

**Problems Faced by Newly Diagnosed Diabetes Mellitus
Patients at Primary Healthcare Facilities of the Mopani
District, Limpopo Province, South Africa**

by

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Requirements for the Degree**

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DECLARATION

I, **Khizamane Joyce Mbombi**, declare that this dissertation, **“Problems Faced by Newly Diagnosed Diabetes Mellitus Patients at Primary Healthcare Facilities of the Mopani District, Limpopo Province, South Africa”** is my own work, and that all sources that I have used or cited have been duly acknowledged through references. This is the first submission of this work for a degree at the University of Limpopo, and it had not been submitted before to any other institution.

K. J. Mbombi :

Date Signed :

DEDICATION

This thesis is dedicated to the memories of my late parents, William and Merriam Manganye. I would also like to pay tribute to my husband, Dr Thomas Mbombi, my children, my sisters, and brothers, my supervisors, colleagues and the newly diagnosed patients with diabetes in the greater Giyani municipality.

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ABSTRACT

In this study, a qualitative, descriptive and contextual research methodology was applied to describe the problems faced by newly diagnosed diabetes mellitus patients at the primary healthcare facilities of the Mopani district in the greater Giyani municipality, Limpopo Province, South Africa. Purposive sampling was used and phenomenological interviews were held with newly diagnosed diabetes mellitus patients after investigations within the first six months. The data were analyzed using Tesch's open coding method of data analysis for qualitative research. The findings indicated that newly diagnosed diabetes mellitus patients faced a number of problems, such as emotional disturbance, fear, anger, denial, frustration, depression, uncertainty, and poor interpersonal relationships with nurses. This study found that lack of support and proper health education for newly diagnosed diabetes mellitus patients demand government intervention, and thus proposes guidelines and recommendations for more effective healthcare practices and education for implementation at primary healthcare facilities.

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DEFINITIONS OF TERMS

Experiences

Experiences refer to the past events, knowledge, and feelings that make up people's life or character, or which have an effect on what they feel or think (Longman Dictionary of Contemporary English, 2003:1105). In this study, experiences indicate the feelings that newly diagnosed diabetes mellitus patients experience in their lives and at healthcare facilities.

Newly diagnosed

This term refers to very recent awareness or discovery of an illness one has (Dorland's Medical Dictionary, 1998:461). In this study, newly diagnosed refers to patients who have been diagnosed with diabetes mellitus after investigations within the first six months.

Patient

A patient is any person who receives medical attention, care, or treatment. The person is most often ill or injured and in need of treatment by a physician or other medical professional (Dorland's Medical Dictionary, 1998:1242). In this study, patient refers to a person newly diagnosed with diabetes mellitus within the first six months who comes for monthly treatment at the clinics.

Diabetes mellitus

Diabetes mellitus is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion and insulin action (Smeltzer & Bare, 2000:974). In this study, it refers to people who have both increased and decreased blood sugar levels.

LIST OF ABBREVIATIONS

DM	Diabetes Mellitus
DOH	Department of Health
NHS	Nursing Health Organization
PHC	Primary Healthcare
USA	United States of America
WHO	World Health Organization

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 Introduction and background

Diabetes mellitus can be a frightening and overwhelming experience for newly diagnosed patients. Newly diagnosed diabetes mellitus (DM) patients often have questions on the prognosis of the disease and how it affects their lifestyle. Most DM patients may experience emotional disturbances during their first few months after diagnosis. People with newly diagnosed DM and their families should realize that self-testing of blood glucose levels and regular medical appointments can become part of their normal daily routines (Evans, 2003:135). Even though anyone can develop DM, some people are more at risk, especially those who are overweight, or have a family history of disease or high blood pressure. Patients who have recently been diagnosed with DM are experiencing a range of emotions, fear, anger, denial, frustration, depression and uncertainty (Evans, 2003:139).

