygiene practices to the government.

Outcome: Registered nurses to use all phases of the nursing process when dealing with community and environmental health issues

6.5.1.2. Strategic Objective 2 :To enhance the activities of registered nurses relating to the motivation and education of the community

The following will be discussed:

- to make available more opportunities for registered nurses to offer education and training to both the community and health care workers in the catchment area
- to expand opportunities for registered nurses relating to the health promotion activities offered to clients in the community, but outside the health facilities

Section 2.2.1 in chapter 2 outlines health education and its importance in PHC. Health education involves empowering people to deal with their own health problems and, hence, encouraging them to make full use of the services which are available and to adopt healthy lifestyles (Dickinson, 2009; Byars & Rue, 2011; 2009; Cottrel & McKenzie, 2005; Tomey, 2009; Gopee, 2008).

Although health education in Namibia is being conducted, it is not adequate (Neshuku, 2005; Iiyambo, 2005).

As discussed in section 4.7.2. in chapter 4, the results of this study indicate that there are certain challenges facing registered nurses in PHC in the execution of some of the functions related to health education. This implies insufficient communication with

the community as was evidenced by the inadequate assessment of health education needs and a lack of encouragement of the community on the part of the registered nurses in local-levelPHC facilities.

The functions related to the motivation and education of the community by registered nurses in terms of the challenges identified in this study include: inadequate assessment of the developmental status of school children; insufficient planning for patient/client education; insufficient education of health workers and patients; insufficient assessment of the need for home care for patients; inadequate provision of home care and inadequate planning for outreach services. The objectives for each of these functions will be discussed in the next section.

To make available more opportunities for registered nurses to offer education and training to both the community and the health care workers in the catchment area

The education of both the community and the family members of patients/clients is one of the duties of the registered nurse, and is one way of empowering the community members to take an active part in behaviours related to health promotion and disease prevention with a view to monitoring health problems (Dickinson, 2009; George, 2011). In addition, the education of health care workers, including nurses, contributes to a higher degree of independence on the part of such health care workers when dealing with health-related problems (Byars & Rue, 2011; Wild, Wild, & Han, 2008; Walker, 2010; Guest & Scullion, 2007; Jooste, 2009; Clarke & Winch, 2007; Stepney & Rostila, 2011; Quinn & Hughes, 2007). (See also chapters 5 and 2 in this regard.)

To expand the opportunities for registered nurses regarding health promotion activities offered to clients within the community, but outside of the health facilities

Health promotion is the process in terms of which communities are transformed and empowered by involving them in activities that influence public health. This may be done by setting relevant agendas, lobbying and advocating for political commitment, raising community consciousness about health issues and strengthening social education programmes (Moseley, 2003; Mank, 2006; Tomey, 2009; Geyer *et al.*, 2009; McWhirter *et al.*, 2007; Moules & Ramsay, 2008; Du Toit & Van Staden, 2009). The registered nurse in PHC practice is expected to apply these strategies in her daily work in order to promote the health of the community.

Based on the study findings, the types of community-based nursing service/PHC nursing service that will be discussed in this section include assessment of the health developmental status of school children, assessment of the need for and provision of home care, and outreach services.

The objectives for these functions are as follows:

Assessment of the developmental status of school children

School children are an issue of concern to the WHO in terms of the peer pressure, the school climate, and the communicable diseases and possible adverse social circumstances they are exposed to. It is against this background that the WHO believes that the health and developmental status of these children should be properly monitored and any adverse effects identified and dealt with timeously so that the children may derive the maximum benefit from education (Coleman, Smith & Bradshaw, 2007; Hinchman & Sheridan-Thomas, 2008; Du Plessis, 2007; Brandshaw & Keing, 2011; Erhart, 2009;).

The Government of the Republic of Namibia has taken the recommendations of the WHO regarding the need for each country to make sure that children benefit from school engagement seriously by putting in place health-promoting school initiatives with the aim of ensuring functional school health programmes. School health nurses are leading these programmes. However, in many cases, these programmes are run by registered nurses who work in mobile/outreach teams in health districts. In addition, some clinic registered nurses also take part in the programmes; depending on whether the workload at the health facilities allows them to do so (GRN MOHSS, May 2008).

It is believed that the assessment of the developmental status of school children enhances the early identification of physical, social, and mental problems so that these may be dealt with as early as possible (Stanhope & Lancaster, 2000; Otaala, Davitz, Otaala, & Davitz, 2004).

In this regard, it is expected that the registered nurse plan a school health programme, implement the plan, evaluate the plan and keep records for reference and legal purposes.

Assessment of need for home care

The need for home care was highlighted in chapter 2 (section 2.4) and it is as a result of this need for home care that registered nurses in PHC should assess the need for home care as it concerns all of their patients/clients (Bower & Waxman, 2010; Berman *et al.*, 2008).

The results of this study indicate that this function has not been properly implemented in practice. The need for home care is fuelled by the HIV/AIDS pandemic (GRN MOHSS, 2001; 2006; University of Namibia, 2007; Jackson, 2002; Ipinge, 2001). There are community-based groups/organisations which are providing home-based

care services on a voluntary basis, and supervised by registered nurses from the health facilities in the catchment area so as to ensure that these groups/organisations are able to render proper home care to those needing it (Dickinson, 2009; Geyer *et al.*, 2009; Schaaf & Zumla, 2009; Lewis & Kanji, 2009; GRN MOHSS, March 2008 2001; Ipinge, 2001).

Outreach health services

Outreach services refer to the provision of health care to populations living far away from health facilities in order to enhance their accessibility to services which may be limited by factors such as distance, rivers, cultural barriers, roads washed away as a result of floods and other natural disasters. These activities require commitment, resources and physical fitness on the part of staff members if they are to be successful (Stanhope & Lancaster, 2010).

The tasks to be undertaken in terms of outreach include the following: assess the need and possibility for home care of patients suffering from communicable diseases and non-communicable diseases; promotion of mental health care, care of patients suffering from mental health problems and follow-up care in the case of individuals experiencing mental health challenges. In addition, there should be health care and social assistance provided to assist high risk families in the catchment area (Hughes & Ferrett, 2007; South African Red Cross Society, 2009; Fraser & Cooper, 2009; Du Plessis, 2007; Moules & Ramsay, 2008; Hughes & Ferret, 2007; Nzimande, 1986; Legal Assistance Centre, Legal Law Unit, 2002; Jenkins, 2000; Clark, 2008; Kotze, 1992; Jackson, 2002; Tarimo, 1991; WHO, 1987).

In Namibia, the MOHSS has a system in place in terms of which there is a team responsible for outreach services in each health district. This outreach/mobile team is

responsible for coordinating all outreach services provided in collaboration with the relevant health facilities (GRN MOHSS, 1992; 1995).

In this regard, it is expected of the registered nurse to plan for home care, implement the plan and evaluate the effectiveness of the care provided as well as to keep records.

The study results demonstrate that those registered nurses who were serving in the mobile/outreach team were acquitting themselves well, although some of the nurses working in clinics and health centres indicated that they felt this was solely the duty of those registered nurses who worked in outreach.

Implementation/Actions to be taken to effect outcomes

- PHC outreach/mobile teams should be both strengthened and provided with support in terms of transport and advice, as well as regular supervisory encouragement. Where possible these teams should be provided with a forum where they may share their experiences with registered nurses who have been based in a clinic or health centre for lengthy periods to facilitate an exchange of ideas.
- PHC supervisors should advocate for more posts for registered nurses and/or for the filling of current vacant posts where the situation so warrants in order to mitigate the shortage of registered nurses as this shortage has been cited as a major contributing factor to inadequate fulfilment of their PHC role functions in this regard.

Consider differences between urban and rural areas

Regarding the assessment of the need for and provision of home care, registered nurses should be aware that the situation in respect of referrals differs between rural and urban health facilities. In the rural areas, the situation regarding communication

and referrals between health facilities, registered nurses and home-based care providers is much clearer, involves fewer challenges and is characterised by interactions between the registered nurses and home-based care volunteers as compared to the situation in urban health facilities.

- PHC supervisors should acknowledge and support the registered nurses in their role in home care.
- It is essential that transport be provided. However, where there is no shortage of transport, registered nurses should be encouraged to carry out regular visits to home care providers and their patients and to provide them with the necessary support (Schaaf & Zumla, 2009).
- **In-service education** should be provided for the registered nurses at clinic and health centre level, informing them of ways in which they can participate in the outreach services in the catchment area. In addition, any possibilities for visiting nearby households should be explored.
- **Exchange programmes:** If possible PHC managers in the regions should organise exchange programmes between registered nurses working in clinics and health centres and those working in outreach teams so as to enable an exchange of knowledge and best practices. Some registered nurses who work in clinics and health centres feel left out as regards the outreach role functions and, therefore, they will need encouragement from their supervisors and from colleagues who are involved in outreach services as it is essential that they realise that outreach services are also part of PHC and they are not separated from it. Currently, some of these registered nurses are of the opinion that the outreach services are for registered nurses who work in the mobile/outreach teams only.

Outcome: Registered nurses perform more activities related to the motivation and education of the community in the catchment area

6.5.2. Strategy 2: Research activities to be conducted by registered nurses

Goal: To enhance the opportunity for registered nurses to contribute to research activities

6.5.2.1. Strategic Objective 1: To increase the opportunities for and capacity of registered nurses to enable them to contribute to research in the catchment area

According to Burns and Grove (2005), research involves carefully searching and examining repeatedly with the aim of validating and refining existing knowledge and also generating new knowledge.

Research may be used to address certain issues, including issues of poverty reduction and social inequality (Mavrotas & Shorrocks, 2007; Baldwin *et al.*, 2010). Irrespective of the practice setting, nursing as a science gains recognition through research and theory development because this facilitates decision making and change implementation, while taking into account the risks and benefits involved (Hunink, 1995; Steyn, Warren, Jonker, & Van Rooyen, 2008; Burke, 2007; Barnald & Locsin, 2007; Cottrell & McKenzie, 2005; Guest & Scullion, 2007; Richardson *et al.*, 2010; Ackley & Ladwig, 2008; McGloin & McLeod, 2010; Fraser & Cooper, 2009; Quinn & Hughes, 2007; Bardach, 2009).

Thus, successful nursing research with subsequent innovation in nursing practice requires cooperative efforts between the nursing service and the nursing education institutions, as well as the involvement of staff and strong quality improvement systems and access to up-to-date literature (Webb, 2008; Mello, 2011; Aschengrau & Searge III, 2008; McGloin & McLeod, 2010; Jones, 2007; Shober, 2008).

The research results showed that conducting research into health problems which have been identified was not well done by the majority of registered nurses. However, this may be attributed partly to the educational level of the respondents as the results of the study indicated that only a few of the respondents had either a bachelor degree or higher qualification. In addition, the undergraduate education level has been identified as one reason for not writing scientific research study reports (Guest & Scullion, 2007; Mason-Whitehead & Mason, 2008; Winch, 2007; Quinn & Hughes, 2007).

Implementation/actions to be taken to effect outcomes

- **In-service training/education:** Registered nurses should be encouraged to assist nurses in identifying possible areas of research within their units and then to carry out such research with the aim of relating their findings to their work areas and then finding ways in which findings can enhance their understanding of the problems they encounter in their daily practice.
- **Staff involvement:** Staff involvement is crucial for the development of the skills required in the implementation of a research-based nursing practice. These skills, which include committee work, effective communication, leadership, persuasion, analysis and clinical expertise, will be needed when implementing the research findings (Ervin, 2002; Williams, 2011; Webb, 2008; Mello, 2011; Richardson et al., 2010; Jones, 2007).

Registered nurses who are graduates in the different nursing specialties in the country could be used to guide others in these nursing specialties, as they are experts in those areas; for example registered nurses with BA, master's and doctoral degrees should be requested to assist other registered nurses in this regard.

- Registered nurses should be encouraged to study further so that they may gain more knowledge and skills about research.
- The formation of district and regional research committees/forums for nurses should be encouraged through the employers, nurses' professional associations and the local university. In addition, nurses from the various nursing disciplines, including midwifery, psychology and so forth, should be encouraged to present the research findings of research projects that they have carried out in their work areas.
- The provision of more staff posts to minimise the workload of registered nurses should be championed so as to enable registered nurses to spend time on research where staff shortages are cited as a reason for their not being involved in or contributing to research.
- Quality assessment and quality improvement systems should be put in place in order to ensure that the research work of registered nurses is peer reviewed (Amos et al., 2008; Geyer *et al.*, 2009; Searle et al., 2009; Jooste, 2009).
- As regards increased access to literature sources, one method of doing this is to appoint nursing lecturers to the health service research committees as lecturers usually have the resources available to locate articles as sources of information (Ervin, 2002; Guest & Scullion, 2007).
- Research findings should be disseminated in the practice setting to encourage registered nurses to appreciate research work and to adopt innovations resulting from relevant research results (Boerma, 1991; Ervin, 2002).
- PHC supervisors should take a lead in supporting research activities because any course of action is generally easier and more accepted if it is carried out in

an official capacity within an agency, rather than through an outside consultant (Ervin, 2002; Jones, 2007).

- In order to assist registered nurses and students to conduct sound research, they must be provided with information on research priority areas in both the health care service and health-related education (Baldwin *et al.*, 2010).
- Survey the nursing staff for skill and knowledge levels and draw up a plan to develop the skills and knowledge required for research in practice. This may include instituting in-service programmes for some staff members while others may need to take graduate research courses in order to become experts in specific areas, for example critiquing research studies, interpreting statistics and so forth (Ervin, 2002; Walker, 2010).
- Make contact with the nursing faculty of the university offering nurse training so that the members of the nursing faculty will be prepared to share with the nursing service their expertise in conducting research in the health service, public health, health economics and education, and in the translation of research findings into practice protocols when necessary (Ervin, 2002; Guest & Scullion, 2007; Jones, 2007).
- The nursing profession is advised to maintain strong nursing professional associations/organisations in order to ensure professional integrity and recognition, as well as to exercise strong professional discipline, peer education and review in order to ensure that their members' practice remains relevant to the needs of the community and is both safe and of the highest standard (Sullivan & Decker, 2001; Webb, 2008; Wild *et al.*, 2008; Mank, 2006; Barnald & Locsin, 2007; Guest & Scullion, 2007; Stepney & Rostila, 2011; Jones, 2007; Pugel, 2009; Quinn & Hughes, 2007).

Outcome: Greater participation of registered nurses in meaningful research activities

6.5.3. Strategy 3: Strategy regarding the managerial or administrative aspects of local-level PHC

Goal: To enhance the involvement of registered nurses in managerial aspects of PHC and the nursing process

Management is an act of running and controlling a business or similar organisation or the skill of dealing with people or situations in a successful way, while administration refers to activities that are carried out in order to plan, organise and run a business or any other similar institution (*Oxford Advanced Learner's Dictionary*, 2010).

Managers focus on coordinating and integrating resources while utilising the functions of planning, organising, supervising, staffing, evaluating, negotiating and representing (Smith, 2007; Radcliffe, 2010; Mello, 2011; Amos *et al.*, 2008). Nurse managers in health care organisations, including those in the management of PHC practice, influence those actions and decisions that will benefit staff members as well as patients, families, and communities (Jooste, 2009; 2010; Jones, 2007).

According to the findings of this study, the challenges in terms of management include shortages of registered nurses; a heavy workload; insufficient planning of programmes to manage illness on the part of registered nurses; insufficient involvement of registered nurses in budget planning; inadequate involvement in/awareness of budget implementation on the part of registered nurses; inadequate involvement in the planning of project proposals on the part of registered nurses; and a lack of transport which, in turn, influences the fulfilment of PHC roles and functions.

The first six constraints are related to human resources while the last one (lack of transport) falls under material resources (Mathis & Jackson, 2000; Hess & Cameron, 2006; Daft *et al.*, 2010; Tomey, 2009; Amos *et al.*, 2008; Geyer *et al.*, 2009; Jones, 2007; Coetzee *et al.*, 2007).

This strategy discusses the abovementioned challenges which may be classified under human and material resources, financial resources and issues of general management.

The strategy aims to improve the following areas of PHC management: a shortage of registered nurses and a heavy workload; insufficient education and training of health workers, including registered nurses, by other registered nurses; insufficient involvement of registered nurses in activities regarding management of PHC services; lack of involvement of registered nurses in planning programmes to manage acute and chronic diseases/illnesses; lack of awareness on the part of registered nurses regarding the health service budget; lack of awareness and participation of registered nurses in relevant project proposals regarding PHC; and a lack of transport hampers the utilisation of the nursing process in PHC practice. Moreover, there is a need to sustain a higher level of performance of those functions that were categorised as well done and to enhance the level of fulfilment of those functions categorised as requiring moderate action.

6.5.3.1. Strategic Objective 1: To enhance the level of involvement of registered nurses in activities relating to the management of PHC

Shortage of registered nurses and a heavy workload

The findings of this study indicate that a shortage of registered nurses is one of the main reasons why registered nurses do not fulfil their PHC functions based on the nursing process adequately.

A shortage of nursing staff in the face of a heavy workload is associated with overworked nursing staff that tend to be demotivated and develop burnout; hence, the nursing services provided are of poor quality (Booyens, 1999; Morrison, 2008). Meyer et al. (2009) argue that the availability of sufficient numbers of nursing staff is one way in which to reduce the risks for patients. Furthermore, it is essential that registered nurses be treated as part of the organisation and no bullying should be allowed to take place in the workplace. In such cases, the registered nurses tend to be productive and are less inclined to consider leaving the organisation (Wilson et al., 2011).

Namibia is faced with a shortage of the registered nurses required to man all the clinics and health centres. This shortage is attributed to a loss of nursing staff as a result of death and staff turnover, but also as a result of an inadequate training output as compared to the higher demand for registered nurses in service (GRN MOHSS, March 2008).

Despite the fact that a shortage of staff plays a role in staff productivity, there are several factors that affect the performance of individual employees; these include their abilities, motivation, the support they receive, the nature of the work they are doing, and their relationships with the organisation.

By implications, it means they cannot apply the nursing process.

Research has revealed that job satisfaction and organisational commitment tend to influence each other (Mathis & Jackson, 2000; Van den Heuvel *et al.*, 2007; Ivancevich *et al.*, 2008; Radcliffe, 2010; Daft *et al.*, 2010; Barnald & Locsin, 2007; Coetzee *et al.*, 2007).

Insufficient education and training of health workers, including registered nurses, by other registered nurses

As was discussed under strategy one, the training and education of nurses enhance the quality of nursing care. Although informal training occurs frequently in institutions, the more formal training of workers is also necessary as it is possible that some informal training may not be accurate (Mathis & Jackson, 2000, Geyer *et al.*, 2009; Jones, 2007). This function was, however, not adequately fulfilled.

Insufficient involvement of registered nurses in activities regarding management of PHC services

The study results indicate that registered nurses are not sufficiently involved in activities such as planning for programmes to manage illnesses, budgeting, outreach and the planning of project proposals.

The literature suggests that employees who are sufficiently involved in the planning of services tend to experience their work as meaningful. They also tend to be more careful and economic as regards handling the resources used in the performance of their duties (Webb, 2008; Geyer *et al.*, 2009; Sullivan & Decker 2001; Jooste, 2009; Byars & Rue, 2011; Van den Heuvel *et al.*, 2007; Heneman III & Judge, 2009; Jooste, 2010; USAID, 2006).

The participation of registered nurses in plans and decision making, under the guidance of their supervisors and depending on local circumstances, may enhance the fulfilment of their role and functions in local-level PHC, as the special treatment and recognition being accorded to them as workers may increase productivity because they feel that they being recognised and regarded as important (Sashkin, 1982; Clark, 2008; GRN MOHSS, 1992; Muller *et al.*, 2006; Hofnie-//Hoebes, 2005; Webb, 2008; Jooste, 2010; Coetzee *et al.*, 2007).

Involvement of registered nurses in planning programmes to manage acute and chronic diseases/illnesses

Programme planning is a method of planning which aims at coordinating the activities relating to what is to be done by whom, when and how. It is a key component of a community health nursing practice, providing a vital link between assessment and diagnosis on the one hand, and intervention and evaluation on the other. Planning is a process involving a series of intentional, time-related actions which are taken by either a group or an individual and which are designed to transform an idea from a vision into reality. The planning of programme activities comprises four interdependent steps, namely, defining, analysing, choosing and mapping. The importance of planning programme activities is to be found in the fact that activities are prioritised and the coordination and management of resources are ensured while such planning facilitates an individual doing the right thing at the right time (Tarimo, 1991; Ervin, 2002; Tomey, 2009; Jooste, 2010). Some of the health programmes currently in operation in PHC in Namibia include programmes addressing malaria, TB, mother and child, and school health (Stanhope & Lancaster, 2008). For more information in this regard, an example of a programme plan pertaining to budgets requirements has been included in Annexure 22.

It is expected that registered nurses take part in the planning of activities that will enhance efficiency of health programmes, implement such plans and do the required programme evaluations and keep records of the conduct and process of all activities implemented.

Furthermore, planning should be carried out based on a strategic plan taking into account existing strengths, threats and opportunities, and should work to realise a prioritised vision while emphasising entrepreneurship and effective leadership as

regards addressing challenges (Ervin, 2002). In Namibia, the planning for all PHC programmes is carried out annually and is based on the main strategic plan of the MOHSS which is, in turn, guided by the national vision, Vision 2030, and the MGDs. Several of the registered nurses in management positions take part in/contribute to this annual planning with this involvement of registered nurses in the planning process depending on the positions they occupy in the organisations (GRN National Planning Commission, 2004: 2007).

To increase the registered nurses' awareness of the health service budget

Developing budgets is one of the final stages of the programme plan. After developing a programme plan, the objectives and activities contained in the programme plan are translated into numerical terms, namely, the budget. However, the budget may use financial terms with which registered nurses are unfamiliar (Ervin, 2002; Brealey, Myers & Marcus, 2007; Tomey, 2009; Jooste, 2010; Colander, 2008).

The main reasons why budgeting is so important in each health or development project include the following: budgeting helps to monitor and control expenditure; prevents indiscriminate expenditure; prioritises the utilisation of resources; avoids impulse buying, while also assisting in allocating the appropriate resources to the correct activities; and prevents resources running out before the completion of the project (Ervin, 2002; Brealey *et al.*, 2007; Van Horne, Wachowicz, & Bhaduri, 2008; Tomey, 2009).

Knowledge and skills of the budgeting process on the part of registered nurses is an advantage in the health services because it instils a sense of care and concern for resource management in them as well as making them feel part of the service.

Results indicate that registered nurses are not involved in budgeting.

To increase the awareness and participation of registered nurses in relevant project proposals regarding PHC

As in the case of budgeting, the planning of proposals is also position linked and, thus, not every registered nurse takes part in the formulation of project proposals.

If community health programmes are funded by government, as is the case with the PHC programmes in Namibia, then funding is not much of a problem. However, nursing is still obliged to carry out the services that are part of funded programmes

and to solicit sources of funding for innovative or newly identified programmes if need be. To be able to do this, nurses require proposal-writing skills (Ervin, 2002; Miner & Miner, 2003; Brigham & Ehrhardt, 2008; Tomey, 2009).

Lack of transport hampers utilisation of the nursing process in PHC practice

Material resources refer to the materials and equipment required to carry out daily functions at the health facilities and include medication, patient records, instruments to measure parameters, beds and linen, space/room for the provision of care, transport and cold chain equipment and so forth (Jooste, 2010).

Of these material resources, transport was the only resource that the research results indicated as often not being available and this hampered the fulfilment of certain of the functions which were mentioned above.

Implementation/actions to be taken to effect outcomes relating to workload and shortage of staff

- Staff shortages: All efforts should be made to try and support those institutions that train registered nurses so as to assist them to produce more qualified registered nurses who are sufficiently well qualified to fill the vacant posts available.
- Everything possible should be done to ensure psychological safety at work and to discourage all forms of bullying so as to ensure that nurses are happy and do not decide they want to leave as a result of such problems (Wilson et al., 2011; Luzinski, 2012).
- It is recommended that all possibilities as regards creating and filling posts for registered nurses be explored as much as possible in order to reduce the shortage in health facilities and, thus, promote productivity (Mathis & Jackson, 2000; Jooste, 2010).

Implementation/actions to be taken to effect outcomes relating to resource constraints and use of nurses

- Nurse Managers in PHC should guide registered nurses in terms of how they can work more effectively, despite the shortage of nurses. This could be done by managers inspiring and nurturing the registered nurses and creating a culture in terms of which they will be encouraged to fulfil their functions to the best of their abilities.
- Participative management should be utilised. Systems involving participatory management and shared governance help create organisational climates that reward decision making, creativity, independence and autonomy. Organisations utilising these systems are able to recruit and retain independent, accountable professionals. In addition, in response to consumer demands for rapid attention to concerns and questions, nursing organisations are adopting consumer-sensitive cultures that require accountability and decision making from nurses.
- Quality assurance measures should be strengthened with the aim of continuously improving performance. It is essential that excellent performance be identified and rewarded for the purposes of motivation and encouragement. This may be done through monetary rewards recognising excellence. One way to do this is to foster communication between nursing service management and nursing professional associations/organisations with the aim of discussing how quality could be improved and to see to it that the working condition of nurses are adequate.
- Ways in which to structure and allocate the daily activities of registered nurses should be explored in order to enhance performance and promote the physical

and mental health of registered nurses (Geyer *et al.*, 2009; Stoltenberg & Bruce, 2007; Jooste, 2009; Jones, 2007).

- When an organisation has undergone a restructuring process in order to become more competitive, this restructuring usually includes job redesigning, while the workforce (human resources) is also affected. This, in turn, requires the proper preparation and reorientation of the working staff in order to avoid burnout and stress (Mathis & Jackson, 2000; Tomey, 2009).

Implementation/actions to be taken to effect outcomes relating to the ongoing education and training of registered nurses

- In-service training should be provided to assist registered nurses to keep up to date with current developments in PHC.
- The sharing of experiences should be facilitated, for example between outreach teams, and clinic and health centre staff, as well as between different clinics and health centres, and also among districts, in order to enable the exchange of ideas. Supervisory support visits should be made to encourage, educate and advise registered nurses and to share information on the practices in place.