Diabetes mellitus is a group of disorders with common features, the most evident of which is an increase in fasting plasma glucose ≥ 7.1 mmol/l, or random plasma glucose level ≥ 11.1 mmol/l (Smeltzer & Bare, 2000:979). It is a chronic illness which can cause substantial premature morbidity and mortality, and is affecting an increasing number of people worldwide. According to Bradshaw and Norman (2007:65), the World Health Organization (WHO) estimated that in 1998 there were 135 million people with DM worldwide. The estimation rose to 171 million in 2000, and is projected to increase to 366 million in 2030. In South Africa, the numbers will increase by more than 1.3 million in the next 25 years. Although all ethnic groups are affected in South Africa, those most at risk are blacks who undergo rapid lifestyle and cultural changes synchronistic with the new democracy, and

people of Indian descent who have a gene pool that renders them unusually susceptible to DM (Bradshaw & Norman, 2007:65).

Diabetes mellitus statistics showed that of the 20.8 million children and adults in the United States of America (USA) who have been diagnosed, 6.2 million were previously unaware that they have the disease until they develop one of the many DM complications that may be life threatening. In South Africa, 5-6 million people live with DM. Much of the increase in DM incidence might occur in developing countries, arising from growth and ageing of the population, as well as urbanization associated with increasing trends towards unhealthy diets, obesity and sedentary lifestyles which result in late onset DM (Bradshaw & Norman, 2007:65). Diabetes mellitus can be controlled if patients are knowledgeable about their disease and assume responsibility for their health. Therefore, healthcare professionals should ensure that all DM patients are educated on matters relating to their illness, and that some of the complications of DM are preventable with prompt diagnosis, effective patient and health professional education, and a comprehensive long-term care regime.

Quality care and management of DM can reduce the impact of complications e.g., non-traumatic amputations and renal disease in developing countries like South Africa (Bradshaw & Norman, 2007). Diabetes mellitus patients should learn to control their blood glucose levels by adhering to specially prescribed diets and exercise programmes to limit complications (Evans, 2003:187). Healthcare providers need to be more proficient in providing care for DM patients and, after diagnosis, patients should be supported and their capacity developed with regard to self-care, self-monitoring, compliance, prevention of complications and management of the disease (DOH, 2001:53).

Most people with DM experience guilt when they break unrealistic regimens imposed by their physicians to minimize the risks of hypoglycaemia and long-term complications. The experience of guilt is often followed by an overwhelming compulsion to repeat the non-

compliant behaviour (Kidson, 2004:28). The analysis of a study conducted by Heur (2006:49) about the perceptions of Hispanic migrant farm workers living with DM revealed several themes, including the causes of diabetes, understanding the chronicity of diabetes, the impact of diabetes on their lives, and fear of the complications related to diabetes. Gladly (2002:9) indicated in his clinical case presentation about management of type 2 DM that patients become annoyed by the treatment regimes imposed on them. The study conducted by Kemper, Savage and Niederbaumer (2005:49) on the level of knowledge about diabetes management of low income persons with diabetes, has proven that diabetes education can be an effective health intervention strategy for the control of DM. Moreover, the same study highlighted that the majority of DM patients with low educational levels also had lower incomes and received less diabetes self-management education than their matching controls. The authors further suggested that development of educational programmes must take into account the level of literacy of the target population.

The study conducted by Bopape and Peltzer (2002:28) revealed four categories of health beliefs, namely, stress, heredity, food and drink transgressions, and fatality. Stress that can lead to deresponsibilization, was the most frequently mentioned aetiology that can present serious health challenges. The study revealed that most patients do not know the causes of their diabetes, however, they contributed to its onset by following western diets consisting of foods high in sugar and fats. The phenomenological study by Pallourios (1991) on the experiences of patients suffering from DM revealed the effects of the first symptoms on the patients, impact of the diagnosis, the emerging patterns of disease and the prospects for the future. The study further emphasized conflicts related to the body, family stress, social isolation and changes in self-image, shock and denial, irritability and depression.

1.2 Problem statement

Newly diagnosed DM patients appeared to have problems with regard to the lifestyle changes they need to make, such as excluding sugar from their diet, checking of blood glucose levels, adherence to medical appointments and treatment. A review of the literature by Pallorious (1991) indicated that people who have newly been diagnosed with DM have many questions in their minds, e.g., what effects will diabetes have on their lives.

1.3 Research question

The following research question guided the study: “What are the problems faced by newly diagnosed DM patients at the primary healthcare facilities of the Mopani district, in the greater Giyani municipality, Limpopo Province, South Africa?”