Implementation/actions to be taken to effect outcomes relating to involvement of nurses in managerial functions and other PHC activities

- It is essential that the meaningfulness of the PHC functions of all registered nurses be enhanced by increasing their involvement in activities that have to do with outreach, budgeting, and planning for programmes and proposals, as well as research. Such involvement may range from information sharing to the allocation of tasks and serving in special groups or committees, depending on both the capability of the registered nurses and the organisational and professional rules.

- The use of teams in jobs is recommended. It is important to use special groups such as quality circles to check on the quality of PHC services provided and also special purpose teams which will address specific problems and which may continue to work together in, for example, dealing with outreach services to improve the level of work and understanding of registered nurses.
- In-service education and information-sharing discussions about functions such as outreach, planning, budgeting and proposals should be conducted on a regular basis in order to keep registered nurses informed about these issues. In addition, it should be made clear to registered nurses that, in some cases, some of them may feel lost when terms relating to research, outreach, budgeting, programme planning and proposal writing are mentioned. However, this does not mean that these nurses are not doing an important job; their ignorance is a result of the terminology being used in these types of managerial functions – a terminology which differs from the general nursing language. In fact, when listening to nurses using nurses’ jargon such as “infection” and so on, a lay person would have the same experience and, thus, the registered nurses should not feel discouraged.
- Registered nurses must be provided with feedback regarding the planning process, budgeting and proposals. It is essential that this feedback be applicable to the level of practice of the registered nurses while reference should be made to the way in which the feedback relates to functions at facility- and district-level PHC practice (Mathis & Jackson, 2000).

Implementation/actions to be taken to effect outcomes relating to programme planning

- As a result of the fact that some registered nurses feel left out of the programme planning process, it would be advisable for PHC managers to

assign tasks to the registered nurses regarding project management so that they may come to realise its relevance to their daily activities. They should also be involved in identifying problem areas either in the health facilities or in the communities they serve. These problem areas may then be included in programme activities during the annual planning activity.

- PHC managers need to explore opportunities for registered nurses at unit level to be exposed to the notion of planning through in-service training and regular staff meetings, where they should be informed about what planning is, who is involved and how each of them may contribute to the process.
- An atmosphere that observes different unit-level/facility-level projects and encourages healthy competition on, for example disease surveillance reporting for clinics in the district, should be created. In addition, unit supervisors should be supported so that they will be in a position to lead others in this regard

Implementation/actions to be taken to effect outcomes relating to budgeting

- The registered nurses indicated that they were not involved in budgeting and, thus, they did not know what the budgeting requirements were that they should be implementing. It is helpful to conduct in-service education on what budgeting entails, thus involving the registered nurses in the budgeting process in terms of identifying relevant activities for budget programmes at their level of practice and also to keep them informed about any other issue in this regard so that they will have some understanding of what the whole process involves. Accordingly, it is recommended that registered nurses should be informed that budgeting is primarily a managerial function and they should not feel incompetent if they do not understand all the terms and happenings related to

budgets in the organisation. Furthermore, it is important that the registered nurse be informed of the budgetary limitations and provisions to enable them ensure that activities that are budgeted for are fulfilled accordingly.

- The registered nurse has to take part in needs assessment regarding budgetary requirement, plan the budget, implement budget plan, evaluate how budget was adhered to and keep the necessary records for reference and for administrative purposes.

Implementation/actions to be taken to effect outcomes relating to project proposals

- When necessary, health programme administrators, community nurses with masters' degrees and university lecturers may be extremely helpful in facilitating the formulation of project proposals for funding.
- Registered nurses must be informed by in-service education about the practices of budgeting and the planning of project proposals that are relevant to them. In addition, they need to be made aware out of the areas where they may contribute to the successful of relevant activities as the need arises.
- Where possible, registered nurses at unit level should be exposed to management functions, while an atmosphere should be created that facilitates the involvement of units at different levels to project proposal writing exercises.

Implementation/actions to be taken to effect outcomes relating to transport

- While the government is constantly finding ways in which to maximise the availability of transport for health care service delivery, the MOHSS should continue exploring all possibilities to increase the availability of transport for all health districts and their health facilities.

- In a situation in which the shortage of transport is a problem, registered nurses need support and encouragement to explore ways in which to organise their work better so as to enable registered nurses from different health facilities to benefit from the scarce transport that is available in the district. In certain districts, health facility registered nurses are combining their community visits with the visits of the district mobile teams so as to make joint trips whenever possible. This approach could be used by other health facilities that are able to do so.
- With the support from the district supervisor, those activities that may be carried out without transport should be identified, and registered nurses be guided accordingly in this regard.

6.5.3.2. Strategic Objective 2: To sustain a higher level of performance of those functions that were categorised as well done and to enhance the level of fulfilment of those functions categorised as requiring moderate action

It is evident from the study results that are presented in chapter 4 that the registered nurses in local-level PHC practice in Namibia fulfil most of the roles and functions expected of them, despite the challenges they face.

Of the 67 PHC nursing role functions across the different phases of the nursing process, twenty (30%) were categorised as well done (see Annexures 12 and 15), thirty (45%) were categorised as moderate (see Annexures 12 and 16), while seventeen (25%) were categorised as requiring urgent action.

For each role function that required urgent action according to the study results, the strategies that were described in the previous sections have been developed. However, for those role functions that were classified as either well done or requiring moderate

action, the intention is that the fulfilment of these role functions is maintained at a high level.

Implementation/actions to be taken to effect outcomes

- Research should be conducted to ascertain the reasons why these functions are well done and to strengthen the measures necessary to maintain this high level of fulfilment.
- It is essential that registered nurses be made aware of these functions and that they be encouraged to maintain the performance of these functions at a high level.
- Best practices must be both recognised and rewarded.

6.6. VALIDATION OF THE STRATEGIES

The validation of the strategies developed entails those involved in the use of the proposed strategies in practice being made aware of the changes that have been suggested by the study results. In addition, it is essential that they are provided with an opportunity to evaluate the information shared by the researcher/agent through the draft strategies, after which they may decide whether or not to adopt the proposed innovations while considering the risks and costs involved. Strategies fall into the practice theory group and suggest possible practical solutions that may be applied in a specific situation. Strategies should be developed based on the following three main criteria, namely: 1) they should include the actions required to solve the problem identified in practice; 2) they should be clear and unambiguous so that those who will use them will be able to relate them to practice without difficulty; and 3) they should be relevant to the practice situation under discussion (Ervin, 2003; Steyn *et al.*, 2008; Burke, 2007; Tomey, 2009; Rossouw *et al.*, 2003; Amos *et al.*, 2008).

These strategies were presented to the PHC supervisors and health programme administrators in PHC and their input requested. See Annexure 23 for the tool that was

used to obtain the stakeholders' input on the strategies. In addition, the strategies were scrutinised by the study leaders who assessed their completeness and relevance.

PHC supervisors and health programme administrators:

Two meetings were held with the PHC programme managers in the North-West Health Directorate, while mail feedback was solicited from others in the rest of the country.

The health programme administrators studied the strategies in relation to both the constraints that had been experienced in health facilities regarding the implementation of PHC activities and the challenges facing registered nurses in local PHC delivery. The health programme administrators considered the strategies to be necessary as the problems these strategies seek to address were all valid problems relating to the provision health care according to the PHC approach. Comments were received and incorporated in the strategies. In addition, the health programme administrators pointed out the strengths and shortcomings of the strategies and the strategies were amended accordingly. These strengths and shortcomings of the strategies are as follows:

Strengths of the strategies

- The strategies incorporated the actions required to enhance the PHC role functions in the relevant areas.
- The strategies are clear in explaining the desired actions to be taken to ensure enhanced PHC practice.
- The strategies are relevant to PHC practice at local-level in Namibia.

Shortcomings of the strategies

The health programme administrators felt that the following should be included in the strategies:

- The existing referral system of the MOHSS needed to be strengthened. In addition, it is essential that all stakeholders be notified of the existing procedure that should be followed in this regard so that they will apply it in their daily practice. This, in turn, will ensure a mechanism to close the gap that the registered nurses had made mention of regarding patient referrals to home-based care volunteer institutions in the catchment area.
- Home-based caregivers/volunteers should be informed of the necessity of contacting nearby clinics/health facilities and vice versa, while health facility staffs need to be informed about the home-based care volunteer groups operating in their catchment areas so as to facilitate the easy referral of clients needing care.
- Lifestyle ambassadors (community volunteers currently used by MOHSS for TB and HIV) were recommended as a suitable group of community health workers who could be utilised by both the community and the facility registered nurses in order to facilitate the link between the two in case of diseases and other ailments that may occur in the community (GRN MOHSS, 2008).
- Learn from best practices. The PHC supervisors indicated that, although the study results had indicated some areas as either not being adequately fulfilled and or as being fulfilled, this, in fact, differed from one health facility to the next. For example, in one health facility the registered nurses conduct health education and they also fulfilled other health promotion activities far better as

compared to the registered nurses in another health facility. It was, thus, suggested that there be an exchange of best practices/success stories between the registered nurses from different health facilities, and also between districts so that they learn from each other. For example, in some districts, home visiting and other field visits are coordinated with the visits of the district outreach teams to ensure maximum use of the limited transportation available for health promotion activities in the district.

Acknowledge the differences between rural and urban PHC practice settings

Regarding functions such as the assessment of the need for and provision of home care, as well as the assessment of issues related to water and sanitation, it was suggested that registered nurses either be made aware or be reminded that the referrals situation differs between rural and urban health facilities. In the rural areas, communication and referral between health facility registered nurses and home-based care providers was described as encompassing fewer challenges and incorporating clearer communication and interactions between the registered nurses and home-based care volunteers, as compared to the same situation in the urban health facilities.

In addition, in the urban areas, communication in that regard was described as relatively difficult. Despite the fact that no researched information is available to describe possible reasons for this situation, the situation was linked to migration and the issue of informal settlements in urban areas. People also seem to live more permanently in one area in the rural areas as compared to the urban areas.

If the registered nurses are to be informed about the suggestions which have been made to enhance the PHC role functions that were rated by more than 20% of the

participants as below average, it is necessary that there be specific suggestions for each activity and each role function and that these be in writing.

Input by study leaders

After the strategies had been presented to the PHC programme administrators and the PHC supervisors, they were presented to the study leaders for their comments. Their suggestions for improvement focused primarily on the clarity of the strategies and they indicated the necessity of describing each strategy clearly so as to enable the registered nurses to follow guidance of these strategies without difficulty. In addition, the activities required needed to be outlined clearly for each strategy. These suggestions were considered and the necessary adjustments made.

6.7. CONCLUSION

This chapter described the strategies that were developed. These strategies are based on the main areas of concern, namely, environmental health; nutrition and food supply; health information communication; identification of social problems in families and in the community; research; and managerial and administrative aspects of the PHC role.

In addition, the strategies developed were validated. The shortcomings that were indicated included the following: referral system of the MOHSS; lifestyle ambassadors; learning from best practices; and a realisation of the differences between rural and urban practice settings.

The next chapter (chapter 7) will focus on the conclusions, limitations and recommendations relating to the study.

CHAPTER 7

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

7.1. INTRODUCTION

The previous chapter described the strategies developed in this study to support the registered nurses in such a way as to enhance their utilisation of the nursing process in the fulfilment of their PHC roles and functions in clinics, health centres and outreach posts in Namibia. These strategies were based on the areas of concern identified in the results of phase 1 of the study. This chapter focuses on the conclusions, limitations and recommendations of the study.

The aim of this study was to explore and describe the extent to which professional nurses utilise the nursing process in fulfilling their role and functions in PHC delivery during their daily practice, and to develop strategies that would support them in the execution of their role and function in this regard.

7.2. CONCLUSIONS

The conclusions were drawn according to the objectives of the study and include the following:

7.2.1. Objective 1: To explore and describe the way in which registered nurses in clinics, health care centres and outreach programmes in the health districts in Namibia use the nursing process in terms of fulfilling their role functions in PHC delivery

7.2.1.1. Conclusions based on the phases of the nursing process

The phases of the nursing process that registered nurses follow in applying the PHC approach in practice are assessment, diagnosis, planning, implementation evaluation and recordkeeping. The results of this study show that Namibian registered nurses who work in local-level PHC facilities apply the nursing process in their daily

practice, as the majority of the PHC role functions were rated as average and higher by 80% or more of the participants.

7.2.1.2. Conclusions based on the elements of primary health care

It emerged from the study results that most of the elements of PHC are fulfilled to a large extent. As was mentioned earlier, the challenges identified fall in the following groups of PHC elements, namely: water and sanitation and other environmental health issues (environmental hygiene); nutrition and food supply; health education and communication/education and motivation of the community; community diagnosis and care and management and support or administrative function, including research.

7.2.1.3. Conclusions based on the statistically significant differences between groups views as revealed by the study results

In this study, certain variables were utilised to check whether there was any significant difference regarding these variables and the way in which the PHC role and functions were being fulfilled. Of these variables, some differences were observed between area of work, duration of service at a health facility and gender and the application of PHC role functions in practice. The duration of service at a health facility was related to a higher level of fulfilment of the diagnosis role functions. Registered nurses who had worked for four to ten years at a health facility were rated as doing well as regards this function, followed by those who had worked for more than ten years, with those who had worked for three years or less performing the worst, although the difference between group 2 (worked at a health facility for 4–10 years) and group 3 (worked at a health facility for more than 10 years) was not statistically significant. However, this observation was made with regard to the group of registered nurses only and not the supervisors.

Regarding planning, those registered nurses and supervisors whose area of work was the health centre rated lower in the fulfilment of their planning role functions as compared to those whose working areas were not health centres.

As regards implementation, two statistically significant differences were found, namely, as regards gender and area of work. Firstly, men were associated with better performance in terms of implementation than women. The second statistically significant difference found was between working in an outreach area and implementing the nursing process, with those nurses who work in outreach areas being associated with better performance in terms of the implementation role functions of the nursing process than those nurses working in health centres/clinics. The former observation was found to apply to the group of registered nurses and the supervisors, while the latter applied to the group of registered nurses only. No significant difference was observed as regards the evaluation and documentation/recordkeeping variables.

7.2.2. Objective 2: To determine the way in which supervisors view the utilisation of the nursing process by the registered nurses in their fulfilment of their role and functions in PHC

The study results revealed that the supervisors of the registered nurses all had the same view regarding the fulfilment of the functions of PHC delivery.

7.2.3. Objective 3: To identify the constraints facing registered nurses as regards their utilisation of the nursing process in PHC delivery

The study concluded that registered nurses do face certain constraints as regards the utilisation of the nursing process in their execution of their daily PHC role functions.

Certain challenges were identified. In relation to the steps of the nursing process, these challenges are in the areas of assessment and planning. The assessment of environmental health issues (sanitation), health education and health communication,

including outreach services, food hygiene and the assessment of social problems in communities and families, were not adequately performed by all registered nurses. As regards planning, the functions related to programme and financial planning, planning for health education and health communication, including outreach services, were also not adequately performed. These findings may, thus, imply that diagnosis, implementation and evaluation may also be deficient in some areas because it is assessment and diagnosis that guides all the functions which are implemented in order to solve the problems which have been identified in PHC nursing (Clark, 2008; Ackley & Ladwig, 2008; McGloin & McLeod, 2010).

The factors that contributed to registered nurses not utilising the nursing process effectively in their daily PHC practice include: a shortage of registered nurses; not being involved in budgeting; not being provided with the transport necessary to carry out their functions; not being exposed to certain activities for lengthy periods of time, for example outreach; heavy workloads, including large numbers of patients/clients to manage; and not having enough time to visit communities as a result of the heavy workload at the clinics and health centres. This workload makes life extremely difficult for the nurses (see also section 4.6 in chapter 4).

7.2.4. Objective 4: To develop a conceptual framework on which to base the development of strategies to support registered nurses in local-level PHC in Namibia to utilise the nursing process in their daily practice

A conceptual framework was devised as a basis for developing the strategies that will support registered nurses in their utilisation of the nursing process to improve the fulfilment of their PHC functions.

7.2.5. Objective 5: To incorporate the study findings in the development of strategies to support registered nurses in their use of the nursing process in PHC delivery

For the purpose of this study, three strategies were developed to address the utilisation of the nursing process in order to ensure the fulfilment of the role functions that were rated by more than 20% of the participants as below average. The strategies are as follows: Strategy 1: addressing the factors that constitute challenges that hinder professional nurses in maximally utilising the nursing process in their daily PHC practice; Strategy 2: the conducting of research activities by registered nurses; and Strategy 3: a strategy regarding the managerial or administrative aspects in local-level PHC.

Strategy 1 addresses issues such as water and sanitation; nutrition, food supply and food hygiene; strengthening of activities related to the motivation and education of the community; as well as outreach services and identification of social problems in families and communities.

Strategy 2 focuses on research activities by registered nurses, while Strategy 3 concentrates on managerial or administrative aspects of PHC. These include planning of programmes to manage illness; involvement of registered nurses in budget planning; involvement in budget implementation; participation in the planning of project proposals; resources that influence the fulfilment of PHC roles and functions; a need to sustain the high level of fulfilment of those functions that were categorised as well done and a need to enhance the level of fulfilment of those role functions that were categorised as requiring moderate actions.

7.2.6. Objective 6: To validate the appropriateness of the strategies

These strategies were validated by PHC supervisors, registered nurses, health programme administrators (HPA) in PHC, and study leaders, all of whom supplied

input. The strategies were found to be action oriented and this, in turn, would enhance PHC practice.

However, the shortcomings identified related to the referral system, utilisation of lifestyle ambassadors and learning from best practices. However, these were addressed thus improving the strategies.

7.3. RECOMMENDATIONS

7.3.1. Strategies

Strategies were developed that indicated the actions that should be taken regarding the challenges that had emerged from the study findings. It is recommended that the researcher

- launch the strategies officially and motivate that the strategies be accepted and implemented by the MOHSS in Namibia
- assist the MOHSS in Namibia in implementing the strategies by conducting workshops at district level to explain the role and function of the registered nurses in this regard. Also, the researcher should conduct workshops with the supervisors of PHC to assist them in their role and functions as supervisors as regards these strategies.

7.3.2. Nursing education

It is recommended that nurse educators constantly reflect on the nursing curricula with the aim to strengthen the role and function of registered nurses concerning the utilisation of the nursing process when implementing elements of PHC in their daily practice.

7.3.3. Health care management

Nursing management

- PHC managers should acknowledge and support the registered nurses in their role in home care. It may be helpful to set aside a day or two in a week or in a month for the clinic registered nurses to conduct home care. In addition, it should be ascertained whether their workload will allow registered nurses to visit some patients cared for at home in the catchment area and provide the necessary support to the patients concerned and their caregivers.
- Maintain contact and open communication between the registered nurses in clinics and health centres and community-based care and voluntary organisations to ensure that the registered nurses provide support to the volunteers in the catchment area.
- The shortage of staff and the heavy workload at the clinics and health centres were mentioned as contributing to the fact that registered nurses do not take part in the supervision of home care provision. Accordingly, it is suggested that PHC supervisors recommend the filling of vacant posts for registered nurses as far as possible.

Implement the elements of PHC using the steps of the nursing process

The implementation of any approach may confront health care providers with challenges. According to Muller et al. (2006), the challenge in the implementation of any new approach in health care services arises from the way in which this approach is managed. In other words, the challenge lies in how effectively people are informed, how much they are involved in interactive decision making and in how well they are educated and trained to obtain the necessary knowledge about the approach. In addition, constant supervision and monitoring is required to ensure that the practice of the approach will always remain relevant. Accordingly, health care managers

(supervisors) in PHC will remain responsible for the continuous assessment, evaluation and interpretation of the variables impacting on the implementation of the new approach.

Additional research

It is recommended that further research be carried out to determine whether the strategies developed are being utilised and, if so, whether they are making a difference in the way in which registered nurses in PHC facilities use the nursing process in fulfilling the PHC functions in their daily practice.

7.4. LIMITATIONS OF THE STUDY

Data collection

The data collected yielded information about the views of registered nurses and their supervisors about the way in which registered nurses fulfil their PHC role functions in practice. However, the data collection instrument could not yield data on exactly how specific skills were executed during the implementation of each activity carried out.

One health district/region was not included in the analysis as the information from this health district, which is also a region, was received late. This clearly affected the comprehensiveness of the study as regards the country as a whole.

Instrument design

The fact that the study adopted a comprehensive view of the way in which the various PHC role functions were fulfilled meant that it was not possible to specify each individual function. For example, not all the activities related to the handling of maternal cases were isolated from the management of other patients/clients throughout the phases of the nursing process and it is possible that this approach may obscure the view of how these cases were managed at this level, especially in view of the fact that Namibia is now faced with the challenge of maternal deaths. Hence, there

is a need for a separate study to focus on the handling of maternal and obstetric cases in local-level PHC.

7.5. CONTRIBUTION TO KNOWLEDGE

The nurse's role and function of rendering nursing care is executed within the framework of the nursing process. Accordingly, a gap in the existing body of knowledge that guided this study was identified as the way in which the utilisation of the nursing process is viewed and applied in a contemporary context, namely a local-level PHC setup.

This gap was addressed by developing an instrument (questionnaire) capable of gathering the required data. After the data had been analysed a conceptual framework was devised to serve as a basis for the development of relevant strategies and it is in this way that the study contributed to the body of knowledge.

As regards health care policy, the study serves as a source of information that the MOHSS in Namibia could use to redevelop or rewrite policies regarding PHC delivery by registered nurses in local-level PHC.

With regard to nursing practice, the study can contribute to knowledge in the areas of nursing practice and the delivery of PHC.

Concluding remarks

I found this study to be a wonderful experience. The findings revealed the challenges that registered nurses are facing when executing their role and functions in their daily practice. These results will assist me as a lecturer to enhance my teaching in many aspects of PHC and may help the MOHSS in Namibia to strengthen the principles of PHC delivery.

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ANNEXURE 1: Letter of permission to conduct the research study from the Ministry of Health and Social Services.



REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198
Windhoek
Namibia
Enquiries: Ms. M. Zauana

Ministerial Building
Harvey Street
Windhoek
Ref.: 17/3/3/AP

Tel: (061) 203-2538
Fax: (061) 272286
Email: mzauana@mhss.gov.na
Date: 13 May 2003

OFFICE OF THE PERMANENT SECRETARY

Ms. H. Iita
P.O.Box 1549
Oshakati

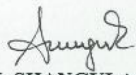
Dear Ms. Iita

***STRATEGIES TO IMPLEMENT PRIMARY HEALTH CARE COMPETENCIES
INTO PRACTICE BY REGISTERED NURSES IN NAMIBIA***

1. Reference is made to your application to conduct the above-mentioned study.
2. The proposal has been evaluated and found to have merit.
3. Kindly be informed that approval has been granted under the following conditions:
 - 3.1. The data collected is only to be used for your Doctoral in Nursing Science;
 - 3.2. A quarterly progress report is to be submitted to the Ministry's Research Unit;
 - 3.3. Preliminary findings are to be submitted to the Ministry before the final report;
 - 3.4. Final report to be submitted upon completion of the study;
 - 3.5. Separate permission to be sought from the Ministry for the publication of the findings.

Wishing you success with your project.

Yours sincerely,


DR. K. SHANGULA
PERMANENT SECRETARY



Forward with Health for all Namibians by the Year 2000 and Beyond!

ANNEXURE 2: Health regions of Namibia and how they relate to the former health regional directorates

REGIONAL HEALTH DIRECTORATES			
North-East	North-West	Central	South
HEALTH REGIONS			
Caprivi	Omusati	Kunene	Hardap
Kavango	Oshana	Otjozondjupa	Karas
	Oshikoto	Erongo	Khomas
	Ohangwena		Omaheke

Source: GRN MOHSS. Integrated Health Care Delivery: The challenges for implementation (1995)

NOTE: Indicates health regions where the study survey was conducted

ANNEXURE 3: Table indicating the water situation of households

Percentage of households by source of water, Namibia, 2001 Census								
Area	Number of households	Piped water within	Public pipe	Safe boreholes	Safe water	Rivers/streams/dams/canals	Other	Not stated
Namibia	346455	52.7	27.9	6.6	87.2	6.6	5.3	0.8
Urban	136909	78.2	19.6	0.6	98.4	0.5	0.3	0.8
Rural	209546	36.1	33.3	10.6	79.9	10.6	8.6	0.8
Caprivi	16839	26.8	29.1	30.5	86.3	10.7	2.4	0.5
Erongo	27496	85.3	7.1	3.3	95.7	2.7	1.5	0.1
Hardap	15039	66.6	20.3	7.7	94.6	3.4	1.6	0.4
Karas	15481	76.5	15.3	1.9	93.7	3.9	1.9	0.5
Kavango	30467	23.5	23.2	15.6	62.3	29.7	7.3	0.7
Khomas	58580	75.4	20.5	2.0	97.9	0.7	0.5	0.9
Kunene	12489	44.9	13.9	14.1	72.8	15.5	10.8	0.9
Ohangwena	35958	30.1	42.0	5.5	77.5	5.0	16.2	1.2
Omaheke	12590	65.2	15.7	8.2	89.1	2.3	7.8	0.8
Omusati	38202	33.3	46.2	3.0	82.5	8.5	8.3	0.7
Oshana	29557	49.5	42.8	1.4	93.7	3.3	2.1	0.9
Oshikoto	28419	43.4	39.5	5.4	88.2	3.9	7.1	0.8
Otjozondjupa	25338	67.8	19.5	7.0	94.3	1.5	2.7	1.5

Source (Republic of Namibia 2001 Population and Housing Census - GRN, National Planning Commission, July 2003 p 58)