1.4 Aim of the study

The aim of the study was to determine and describe the problems faced by newly diagnosed DM patients at primary healthcare facilities of the Mopani district, in the greater Giyani municipality, Limpopo Province, South Africa.

1.5 Objectives of the study

The objectives of the study were to:

- Identify the problems faced by newly diagnosed DM patients at primary healthcare facilities of the Mopani district, in the greater Giyani municipality, Limpopo Province, South Africa.
- Recommend health education guidelines for DM, based on the analyses of the findings.

1.6 Theoretical framework

Callista Roy's philosophical assumptions and adaptation model of nursing will form the theoretical framework of this study (Whittemore et al, 2002 & George, 1995:276). The Roy adaptation model encompasses the four elements of person, environment, health, and nursing. According to this model, individuals in society are living adaptive systems whose behaviours can be classified as adaptive responses or ineffective responses. These responses are derived from regulator and cognator mechanisms. The assessment of behaviour is done in four adaptive modes: physiological, self-concept, role function, and interdependence. The environment consists of the person's internal and external stimuli. Health is a process of becoming integrated and able to meet the goals of survival, growth, reproduction, and mastery.

The goal of nursing is to promote adaptive responses in relation to the four adaptive modes, using information about the person's adaptation level and focal, contextual, and residual stimuli. Nursing activities involve the manipulation of these stimuli to promote adaptive responses (George, 1995:276). These elements constitute, from the perspective of the discipline of nursing, a common heritage or process that facilitates the integration and assessment of behaviours and stimuli, nursing diagnosis, goal setting, intervention, and evaluation. Behavioural assessment deals with the four adaptive modes, whereas assessment of stimuli focuses on focal, contextual, and residual stimuli. Nursing diagnosis consists of stating the problem. Goals are set in relation to the problem and are written in behavioural terms. Interventions are planned to manipulate the stimuli, and evaluation compares the person's output responses with desired behaviours established in the management of newly diagnosed disease and, for the purpose of this study, DM patients (George, 1995:276; Whittemore et al., 2002:18-25).

1.7 Research methodology

A qualitative, descriptive and contextual research method was used in this study. A phenomenological research design was used, as it applies to people's lived experiences or the perceptions of the meaning of an event as opposed to the event as it exists externally to the person (Leedy, 2005:139). The study population consisted of all newly diagnosed DM patients who were taking treatment at the following clinics: Giyani Health Centre, and the Kremetart and Thomo clinics in the greater Giyani municipality of the Mopani district in the Limpopo Province, South Africa. Semi-structured interviews were conducted to collect data from the newly diagnosed DM patients who met the selection criteria. The research methodology will be described in detail in Chapter 2 of this study.

1.8 Significance of the study

The study contributes towards the improvement of care of newly diagnosed DM patients, based on the problems they face at primary healthcare facilities. The study also serves to encourage nurses to provide health information sessions to diabetes mellitus patients at primary healthcare facilities. The findings of the study may thus help in formulating national guidelines for improved care of diabetic patients.

1.9 Conclusion

This chapter presented an overview of the research study. The background, theoretical framework, the problem statement, research objectives, proposed methodology, significance of the study and a brief description of the research design were articulated.

CHAPTER 2

RESEARCH METHODOLOGY

2.1 Introduction

Chapter 2 focuses on the research method and design applied in the study. The researcher used the qualitative research method in order to obtain complete and accurate information about the problem faced by newly diagnosed DM patients at primary healthcare facilities.

2.2 Qualitative research method

The qualitative research method involves the study of phenomena in their natural settings, i.e., it attempts to make sense of or interpret issues or realities linked to such phenomena experienced by individuals in society, and how these shape their existence and outlook on life (Polit & Beck, 2008:17). Typically, qualitative research is performed on a smaller scale to explicate phenomena under investigation, but in greater depth for the duration of the study, in settings that affect the selected study population (De Vos et al, 2002:337). In this study, qualitative research method was used in order to collect detailed information about the problems faced by newly diagnosed DM patients at the PHC facilities of the Mopani district, Limpopo Province

2.3 Selection of study site

Newman (2000:198) defined a study site in terms of the context within which events are happening and indicated that data richness, unfamiliarity and suitability are factors that influence the choice of a study site. The Limpopo Province is one of the 9 provinces in South