ANNEXURE 4: Table indicating the toilet facilities situation of household

Percentage of households by toilet facility, Namibia, 2001 Census								
Area	Number of households	Flush toilet not shared	Flush toilet shared	Ventilated Improved Pit latrine(VIP)	Pit long drop	Bucket/pail	Bush	Other
Namibia	346455	22.5	11.9	2.0	7.1	1.5	54.2	0.3
Urban	136909	47.5	25.0	2.1	5.7	1.6	17.4	0.5
Rural	209546	6.1	3.4	2.0	8.1	1.5	78.3	0.2
Caprivi	16839	7.4	5.9	0.3	1.9	0.5	83.4	0.1
Erongo	27496	46.2	34.1	1.8	5.2	0.6	11.5	0.5
Hardap	15039	40.2	9.4	1.4	4.3	10.3	34.0	0.1
Karas	15481	37.9	19.9	1.9	6.6	7.3	26.0	0.2
Kavango	30467	5.2	2.1	1.1	8.8	0.8	81.3	0.1
Khomas	58580	49.9	25.4	0.8	2.2	0.6	20.2	0.5
Kunene	12489	19.9	6.3	0.6	4.8	2.1	65.5	0.2
Ohangwena	35958	2.0	1.2	1.4	5.5	0.5	88.8	0.1
Omaheke	12590	22.4	10.5	1.2	2.6	0.7	62.2	0.1
Omusati	38202	2.3	1.0	3.9	8.8	0.5	83.0	0.2
Oshana	29557	13.7	5.5	8.2	21.1	1.2	49.2	0.7
Oshikoto	28419	9.3	6.6	1.4	10.4	1.4	70.2	0.5
Otjozondjupa	25338	30.3	17.5	0.8	7.0	0.8	42.7	0.2

Source (Republic of Namibia 2001 Population and Housing Census - GRN, National Planning Commission, July 2003 p 60)

ANNEXURE 6: Outcome of the needs analysis of the expectations of health programme administrators regarding registered nurses

Outcome of the written survey documents and meetings		
Themes	Categories	Sub-categories
PHC activities	Mother and child health care Outreach services Administration and management Client management Health promotion and disease prevention Information and education Management of Health Information System (HIS) Environmental sanitation Community activities Operational research	Community-based care provision Promotion of family planning Ante-natal care Post natal care Immunisations Home care School visiting Home visits Health facility management Ensure sufficient supplies of drugs Equipment Care of adolescents and adults Rehabilitation services Care of the elderly Care of children under five years Growth monitoring Food and nutrition programme Vitamin A supplementation Cancer screening Control of diarrhoeal diseases Promotion of oral health Control of communicable diseases Disease surveillance Offer correct health education Provide clients with counselling Training of community own resource persons (CORPS) Training of nurses Collect data Analyse data Communicate information Disease surveillance Eliminate all hazards Promote water safety Promote food security Promote adequate housing Community mobilisation Carry out rapid community assessment
Nursing competence	Communication skills	Good interactions with clients Good interactions with fellow workers
Nursing process	Diagnosis Implementation	Make correct and early diagnosis Prompt treatment Management of illnesses, including childhood illnesses

Three main themes were identified. The first theme involved PHC nursing activities; the second theme nursing competencies and the third theme the nursing process.

ANNEXURE 7: Research questionnaire for completion by registered nurses

Research Questionnaire

*To be completed by **registered nurses** working in state clinics, health centres and in outreach teams in Namibia*

NB! Please complete this questionnaire **only** if you have been in nursing service for at least eight (8) months after completion of your basic registered nurse education

Study Topic: ***Strategies to enhance the application of Primary Health Care (PHC) competencies to the practice of registered nurses in Namibia***
(A cross-sectional survey)

Investigator: Mrs Hermine Iita (University of Namibia)

Supervisors:

1. Prof. A Van Dyk (University of Namibia)
2. Dr SN Ipinge (University of Namibia)
3. Dr V Ehlers (University of South Africa)

This questionnaire consists of 9 pages.

Letter to request informed consent regarding participation in this research study

Dear Registered Nurse

As a nurse educator, I would like to find out how you perceive your practice as a registered nurse with regard to the application of Primary Health Care (PHC) in your daily practice at your workplace. This study is being carried out as one of the requirements for admission to the degree of Doctor in Nursing Science at the University of Namibia.

Attached please find a copy of the letter of permission the Ministry of Health and Social Services which authorised this study.

Kindly assist me in this regard by completing the questions about your daily practice at the health facility where you work and which are contained in the following pages.

This questionnaire will take approximately 20 minutes of your time.

Please indicate your response by making a cross (X) over the selected number.

Take note of the following:

*Do not write your name on the questionnaire. For reasons of confidentiality, the findings of this study will not be linked to your name in any way.

*There are no correct or incorrect answers. Your honest response is required

*Please answer all the questions

*If you would like to change an answer, do so by clearly crossing out the incorrect answer and marking the correct answer clearly

Please return this questionnaire on completion to the person from whom you received it, on or before Friday 13 January 2006.

Ms Hermine Iita
University of Namibia (Oshakati)
Department of Nursing Science
PO Box 1549
Oshakati
Namibia

SECTION A: PERSONAL PARTICULARS OF THE REGISTERED NURSE

INSTRUCTIONS: PLEASE FILL IN YOUR PERSONAL PARTICULARS IN THE SPACES PROVIDED

<i>Question no</i>	<i>Description</i>	<i>Variable (Office use only)</i>
--------------------	--------------------	---------------------------------------

1. How old are you?

Age

Under 35 years	1
35–44 years	2
45 years and above	3

2. For how long have you been a registered nurse?

Duration

3 years or less	1
4 to 10 years	2
More than 10 years	3

3. Please indicate your gender.

Gender

Male	1
Female	2

4. Indicate the area in which you work. (More than one choice is acceptable)

Work area

Clinic (hospital, PHC area/clinic included)	1
Health centre	2
Outreach (mobile) team	3
Health post	4

5. Indicate your nursing qualification(s).

Qualification/s

Diploma	1
Bachelors degree and above	2

6. For how long have you been working in this specific health facility?

Facility duration

3 years or less	1
4 to 10 years	2
More than 10 years	3

7. What is the name of your health district?

District

8. What is the name of your health region?

Region

WHEN YOU ANSWER THE NEXT SECTIONS OF THIS QUESTIONNAIRE:

1. Indicate your opinion by making a cross over the appropriate number in the space provided for each question.
2. Remember: If you make a cross over number “1”, it means that you are confirming the statement about that specific task to a lesser extent, while if you make a cross over number “5”, this means you are confirming that statement to a larger extent. Number 2, 3 and 4 may rated as follows:
2: Below average, 3: Average and 4: Above average
3. Where you are confirming the statement to a **lesser extent**, please indicate your remarks in the space provided.

SECTION B: ASSESSMENT

Do you assess the following in your daily practice?

	Not at all	1	2	3	4	5	To a large extent	Variable
9. Occurrence of health problems in your catchment area.								Assess problems
10. Occurrence of important diseases in the community								Assess diseases
11. Safety of drinking water for clients in the catchment area								Assess water
12. Conditions under which waste is being disposed of in the area								Assess waste
13. The extent of food hygiene in the area								Assess hygiene
14. Nutritional status of all clients								Assess nutrition
15. Environmental health hazards (e.g. standing, dirty water etc.)								Assess health hazards
16. Need for housing and shelter in your health area								Assess housing
17. Take a complete history of all the patients/client whom you examine								Assess patient history
18. All observations carried out on all patients (BP, pulse, respiration)								Assess observation
19. Health status of any patient who is diagnosed with any disease								Assess health status
20. Women six weeks after delivery (postnatal)								Assess women
21. Immunisation status of all infants and children under the age of 5 years								Assess immunisation status
22. Need for Vitamin A by children under 5 years								Assess Vitamin A
23. Tetanus vaccination status of all women of child-bearing age (15–45)								Assess Tetanus vaccination status
24. Health development status of school children								Assess school
25. Social problems in families and community								Assess social
26. Needs of patients as regards referrals for special treatment (e.g. rehabilitation)								Assess referral
27. Need for home care								Assess home care
Remarks								

SECTION C: DIAGNOSIS

Do you in your daily practice

	Not at all	1	2	3	4	5	To a large extend	Variable
28. Determine the catchment population that you serve, including specific age groups								Determine catchment
29. Know the size of the catchment area								Know size
30. Identify the immunisation (EPI) coverage attained to date in the catchment area								Identify EPI coverage
31. Identify the socio-economic status of the community								Identify socio-economic
32. Identify the resources needed in the provision of nursing care								Identify resources
33. Identify the training needs of the community								Identify community training
34. Identify the training needs of health workers, including nurses								Identify health worker training
35. Carry out a full physical examination of all clients								Physical Examination
36. Make a correct nursing diagnosis in respect of all patients/clients								Nursing diagnosis
37. Identify disease trends reflected in health information system records								Identify disease trends
Remarks:								

SECTION D: PLANNING

Do you plan

	Not at all	1	2	3	4	5	To a large extent	Variable
38. The daily nursing care according to the needs of the target catchment population in the community that you serve								Plan care
39. Services according to the health information available at the health facility (e.g. morbidity & mortality)								Plan services
40. To develop a teaching plan for individuals to promote health								Plan teaching
41. Programmes to manage illness of an acute and/or chronic nature.								Plan programmes
42. Annual budget to request resources (manpower, materials)								Plan budget
43. To contribute to the planning of a project proposal to request resources according to needs								Plan proposal
44. Training sessions for the community concerning health issues								Plan community training
45. Training sessions for staff on relevant issues								Plan staff training
46. Properly for all health promotion activities (e.g. Growth monitoring, home visiting, AIDS prevention, immunisation)								Plan health promotion
47. For nursing interventions for any health problems identified								Plan nursing
48. For outreach services in the community								Plan outreach
Remarks:								

SECTION E: IMPLEMENTATION

Do you

	Not at all	1	2	3	4	5	To a large extent	Variable
49. Carry out all the planned nursing intervention activities for the catchment population (e.g. health promotion, home visits & immunisation)								Carry out activities
50. Utilise the available resources in the community when carrying out nursing intervention activities.								Utilise resources
51. Refer clients to the health services available in the community								Refer
52. Involve family members when implementing nursing activities								Involve family
53. Conduct training sessions for all health workers and the community								Conduct training
54. Carry out activities related to the control of outbreaks of disease and disasters								Control outbreaks
55. Implement the planned budget requirements								Implement budget
56. Ensure that the resources provided for nursing projects are utilised for the correct purpose								Resource utilisation
57. Manage any health problem within the framework of scope of practice								Manage problems
58. Provide health education according to health needs of clients								Health education
59. Provide home care according to the needs of clients								Home care
60. Administer treatment and medications as authorised by the nursing act and the relevant regulations								Administer treatment
61. Carry out research into problems identified								Research
62. Safeguard the rights of individual patients								Safeguard rights
Remarks:								

SECTION F: EVALUATION

Do you

	Not at all	1	2	3	4	5	To a large extent	Variable
63. Monitor changes in the occurrence and presence of health problems								Monitor health
64. Evaluate the ways in which materials and supplies are used for nursing care								Evaluate materials
65. Evaluate the effectiveness of health programmes e.g. immunisation								Evaluate programmes
66. Evaluate the effectiveness of health education programmes								Evaluate education
67. Evaluate the progress in health of all categories of patients/clients								Evaluate progress
Remarks:								

SECTION G: RECORD KEEPING

Do you?

	Not at all	1	2	3	4	5	To a large extent	Variable
68. Ensure that the written health profile documents of the health area in the health facility are up to date								Health profile Up to date
69. Ensure the accuracy of the health information available at health facility (mortality/morbidity)								Correctness of information
70. Document incidences of health problems and important diseases in the community								Document incidences
71. Document all training sessions conducted (for community and staff)								Document training
72. Document all health promotion activities conducted								Document health promotion
73. Document all nursing care activities provided								Document activities
74. Document all health information required for health information system								Document health information
75. Communicate findings with stakeholders, both orally and in written form								Communicate findings
Remarks:								

Thank you very much for completing the questionnaire!!!

<i>For office use only:</i>		
76. Researcher's classification of respondent		
		Class
Registered nurse	1	
Immediate supervisor	2	

ANNEXURE 8: Research questionnaire for completion by supervisors

Research Questionnaire

*To be completed by the **immediate supervisors** of registered nurses working in state clinics, health centres and at outreach posts in Namibia*

NB! Please complete this questionnaire for the registered nurses **only** if they have been in nursing service for at least eight (8) months after completion of their basic registered nurse education

Study Topic: ***Strategies to enhance the application of primary health care (PHC) competencies in practice by registered nurses in Namibia***
(A cross-sectional survey)

Investigator: Mrs Hermine Iita (University of Namibia)

Supervisors: 1. Prof. A Van Dyk (University of Namibia)

2. Dr SN Ipinge (University of Namibia)

3. Dr V Ehlers (University of South Africa)

This questionnaire consist of 9 pages.

Dear supervisors of registered nurses working in clinics, health centres or at outreach (mobile) PHC services

As a nurse educator, I would like to find out how you perceive the practice of registered nurses under your supervision regarding the application of primary health care (PHC) in practice at your workplace.

Kindly assist me in this regard by completing the questions on the following pages about the performance of the registered nurse selected in your health facility for this study. This questionnaire will take approximately 20 minutes of your time.

Please indicate your response by making a cross (X) over the selected number.

Take note of the following:

*Do not write the name of the registered nurse you are assessing on the questionnaire

*There are no correct or incorrect answers. Your honest response is required

*Please answer all the questions

*If you would like to change an answer, do so by clearly crossing out the incorrect answer and marking the correct answer clearly

Please return this questionnaire on completion to the person from whom it you received it.

Ms Hermine Iita
University of Namibia (Oshakati)
Department of Nursing Science
PO Box 1549
Oshakati
Namibia

SECTION A: PERSONAL PARTICULARS OF THE SUPERVISOR

INSTRUCTIONS: PLEASE FILL IN YOUR PERSONAL PARTICULARS IN THE SPACES PROVIDED

1. How old are you?

Under 35 years	1
35–44 years	2
45 years and above	3

2. For how long have you been a registered nurse?

3 years or less	1
4 to 10 years	2
More than 10 years	3

3. Please indicate your gender.

Male	1
Female	2

4. Indicate the area in which you work. (More than one choice is acceptable)

Clinic (hospital, PHC area/clinic included)	1
Health centre	2
Outreach (mobile) team	3
Health post	4

5. Indicate your nursing qualification(s).

Diploma	1
Bachelors degree and above	2

6. For how long have you been working in this specific health facility?

3 years or less	1
4 to 10 years	2
More than 10 years	3

7. What is the name of your health district?

8. What is the name of your health region?

WHEN YOU ANSWER THE NEXT SECTIONS OF THIS QUESTIONNAIRE:

1. Indicate your opinion by making a cross over the appropriate number on the space provided for each question.
2. Remember: If you make a cross over number “1”, it means that you are confirming the statement about that specific task to a lesser extent while, if you make a cross over number “5”, this means you are confirming that statement to a larger extent
3. Where you are confirming the statement to a lesser extent, please indicate your remarks in the space provided

SECTION B: ASSESSMENT

Does he/she assess the following in his/her daily practice?

	Not at all	1	2	3	4	5	To a large extent
9. Occurrence of health problems in the catchment area.							
10. Occurrence of important diseases in the community							
11. Safety of drinking water for clients in the catchment area							
12. Conditions under which waste is disposed of in the area							
13. The extent of food hygiene in the area							
14. Nutritional status of any client							
15. Environmental health hazards (e.g. standing, dirty water etc.)							
16. Need for housing and shelter in your health area							
17. The patient data (health history) of all patients/client that he/she examines							
18. All observations carried out on any patient (BP, pulse, respiration)							
19. Health status of any patient who has been diagnosed with any disease							
20. Women six weeks after delivery (Post natal)							
21. Immunisation status of all infants and children under the age of 5 years							
22. Need for Vitamin A by children under 5 years							
23. Tetanus vaccination status of all women of child bearing age (15-45)							
24. Health development status of school children							
25. Social problems in families and community							
26. Needs of patients concerning referrals for special treatment (e.g. rehabilitation)							
27. Need for home care							
Remarks:							

SECTION C: DIAGNOSIS

Does he/she in his/her daily practice....

	Not at all	1	2	3	4	5	To a large extent
28. Determine the catchment population that you serve, including specific age groups							
29. Know the size of the catchment area							
30. Identify immunisation (EPI) coverage attained to date in the catchment area							
31. Identify the socioeconomic status of the community							
32. Identify the resources required in the provision of nursing care							
33. Identify the training needs of the community							
34. Identify the training needs for health workers, including nurses							
35. Take a complete history of all patients/clients							
36. Conduct a full physical examination (assessment) of any client/patient							
37. Identify the disease trends reflected in the health information system records							
Remarks:							

SECTION D: PLANNING

Does he/she plan.....?

	Not at all	1	2	3	4	5	To a large extent
38. The daily nursing care according to the needs of the target catchment population in the community that he/she serves							
39. Services according to the health information available at the health facility (e.g. morbidity and mortality)							
40. To develop a teaching plan for individuals to promote health							
41. Programmes to manage illnesses pertaining to acute and chronic health problems.							
42. Annual budget to request resources (manpower, materials)							
43. To contribute to the planning of a project proposal to request resources according to needs							
44. Training sessions for the community concerning health issues							
45. Training sessions for staff on relevant issues							
46. Properly for all health promotion activities (e.g. Growth monitoring, home visiting, AIDS prevention, immunisation)							
47. For nursing interventions for any health problems identified							
48. For outreach services in the community							
Remarks:							

SECTION E: IMPLEMENTATION

Does he/she.....?

	Not at all	1	2	3	4	5	To a large extent
49. Carry out all the planned nursing intervention activities for the catchment population (e.g. health promotion, home visits and immunisation)							
50. Utilise the resources available in the community when carrying out nursing intervention activities.							
51. Refer clients to the health services available in the community							
52. Involve family members when implementing nursing activities							
53. Conduct training sessions for all health workers and the community							
54. Carry out activities related to the control of outbreaks of disease and disasters							
55. Implement the planned budget requirements							
56. Ensure that the resources provided for nursing projects are utilised for the correct purpose							
57. Manage any health problems within the framework of scope of practice							
58. Provide health education according to the health needs of clients							
59. Provide home care according to the needs of clients							
60. Administer treatment and medications as authorised by the Nursing Act and the relevant regulations							
61. Carry out research into problems identified							
62. Safeguard the rights of individual patients							
Remarks:							

SECTION F: EVALUATION

Does he/she.....?

	Not at all	1	2	3	4	5	To a large extent
63. Monitor changes in the occurrence and presence of health problems							
64. Evaluate the ways in which materials and supplies are used for nursing care							
65. Evaluate the effectiveness of health programmes e.g. immunisation							
66. Evaluate the effectiveness of health education programmes							
67. Evaluate the progress in health of all categories of patients/clients							
Remarks:							

SECTION G: RECORD KEEPING

Does he/she.....?

	Not at all	1	2	3	4	5	To a large extent
68. Ensure that the written health profile documents of the health area in the health facility are up to date							
69. Ensure the accuracy of the health information available at the health facility (mortality and morbidity)							
70. Document incidences of health problems and important diseases in the community							
71. Document all training sessions conducted for community and staff							
72. Document all health promotion activities conducted							
73. Document all nursing care activities provided							
74. Document all health information required for health information system							
75. Communicate findings with stakeholders, both orally and in written form							
Remarks:							

Thank you very much for completing the questionnaire!!!

<i>For office use only:</i>		
76. Researcher's classification of respondent		Class
Registered nurse	1	
Immediate supervisor	2	

ANNEXURE 9: Number of target health facilities / details of the population and the responses of the participants

Health			Number of			Responses	
Area	Region	District	Facilities	Registered nurses	Available registered nurses	Nurses	Sup
North East	Caprivi	Katima Mulilo	27	19	16	0	0
	Kavango	Andara	9	3	2	2	2
		Nankundu	11	8	6	6	2
		Nyangana	10	4	3	3	3
		Rundu	20	10	9	4	0
North West	OmUSATI	Okahao	7	13	11	4	5
		Oshikuku	18	23	20	6	2
		Outapi	7	16	14	14	14
		Tsandi	5	14	12	6	6
	Oshana	Oshakati	13	17	16	16	17
	Oshikoto	Onandjokwe	15	17	13	13	13
		Tsumeb	4	4	3	2	2
	Ohangwena	Eenhana	9	10	8	8	8
		Engela	16	17	16	16	14
		Kongo	3	3	2	2	3
Central	Kunene	Khorixas	7	6	5	1	5
		Opuwo	13	4	3	0	3
		Outjo	4	4	3	3	2
	Otjozondjupa	Grootfontein	6	6	5	6	5
		Okahandja	2	3	2	3	1
		Okakarara	4	4	3	4	0
		Otjiwarongo	4	4	3	4	1
	Erongo	Aradis (Swakopmund)	1	See Swakopmund			
		Omaruru	4	4	3	0	0
		Swakopmund	4	5	4	4	4
		Usakos	4	4	3	3	2
		WalvisBay	6	7	6	6	6
South	Hardap	Aranos	3	4	3	4	4
		Mariental	6	7	5	3	4
		Rehoboth	3	3	2	0	0
	Karas	Karasburg	4	4	3	2	2
		Keetmanshoop	3	7	6	7	1
		Luderitz	6	4	3	2	2
	Khomas	Windhoek	10	24	19	6	7
	Omaheke	Gobabis	25	5	4	4	4
Total			293	287	236	164	144

ANNEXURE 10: Demographic particulars of the participants on which inferential statistics were carried out (ANOVA and t-test).

ANOVA and *t*-test was applied to these variables

- Age
- Years of experience
- Gender
- Area of work (clinic, health centre, outreach or health post)
- Qualification
- Years of practice in a certain area of work

Table 10A: Age of participants per group

	Total			Registered nurses			Supervisors	
	Number	Percent		Number	Percent		Number	Percent
Under 35	70	22.8		39	23.8		31	21.7
35–44	128	41.7		61	37.2		67	46.9
45+	109	35.5		64	39.0		45	31.5
Total	307			164			143	

Table 10B: Years of experience in the nursing profession of participants per group

	Total			Registered nurses			Supervisors	
	Number	Percent		Number	Percent		Number	Percent
3 years or less	40	13.0		27	16.5		13	9.0
4–10 years	111	36.0		70	42.7		41	28.5
More than 10 years	157	51.0		67	40.9		90	62.5
Total	308			164			144	

Table 10C: Gender of respondents

	Total		Registered nurses		Supervisors	
	Number	Percent	Number	Percent	Number	Percent
Male	61	19.8	36	22.0	25	17.4
Female	247	80.2	128	78.0	119	82.6
Total	308		164		144	

Table10D: Number of respondents per area of practice

Health facility	Total respondents	Worked at this health facility	
		Number	Percentage
Clinic	308	208	67.5
Health centre	308	80	26
Outreach	308	49	15.9
Health post	308	7	2.3

Table10E: Number of registered nurses' and supervisor' responses per health region

Region	Total		Registered nurses		Supervisors	
	Number	Percent	Number	Percent	Number	Percent
Ohangwena	51	16.6	26	15.9	25	17.4
Oshikoto	30	9.7	15	9.1	15	10.4
Oshana	33	10.7	16	9.8	17	11.8
Omusati	57	18.5	30	18.3	27	18.8
Kavango	22	7.1	15	9.1	7	4.9
Otjozondjupa	24	7.8	17	10.4	7	4.9
Erongo	25	8.1	13	7.9	12	8.3
Omaheke	8	2.6	4	2.4	4	2.8
Khomas	13	4.2	6	3.7	7	4.9
Karas	16	5.2	11	6.9	5	3.5
Hardap	15	4.9	7	4.3	8	5.6
Kunene	14	4.5	4	2.4	10	6.9
Total	308	100	164	100	144	100

Table10F: Number of respondents per health area

Health area	Total		Registered nurses		Supervisors	
	Number	Percent	Number	Percent	Number	Percent
North East	23	7.5	15	9.1	8	5.6
North West	163	52.9	84	51.2	79	54.9
Central	69	22.4	36	22.0	33	22.9
South	53	17.2	29	17.7	24	16.7
Total	308	100	164	100	144	100

Table10G: Respondents per health district

Health district	Total		Registered nurses		Supervisors	
	Number	Percent	Number	Percent	Number	Percent
Andara	4	1.3	2	1.2	2	1.4
Nankundu	8	2.6	6	3.7	2	1.4
Nyangana	6	1.9	3	1.8	3	2.1
Rundu	4	1.3	4	2.4	0	0
Okahao	9	2.9	4	2.4	5	3.5
Oshikuku	8	2.6	6	3.7	2	1.4
Outapi	28	9.1	14	8.5	14	9.7
Tsandi	12	3.9	6	3.7	6	4.2
Oshakati	33	10.7	16	9.8	17	11.8
Onandjokwe	26	8.4	13	7.9	13	9.0
Eenhana	16	5.2	8	4.9	8	5.6
Engela	30	9.7	16	9.8	14	9.7
Kongo	5	1.6	2	1.2	3	2.1
Khorixas	6	1.9	1	0.6	5	3.5
Opuwo	3	1.0	0	0	3	2.1
Grootfontein	11	3.6	6	3.7	5	3.5
Okahandja	4	1.3	3	1.8	1	0.7
Okakarara	4	1.3	4	2.4	0	0
Otjiwarongo	5	1.6	4	2.4	1	0.7
Swakopmund	8	2.6	4	2.4	4	2.8
Usakos	5	1.6	3	1.8	2	1.4
Walvis Bay	16	5.2	8	4.9	8	5.6
Aranos	8	2.6	4	2.4	4	2.8
Mariental	7	2.3	3	1.8	4	2.8
Karasburg	4	1.3	2	1.2	2	1.4
Keetmanshoop	8	2.6	7	4.3	1	0.7
Luderitz	4	1.3	2	1.2	2	1.4
Windhoek	13	4.2	6	3.7	7	4.9
Gobabis	8	2.6	4	2.4	4	2.8
Outjo	5	1.6	3	1.8	2	1.4
Total	308	100	164	100	144	100

Table10H: Qualification of participants per group

	Total		Registered nurses		Supervisors	
	Number	Percent	Number	Percent	Number	Percent
University diploma	260	85.0	152	94.0	108	75.0
Bachelor degree and higher	46	15.0	10	6.0	36	25.0
Total	306		162		144	

Table 10I: Period of time participants practiced in current health facility(How long have you been working in this health facility)

	Total			Registered nurses			Supervisors	
	Number	Percent		Number	Percent		Number	Percent
3 years or less	76	24.8		45	27.4		31	21.8
4-10 years	122	39.9		59	36.0		63	44.4
More than 10 years	108	35.3		60	36.6		48	33.8
Total	306			164			142	

ANNEXURE 11: A comparison of the percentages of responses that rated the fulfilment of specific role functions as average and higher

Total = Percentage of total participants in the study who rated an item as such

Registered nurses = Percentage of registered nurse participants in the study who rated an item as such

Supervisors = Percentage of supervisor participants in the study who rated an item as such

TABLE 11A: SECTION B – ASSESSMENT

Do you assess the following in your daily practice?