Africa. It is divided into 5 districts, namely, Capricorn, Sekhukhune, Mopani, Vhembe, and Waterberg(http://www.golimpopo.com/fact-details_limpopo-districts-and-municipalities_18.html; related link: http://www.limpopo.gov.za/about_limpopo/stateinst). A district has a number of municipalities and greater Giyani is one of the Mopani District municipalities. The study was conducted in 3 PHC facilities of the Mopani District, viz., Giyani Health Centre, Thomo and Kremetart clinics. These facilities are situated in the greater Giyani municipality located 180 km from Polokwane, the administrative seat and capital city of the Limpopo Province. The surrounding villages consist mainly of mud and brick houses in which people with a predominantly low socio-economic status live. Apart from the hot climate in the area, patients generally have to travel about 5 km or more to PHC facilities. Moreover, most DM patients live in households that do not have refrigerators, which impacts on the storage and effectiveness of their medication.

2.4 Research design

According to de Vos et al (2003:391), research design refers to a logical strategy to collect evidence about desired knowledge. For the researcher to choose a suitable design, the researcher's questions, skills and available resources are of major importance. According to Terre Blanche and Durrheim (2004:29), a research design is a strategic framework for action that bridges the research question and implementation of the research. According to Hicks (1999:7), when using the qualitative research method, the researcher can collect information on individuals' views, opinions, feelings and beliefs within their natural setting. Cresswell (1998:31) stated that qualitative research includes perceptions of participants, observations of how they experience, live and display the phenomenon, and look for meaning in their expressions. In this study, a qualitative research design that is descriptive and contextual was used to collect detailed and accurate information about the problems newly diagnosed DM patients faced at PHC study sites.

2.4.1 Contextual design

According to Barbie and Mouton (2002:272), qualitative researchers describe and understand events within the concrete or natural context in which they are happening. This study was limited to newly diagnosed DM patients at Giyani Health Centre, and the Kremetart and Thomo clinics of the greater Giyani municipality of the Mopani District in the Limpopo Province. A contextual design was used and the participants were interviewed within their environmental setting, i.e., the situational problems faced or experienced at the clinics they attended for check-ups and collection of their medication.

2.4.2 Descriptive design

According to Brink (2003:11), a descriptive design aims to obtain complete, accurate and new information about a phenomenon through observation and description. This study utilized a descriptive design to gather information about the problems DM patients faced and experienced at PHC facilities at the study sites. The descriptive design helped the researcher to gain insight into the meaning of the phenomenon investigated, i.e., progressing from the known to the unknown. The description in this qualitative study involved intensive examination of the phenomenon in question, essentially as suggested by de Vos et al (2002:109) and recommended by Burns and Grove (2003:204). In agreement with the theoretical expectations expounded by these authors, the descriptive design enabled the researcher to gain additional information about the composite of realities experienced by DM patients at PHC centres at the study sites. The researcher had provided participants sufficient time to describe their problems in relation to their new diagnosis.

2.5 Population

A population refers to a complete set of persons or objects that possess some common characteristics that are of interest to the researcher (Brink, 2003:213). According to Mayan (2002:33), a population is the entire group of persons or objects that meet the designated set of criteria the researcher is interested in studying. Likewise, Newman (2000:201) views a population as the entire pool of cases, but a target population is the specific pool of cases that the researcher wants to study. In this study, the target population comprised newly diagnosed DM patients, both male and females in their first 6 months of diagnosis who collected their monthly medication at the healthcare facilities of the greater Giyani municipality of the Mopani District in Limpopo Province.

2.5.1 Sampling, sample size and sampling criteria

Sampling refers to the process of selecting a part of the population to represent the entire population (Polit & Hungler, 2001:234). According to Newman (2000:198; 2006:222), purposive sampling identifies particular types of cases for in-depth investigation, and thus is smaller than a generalized population, but more suitable to the selection of special cases that are particularly enlightening. Barbie and Mouton (2002:166) and de Vos et al (2002:207) specified that researchers can use their own judgment whether to choose non-probability purposive sampling in a research study.