	Percentages – positive replies		
	Total	Registered nurses	Supervisors
9. Occurrence of health problems in your catchment area.	86.9	86.5	87.3
10. Occurrence of important diseases in the community	87.1	83.8	90.8
11. Safety of drinking water for clients in catchment area	75.5	75.1	76.0
12. Conditions under which waste is being disposed of in the area	69.5	69.6	69.3
13. The extent of food hygiene in the area	74.2	75.4	72.8
14. Nutritional status of clients	85.2	81.5	89.4
15. Environmental health hazards e.g. standing, dirty water	67.4	66.0	68.7
16. Need for housing & shelter in your health area	62.4	62.7	62.3
17. Take a complete history of all the patients/client whom you examine	93.4	93.2	93.8
18. All observations carried out on patients (BP, pulse, respiration)	93.2	92.1	94.5
19. Health status of any patient who is diagnosed with any disease	92.2	92.6	91.7
20. Women six weeks after delivery (Post natal)	81.1	81.1	81.2
21. Immunisation status of all infants and children under the age of 5 years	95.9	95.7	96.5
22. Need for Vitamin A of children under 5 years	93.5	93.9	93.1
23. Tetanus vaccination status of all women of child bearing age (15-45)	85.6	87.1	84.0
24. Health developmental status of school children	69.0	71.5	66.5
25. Social problems in families and community	75.4	76.6	74.2
26. Needs of patients concerning referral to special treatment e.g. rehabilitation)	82.7	80.3	85.4
27. Need for home care	74.8	73.2	76.7

TABLE 11B: SECTION C – DIAGNOSIS**Do you in your daily practice**

	Percentages – positive replies		
	Total	Registered nurses	Supervisors
28. Determine the catchment population that you serve, including specific age groups	90.4	90.1	90.8
29. Know the size of the catchment area	88.5	88.8	88.2
30. Identify the immunisation (EPI) coverage attained to date in the catchment area	92.8	92.6	93.1
31. Identify the socio-economic status of the community	81.5	82.2	80.6
32. Identify the resources needed in the provision of nursing care	90.5	87.6	93.8
33. Identify the training needs of the community	88.9	87.0	91.0
34. Identify the training needs for health workers, including nurses	89.6	86.6	93.1
35. Carry out a full physical examination of all clients	87.8	86.4	89.6
36. Make a correct nursing diagnosis of all patients/clients	94.4	93.2	95.9
37. Identify disease trends reflected in the health information system records	91.0	92.5	89.5

TABLE 11C: SECTION D – PLANNING
Do you?

	Percentages – positive replies		
	Total	Registered nurses	Supervisors
38. The daily nursing care according to the needs of the target catchment population in the community that you serve	81.1	88.3	88.0
39. Services according to the health information available at health facility (e.g. morbidity and mortality)	89.5	88.3	90.8
40. To develop a teaching plan for individuals to promote health	86.2	88.4	84.0
41. Programmes to manage illnesses of an acute and chronic nature.	80.6	85.0	75.6
42. Annual budget to request resources (manpower, materials)	66.4	65.3	67.6
43. To contribute to the planning of a project proposal to request resources according to needs	62.3	60.5	64.4
44. Training sessions for the community concerning health issues	79.6	76.0	83.8
45. Training sessions for staff on relevant issues	86.3	86.3	86.3
46. Effectively for all health promotion activities (e.g. Growth monitoring, home visiting, AIDS prevention, immunisation)	87.9	87.7	88.2
47. For nursing interventions for any health problem identified	89.5	90.2	88.8
48. For outreach services in the community	75.3	75.2	75.6

**TABLE 11 D: SECTION E - IMPLEMENTATION:
Do you.....?**

	Percentages – positive replies		
	Total	Registered nurses	Supervisors
49. Carry out all the planned nursing intervention activities for the catchment population (e.g. health promotion, home visits and immunisation)	92.1	90.7	93.8
50. Utilise the resources available in the community when carrying out nursing intervention activities.	88.0	89.4	86.8
51. Refer clients to the health services available in the community	89.2	91.4	86.6
52. Involve family members of patients/clients when implementing nursing activities	87.4	86.5	88.7
53. Conduct training sessions for all health workers and the community	79.8	77.0	83.0
54. Carry out activities related to control of outbreaks of disease and disasters	84.7	85.3	84.2
55. Implement the planned budgetary requirements	73.6	71.3	76.4
56. Ensure that the resources provided for nursing projects are utilised for the correct purpose	85.2	83.2	87.2
57. Manage any health problem within the framework of scope of practice	93.4	90.2	97.2
58. Provide health education according to the health needs of clients	95.4	95.1	95.6
59. Provide home care according to the needs of clients	76.6	76.7	76.6
60. Administer treatment and medications as authorised by both the nursing act and the relevant regulations	94.8	94.5	95.5
61. Carry out research into problems identified	62.5	70.5	53.6
62. Safeguard the rights of individual patients	93.1	92.6	93.5

**TABLE 11E: SECTION F – EVALUATION:
Do you**

	Percentages – positive replies		
	Total	Registered nurses	Supervisors
63. Monitor changes in the occurrence and presence of health problems	89.8	87.6	92.2
64. Evaluate the ways in which materials and supplies are used for nursing care	90.5	90.8	90.1
65. Evaluate the effectiveness of health programmes e.g. immunisation	93.1	94.5	91.6
66. Evaluate the effectiveness of health education programmes	88.9	91.5	86.0
67. Evaluate the progress of health of all categories of patients/clients	88.6	89.0	88.2

**TABLE 11 F: SECTION G – RECORD KEEPING
Do you....?**

	Percentages – positive replies		
	Total	Registered nurses	Supervisors
68. Ensure that the written health profile documents of the health area in the health facility are up to date	87.8	89.3	86.1
69. Ensure the accuracy of the health information available at the health facility (mortality/ morbidity)	90.3	88.0	93.1
70. Document incidences of health problems and important diseases in the community	86.4	84.9	88.0
71. Document all training sessions conducted for the community and for the staff	83.4	87.3	84.0
72. Document all health promotion activities conducted	86.6	87.3	85.8
73. Document all nursing care activities provided	92.4	91.1	93.7
74. Document all health information required for the health information system	94.0	93.0	95.0
75. Communicate findings with stakeholders, orally and in written form	83.2	81.9	84.6

ANNEXURE 12: Areas where fulfilment of role functions was categorized as well done in the context of the phases of the nursing process

	Phase of the nursing process	Percentages		
		Total	Registered nurses	Supervisors
Take a complete history of all patients/clients whom you examine	Assessment	93.4	93.2	93.8
All observations carried out on patients (BP, pulse, respiration)	Assessment	93.2	92.1	94.5
Health status of any patient diagnosed with any disease	Assessment	92.2	92.6	91.7
Assessment of immunisation status of all infants and children under the age of five(5) years	Assessment	96.1	95.7	96.5
Need for Vitamin A by children under 5 years	Assessment	93.5	93.9	93.9
Determine the catchment population that you serve, including specific age groups	Diagnosis	90.4	90.1	90.8
Identify the immunisation (EPI) coverage attained to date in the catchment area	Diagnosis	96.1	95.7	96.5
Identify the resources needed in the provision of nursing care	Diagnosis	90.5	87.6	93.8
Make a correct nursing diagnosis of all patients/clients	Diagnosis	94.4	93.2	95.9
Identify the disease trends reflected in health information system records	Diagnosis	91.0	92.5	89.5
Carry out all the planned nursing intervention activities for the catchment population (e.g. health promotion, home visits & immunisation)	Implementation	92.1	90.7	93.8
Manage any health problem within the framework of scope of practice	Implementation	93.4	90.2	97.2
Provide health education according to the health needs of clients	Implementation	95.4	95.1	95.6
Administer treatment and medications as authorised by both the Nursing Act and the relevant regulations	Implementation	94.8	94.5	95.5
Safeguard the rights of individual patients	Implementation	93.1	92.6	93.5
Evaluate the ways in which materials and supplies are used for nursing care	Evaluation	90.5	90.8	90.1
Evaluate the effectiveness of health programmes e.g. immunisation	Evaluation	93.1	94.5	91.6
Ensure the accuracy of the health information available at a health facility (mortality/morbidity)	Recordkeeping	90.3	88.0	93.1
Document all nursing care activities provided	Recordkeeping	92.4	91.1	93.7
Document all health information required for the health information system	Recordkeeping	94.0	93.0	95.0

ANNEXURE 13: Areas where fulfilment of role functions was categorized as moderate in the context of the phases of the nursing process

	Phase of the nursing process	Percentages		
		Total	Registered nurses	Supervisors
Assessment of occurrence of health problems in the catchment area	Assessment	86.9	86.5	87.3
Assessment of occurrence of important diseases in the community	Assessment	87.1	83.8	90.8
Assessment of nutritional status of clients	Assessment	85.2	81.4	89.4
Assessment of women 6 weeks after delivery (postnatal)	Assessment	81.1	81.1	81.2
Checking of tetanus vaccination status for all women of childbearing age (15–45)	Assessment	85.6	87.1	84.0
Assessment of needs of patients concerning referral to special treatment (eg. rehabilitation)	Assessment	82.7	80.3	85.4
Knowing the size of the catchment area	Diagnosis	88.5	88.8	88.2
Identification of the socio-economic status of the community	Diagnosis	81.5	81.9	80.6
Identification of the training needs of the community	Diagnosis	88.9	87.0	91.0
Identification of the training needs for health workers, including nurses	Diagnosis	89.6	86.6	93.1
Carrying out a full physical examination of all clients	Diagnosis	87.8	86.4	89.6
Plan nursing care daily according to the needs of the target catchment population in the community being served	Planning	88.1	88.0	88.0
Plan services according to the health information available at health facility (eg. Morbidity and mortality)	Planning	89.5	88.3	90.8
Plan to develop teaching plan for individuals to promote health	Planning	86.2	88.4	84.0
Plan training sessions for staff on relevant issues	Planning	86.3	86.3	86.3
Plan properly for all health promotion activities (e.g. Growth monitoring, home visiting, AIDS prevention, immunisation)	Planning	87.9	87.7	88.2
Plan for nursing interventions for any health problem identified	Planning	89.5	90.2	88.8
Utilisation of the resources available in the community when carrying out nursing intervention activities	Implementation	88.0	69.4	86.8
Referring clients to the health services available in the community	Implementation	89.2	91.4	86.4
Involving family members of patients/clients when implementing nursing activities	Implementation	87.4	86.5	88.7
Carrying out activities related to control of outbreaks of disease and disasters	Implementation	84.7	85.3	84.2
Ensuring that resources provided for nursing projects are utilised for the	Implementation	85.2	83.2	87.2

correct purpose				
Monitoring of changes in the occurrence and presence of health problems	Evaluation	89.8	87.6	92.2
Evaluating the effectiveness of health education programmes	Evaluation	93.1	91.5	86.0
Evaluating the progress of health of all categories of patients/clients	Evaluation	88.6	89.0	88.2
Ensuring that the written health profile documents of the health area in the health facility are up to date	Documentation	87.8	89.3	86.1
Documenting incidences of health problems and important diseases in the community	Documentation	86.4	84.9	88.0
Documenting all training sessions conducted for community and staff	Documentation	83.4	82.9	84.0
Documenting all health promotion activities conducted	Documentation	86.6	87.3	85.8
Communicating findings to stakeholders, orally and in written form	Documentation	83.2	81.9	84.6

ANNEXURE 14: Areas where fulfilment of role functions was categorized as required urgent action in the context of the phases of the nursing process

Area of concern	Phase of the nursing process	Percentages		
		Total	Registered nurses	Supervisors
Safety of drinking water	Assessment	23.4	24.0	21.9
Waste disposal	Assessment	29.3	29.8	28.7
Food hygiene	Assessment	24.8	24.5	25.2
Environmental health hazards	Assessment	31.7	34	29.2
Housing	Assessment	36.5	37.4	35.7
Developmental status of school children	Assessment	29.6	28.5	30.8
Social problems in families and communities	Assessment	23.6	23.4	23.8
Need for home care (assess)	Assessment	24.2	26.9	21.1
Planning programs to manage illness	Planning	18.5	10.0	22.4
Budget	Planning	32.3	34.2	30.3
Proposals for projects (plan)	Planning	36.4	38.9	33.6
Plan training sessions for the community	Planning	19.4	24.1	14.1
Outreach	Planning	23.4	24.9	21.3
Training of health workers and community members	Implementation	18.8	22.3	15.2
Implement budget	Implementation	24.7	27.5	21.5
Provide home care	Implementation	21.7	22.6	20.6
Carry out research	Implementation	36.5	29.6	44.2

ANNEXURE 15: Functions that were categorized as well done in the context of the elements of Primary health care (PHC)

Theme/elements of primary health care	Role function	Phase of the nursing process
Health education and communication	None	
Nutrition and food supply	None	
Control of endemic diseases	Identification of disease trends in HIS (See community diagnosis/community activities)	
Immunisation	Identify immunisation (EPI) coverage attained to date in the catchment area	Diagnosis
Supply of essential drugs	Administer treatment and medications as authorised by the Nursing Act and the relevant regulations	Implementation
Treatment of common diseases and injuries	Assessment of the completeness of history taking/take a complete history of patients examined	Assessment
	Assess all observations carried out on patients (BP, pulse, respiration)	Assessment
	Check health status of any patient diagnosed with any disease	Assessment
	Identify resources needed in the provision of nursing care	Diagnosis
	Make a correct nursing diagnosis of all patients/clients	Diagnosis
	Provide health education according to health needs of clients (Training/teaching)	Implementation
	Safeguard the rights of individual patients	Implementation
	Document all nursing care activities provided	Documentation/ recordkeeping
Mother and child health services including family planning (part of health promotion)	Assessment of immunisation status of all infants and children under the age of five(5) years	Assessment
	Need for Vitamin A by children under 5 years	Assessment
Water and sanitation (environmental hygiene)	None	
Community diagnosis/community activities	Determine the catchment population that you serve, including specific age groups	Diagnosis
	Identification of disease trends reflected in HIS	Diagnosis
	Carry out all the planned nursing intervention activities for the catchment population (e.g. health promotion, home visits & immunisation)	Implementation
	Manage any health problem within the framework of scope of practice	Implementation
Management and support or administrative function	Evaluate the ways in which materials and supplies are used for nursing care	Evaluation
	Evaluate the effectiveness of health programmes e.g. immunisation	Evaluation
	Ensure correctness of HIS at health facility (morbidity and mortality)	Documentation
	Document all health information required for HIS	Documentation

ANNEXURE 16: Functions that were categorized as moderate in the context of the elements of Primary health care (PHC)

Theme/elements of primary health care	Role function	Phase of the nursing process
Health education and communication	Identification of training needs of the community	Diagnosis
	Plan to develop teaching plan for individuals to promote health (management, communication)	Planning
	Involve family members of patients/clients when implementing nursing activities (management, communication)	Implementation
Nutrition and food supply	Assessment of nutritional status of patients / clients	Assessment
Control of endemic diseases	Carrying out activities related to control of outbreaks of disease and disasters	Implementation
Immunisation	Checking tetanus vaccination status for all women of childbearing age(15-45)	Assessment
Supply of essential drugs	None	
Treatment of common diseases and injuries	Assessment of needs of patients concerning referral to special treatment (eg. rehabilitation)	Assessment
	Plan daily nursing care according to the needs of the target catchment population in the community being served (community diagnosis)	Planning
	Carry out a full physical examination of all clients	Diagnosis
	Utilisation of the resources available in the community when carrying out nursing intervention activities (Community diagnosis)	Implementation
	Referring clients to the health services available in the community	Implementation
	Evaluating the progress of health of all categories of patients/clients	Evaluation
Mother and child health services, including family planning (part of health promotion)	Assessment of women 6 weeks after delivery (postnatal)	Assessment
Water and sanitation (environmental hygiene)	None	
Community diagnosis/Community activities	Assessment of occurrence of health problems in the catchment area	Assessment
	Assessment of occurrence of important diseases in the community	Assessment
	Knowing the size of the catchment	Diagnosis
	Identification of the socio-economic status of the community	Diagnosis
	Plan for nursing interventions for any health problem identified (Treatment)	Planning
	Plan properly for all health promotion activities (e.g. growth monitoring, home visiting, AIDS prevention, immunisation)	Panning
	Monitoring of changes in the occurrence and presence of health problems	Evaluation
	Document all health promotion activities conducted	Documentation/ Recordkeeping
	Document incidences of health problems and important diseases in the community	Recordkeeping

Management and support or administrative function	Identification of training needs for health workers, including nurses	Diagnosis
	Plan services according to the health information available at the health facility e.g. Morbidity and mortality	Planning
	Plan training sessions for staff on relevant issues (also in mobilisation)	Planning
	Ensure that resources provided for nursing projects are utilised for the correct purpose	Implementation
	Evaluating the effectiveness of health education programmes	Evaluation
	Communicating findings to stakeholders, orally and in written form	Documentation/ Recordkeeping
	Ensuring that the written health profile documents of the health area in the health facility are up to date	Documentation/ Recordkeeping
	Document all training sessions conducted for community and staff (management, communication)	Documentation/ Recordkeeping

ANNEXURE 17: Functions that were categorized as needed urgent action in the context of the elements of Primary health care (PHC)

Theme/Elements of primary health care	Role function	Phase of the nursing process
Health education and communication	Developmental status of school children	assessment
	Need for home care (assess)	Assessment
	Outreach	Planning
	Plan training sessions for the community	Planning
	Provide home care	Implementation
Nutrition and food supply	Food hygiene assessment	Assessment
Control of endemic diseases	None	
Immunisation	None	
Supply of essential drugs	None	
Treatment of common diseases and injuries	None	
Mother and child health services, including family planning (part of health promotion)	None	
Water and sanitation (environmental hygiene)	Safety of drinking water (environmental sanitation)	Assessment
	Waste disposal (environmental sanitation)	Assessment
	Environmental health hazards (environmental sanitation)	Assessment
	Housing (environmental sanitation)	Assessment
Community diagnosis/Community activities	Social problems in families and communities	Assessment
Management and support or administrative function	Planning programmes to manage illness	Planning
	Plan budget	Planning
	Proposals for projects (plan)	Planning
	Implement budget	Implementation
	Training of health workers and community members	Implementation
	Carry out research	Implementation

ANNEXURE 18: Contributing factors to constraints faced by registered nurses in the fulfilment of primary health care role functions

The following issues were pointed out as being among the contributing factors to many registered nurses and supervisors rating the fulfilment of primary health care role function as below average:

- In many of the health districts in Namibia, school health services are part of the outreach function and are, thus, included in the activities of the mobile/outreach teams in the health districts. It would appear that these outreach teams are of the view that they are carrying out this function in the districts on behalf of other registered while the rest of the registered nurses function in clinics and health centres. However, the results indicate that those registered nurses who had been working in outreach teams had been fulfilling this function in practice, provided that transport was made available to them when required.
- The other group of registered nurses who were confined to providing services within clinics and health centres were of the opinion that they had little chance to come in contact with school children and to assess their health status, except in case of a few cases that present themselves at the health facilities for the treatment of ailments.
- The fact that transport was not always readily available to all registered nurses from the different health facilities so as to enable them to reach the different schools was identified as an obstacle preventing the registered nurses from being able to visit different schools/many schools and to have a chance to assess the health status of school children.
- The assessment of the health development status of school children provides the registered nurse in primary health care with an opportunity to identify possible health development problems and then to be able to plan the necessary/required services, for example, health education, medical treatment etc. This state of affair did not, however, cause serious health care difficulties for school children because they do have access to nearby health facilities in the health districts.
- Budgeting is one of the activities that are linked to managerial responsibility. However, it is not usual for registered nurses to be involved in budgeting as this is, primarily, the responsibility those occupying managerial positions.
- The supervisors claim there is also a lack of/inadequate awareness as, in some instances, registered nurses do not recognize the level at which they are contributing e.g being requested to suggest how many plastic bags they may need to use in a health facility or how many thermometers they may need is also part of budgeting. Thus, there are many registered nurses involved in the budgeting process although more explanations may be needed as to why budgeting is required
- There is a dangers if registered nurses are not aware of their contribution to budgeting, they may feel they are not part of the planning process, a situation that may lead to lack of support of activities and lack of care in handling service resources Fortunately the results indicate that registered nurses in Namibia are ensuring that the materials and equipment are used for the correct purpose (See implementation and evaluation)

ANNEXURE19: Essential/core public health functions

The leaders in the public health disciplines have refined and explained the public health core functions model to include a widely endorsed public health vision and mission statement that enumerates the ten (10) essential public health services. These include:

- Monitor health status to identify community health problems
- Diagnose and investigate health problems and health hazards in the community.
- Inform, educate, and empower people regarding health issues.
- Mobilise community partnerships to identify and solve health problems.
- Develop policies and plans that support individual and community health efforts.
- Enforce laws and regulations that protect health and ensure safety.
- Link people to the personal health services required and assure that health care will be provided when it would otherwise be unavailable.
- Assure a competent public health and personal health care worker.
- Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
- Conduct research with the aim of coming to new insights and innovative solutions to health problems

Source: Ervin (2002).

ANNEXURE 20: Challenges identified and strategies developed

Challenges identified	Strategies formulated
<p>Insufficient assessment of safety of drinking water for patients/clients by registered nurses</p> <p>Insufficient assessment of waste disposal in the catchment area by registered nurses</p> <p>Inadequate assessment of environmental health hazards by registered nurses</p> <p>Poor assessment of housing conditions of patients/clients in the catchment area by registered nurses</p> <p>Insufficient assessment of food hygiene by registered nurses</p> <p>Inadequate assessment of the developmental status of school children by registered nurses</p> <p>Insufficient planning for patient/client education by registered nurses</p> <p>Insufficient education of health workers by registered nurses</p> <p>Insufficient assessment of need for home care for patients by registered nurses</p> <p>Inadequate provision of home care by registered nurses</p> <p>Inadequate planning for outreach services by registered nurses</p> <p>Insufficient assessment of social problems in families and communities by registered nurses</p>	<p>Addressing the contributing factors to challenges that hinder professional nurses to maximally utilise the nursing process in their daily Primary health care practice</p>
<p>Registered nurses do not take part in research activities nor do they contribute sufficiently to these activities</p>	<p>Strategy regarding research activities to be conducted by registered nurses</p>
<p>Insufficient planning of programmes to manage illness by registered nurses</p> <p>Insufficient involvement of registered nurses in budget planning</p> <p>Inadequate involvement in of budget implementation on the part of registered nurses</p> <p>Insufficient participation in the planning of project proposals by registered nurses</p> <p>Lack of resources influencing the fulfilment of primary health care roles and functions</p> <p>A need for sustaining the high level of fulfilment of those functions that were categorised as well done</p> <p>A need for enhancing the level of fulfilment of those role functions that were categorised as requiring moderate action</p>	<p>Strategy regarding the managerial or administrative aspects in local level primary health care</p>

ANNEXURE 21: An example of a programme plan indicating the relationship between objectives and activities and the budget

Objectives and activities	Budget items
<p>To increase the immunisation level of 2 year olds in the country from 75% to 95%.</p> <p>(a). Hold four immunisation clinics per month for one year in locations close to high concentrations of 2 years old children.</p> <p>(b). Staff with one registered nurse and one volunteer per site</p>	<p>(a). Vaccines and supplies for 48 clinics for one year</p> <p>(b). Four hours of time needed from one staff member and one volunteer per week</p>
<p>To reduce coronary heart disease deaths from 125 per 100,000 to 100 per 100,000 in five years by decreasing dietary fat intake among the adult population in the country</p> <p>(a). Institute low fat menus in all local restaurants and workplace cafeterias</p> <p>(b). Provide a school-to-home educational programme via Internet and brochures monthly for grades R to 12.</p>	<p>(a). Hold a series of meetings with restaurant owners and cafeteria supervisors to distribute s menus and discuss the process for implementing low fat menus and/or low fat substitutes for favourite menu items. Provide nutritional consultation on request during the planning and implementation of new menus</p> <p>(b). Half-time project manager will help develop the Web site and compile brochures during the first year of the programme.</p>
<p>To increase the proportion of school-age children who engage in regular physical activity from 55% to 95%.</p> <p>(a). Hold consultations to those schools that do not offer physical education programmes during the school year.</p> <p>(b). Assist schools to obtain funding for physical education programmes.</p> <p>(c). Assist schools to gain community support for summer physical education programmes.</p>	<p>(a). Project coordinator to hold consultations with five schools for two hours per week for a year.</p> <p>(b). Four hours per week per school for one year for project coordinator to assist with grant proposal writing and funding.</p> <p>(c). Ten hours per week for project coordinator to develop public awareness campaign for support for summer physical education programmes</p>

Source: Ervin (2002)

ANNEXURE 22: Copy of form requesting comments regarding strategies developed but not finalised

Strategies to enhance the application of primary health care (PHC) activities in practice by registered nurses in Namibia – compiled by Hermine Iita				
SUMMARY OF INPUT INTO STRATEGIES BY STAKEHOLDERS				
Date	Region	Full names and signature	Capacity	Input

REMARKS/COMMENTS ETC (PTO if not sufficient space provided)

ANNEXURE 23: The Millennium Development Goals (MDGs) which world leaders are committed to achieve by the year 2015

MDG 1	Goal 1	Eradicate extreme poverty and hunger
	Goal 2	Achieve universal primary education
MDG 2	Goal 3	Promote gender equality and empower women
MDG 3	Goal 4	Reduce child mortality
	Goal 5	Improve maternal health
MDG 4	Goal 6	Combat HIV/AIDS, malaria and other diseases
MDG5	Goal 7	Ensure environmental sustainability: land and air
MDG 6	Goal 7	Ensure environmental sustainability: water and sanitation
MDG 7	Goal 8	Develop a global partnership for development: development assistance and market access
MDG 8	Goal 8	Develop a global partnership for development: landlocked countries and small island, developing states
MDG 9	Goal 8	Develop a global partnership for development: sustainability
MDG 10	Goal 8	Develop a global partnership for development: work opportunities, access to drugs and access to new technologies

(Source: UNPD, 2003: Human Development Report (UNDP, 2000))