In this study, non-probability purposive sampling was used. The participants selected were newly diagnosed DM patients in their first 6 months of diagnosis and who collected their monthly treatment at the following PHC facilities of the greater Giyani municipality of Mopani District: Giyani Health Centre, Kremetart Clinic, and Thomo Clinic. The way in which participants are selected in qualitative sampling is determined by their relevance to the research topic rather than their representativeness, i.e., non-probability, meaning that they

rarely determine the sample size in advance (Newman, 2000:198). In this study, the researcher conducted interviews until data saturation was reached.

For inclusion in the study, participants met the following sampling criteria:

- They were newly diagnosed DM patients who collected their monthly treatment at the PHC facilities.
- They were in their first 6 months of being diagnosed with diabetes mellitus.

Data saturation occurred after interviews with 8 participants (2 males and 6 females, aged between 40-65 years), all of whom were newly diagnosed DM patients for a period of 2 months. The researcher made prior arrangements with the participants in order to choose the most suitable date, time and place for their interviews. Since the participants were allowed to speak in the vernacular or language they felt most comfortable with, interviews were conducted predominantly in Xitsonga and partially in English. Almost all the participants preferred to speak Xitsonga.

2.6 Data collection method

The researcher directly approached the participants after they had completed their consultation with the healthcare providers, and asked if they would be willing to participate in the study. Semi-structured interviews (Appendix 3) allowed the researcher to set appointments with participants for interviews at the PHC facilities and to collect the data. The researcher prepared the designated room at the PHC facility for the interview on the specified day. The researcher conducted one-to-one semi-structured interviews that consisted of open-ended questions aimed at obtaining the factual significance that the participants assigned to the events and the complexities of their lived experiences (De Vos, et al 2002:303). This method allowed the participants to describe their problems in their own words.

The researcher probed into the participants' responses in order to generate more data on the phenomenon being studied, and to obtain greater clarity from the participants on issues which were vague during note taking and personal interviews. Probing, as advocated by Bowling (2002:378), enabled the researcher to rationalize the facial expressions, gestures and comments of the participants. An audiotape recorder was used for voice recordings with the participants' agreement as long as their names were not reflected; it was placed on the table in front of the participant in order to capture all the information articulated by the participant and to permit the researcher to ask more detailed questions. This also helped the researcher to adopt a more personalized approach and to listen more attentively to the participants, rather than manually recording all the responses that could be distracting. Semi-structured interviews were conducted until data saturation was reached. Each interview session lasted about 20 minutes. The primary reasons for the relatively short duration of the interviews were time constraints as most of the participants had to consider transport arrangements.

2.6.1 Individual interviews

One to one interviews afford a system of collecting data directly from participants in a face-to-face encounter. Semi-structured interviews were conducted with the newly diagnosed DM patients at the clinics, principally as described by Burns and Grove (2001:594). On the day of the interview, the researcher arrived early for the preparation of the selected room, which was separate from the consulting rooms and the reception area of the clinic. The room provided privacy and a comfortable environment that was easily accessible to the participants. The researcher used an interview guide (Appendix 1) espoused by Mayan (2001:33). Therefore, the questions were steered by the responses given by the participant, i.e., subsequent questions emanated from the participant's answers. The researcher was able to collect narrative and subjective information from the participants (Appendix 3).

The researcher used the following guidelines to conduct qualitative research interviews, as discussed by Kvale (1998:180):

- The researcher immersed herself in the participants' realms of existence in order to better understand the problems they faced after being newly diagnosed with DM.
- The researcher maintained a non-threatening environment throughout the study. Participants were free to relate their stories without fear. Newman (2000:257) supports this notion by indicating that qualitative research interviews should take place in an environment free from threats.
- In this study, interviews were conducted at the clinics where the participants received their medications, and thus they were in a familiar environment.
- The researcher applied listening skills throughout the interviews. In this study, the participants were free to use the language of their choice.
- The researcher paid attention to everything that happened during the interviews and encouraged participants to talk.
- Pleasant interpersonal relationships were maintained throughout the study.
- The researcher used an audiotape recorder to collect data during interviews which were later transcribed and analyzed.
- The researcher took field notes during interviews. Mayan (2001:33) maintains that during qualitative interviews, the researcher should write notes about what takes place during the interview. Thus, notes were used to capture points which the researcher would revisit after the interviews.
- Each interview lasted approximately 20 minutes. The primary reason for the relative short duration of the interviews was that time was limited as most of the participants could not manage to spend an extended time due to transport problems.

2.6.2 Field notes

The researcher took notes to capture points to which the researcher might wish to return to at a later stage in the interview or to locate in the recorded interview. This was imperative to reduce loss of information observed during interaction with the participants (Mayan 2001:133). Field notes include comprehensive accounts of listening and communication, and the researcher's attitude, perception and feelings which will aid the researcher to retrieve data to explore the interview process (de Vos et al, 2002:187,298). Field notes supplement the tape-recorded interviews. As the researcher needed to make sense of the lived experiences and problems cited by the participants after they had been diagnosed with diabetes, the researcher applied four categories of field notes (de Vos et al, 2002:305-318):

- **Personal notes:** These are notes on the researcher's own ideas, reactions, feelings and experiences.
- **Observation notes:** Reflect notes taken through observing and listening to what is happening during interaction with participants.
- **Methodological notes:** These notes are the researcher's instructions, reminders and critical data during data collection.
- **Theoretical notes:** Contain the researcher's interpretations. They are controlled efforts on the part of the researcher to be able to extract meaning from the observation notes.

2.6.3 Communication strategies during the interviews

2.6.3.1 Exploring and probing for responses

According to Newman (2000:277), a probe is a neutral request to clarify ambiguous, incomplete, finish an unfinished, or complete and incomplete questions. De Vos et al (2002:287) reinforced this notion by indicating that a probe is used to clarify the answer or to request further examples, including evidence. In addition, Rice and Ezzy (2001:61) explicated various types of probes that can be used to elicit information such as continuation, clarification, attention, completion and evidence. In this study, the aforementioned types of probes were used and questions were asked which emanated from the participants' answers, to allow the participants to furnish more information on the phenomenon under study.

2.6.3.2 Minimal verbal responding

This is a verbal response that correlates with occasional nodding, which assures the participants that the researcher is still listening (de Vos et al, 2002:289). In this study, the researcher nodded to answer yes to a question, or to show agreement, understanding, or approval, and used the following verbal expressions “mmm”, “continue”, “oh”, in response to what the participants were saying, to allow free flow of information and to encourage the participants to talk.

2.6.3.3 Reflecting

This happens when the researcher reflects on something that the participant had already said so that the participant can give more information on that particular point (de Vos et al, 2006:289). In this study, the researcher took the participants back to earlier stages of

interviews so that they could expand more on some of the points mentioned in order to confirm what they had said.

2.6.3.4 Paraphrasing

This is a verbal response or attempt by the researcher to rephrase what the participant had said in a different way, but meaning the same thing to let the participants confirm what they meant (de Vos et al, 2006:289). In this study, the researcher expressed the participants' words in a different way, but with the same meaning. This prompted the participants to give more information.

2.6.3.5 Clarifying

According to de Vos et al (2006:289) and Henning, Van Rensburg and Smit (2004:289), clarifying is a technique used to get lucidity on unclear statements. In this study, the researcher asked follow-up questions and redesigned the questions throughout the interview so that the participants could elaborate facts and consolidate information.

2.6.3.6 Focusing

Focusing is a non-verbal response in which the researcher draws the participants' attention to the phenomenon under study. In this study, the researcher kept the interview on track by paying full attention throughout in order to help participants to focus on their problems as newly diagnosed DM patients.

2.6.3.7 Validation

The researcher observed the participants and interpreted their non-verbal communications such as facial expressions and body gestures, and transcribed these in the analysis (Brink, 1996:158). In this study, all non-verbal communications collected during interviews as field notes were transcribed and analyzed.

2.6.3.8 Encouragement

According to de Vos et al (2006:296), the participant has to be encouraged to pursue a line of thought. In this study, the participants were encouraged to tell more about the aspects related to their problems after diagnosis.

2.6.3.9 Using silence

Silence allowed the participants to do the talking while the researcher listened and observed (Barbie & Mouton, 2002:89). In this study, the researcher kept quiet and observed what was happening to allow the participants to think and continue narrating at their own pace without interruption.

2.7 Data analysis

Data were collected by audiotape and transcribed verbatim. Data were analyzed using Tesch's open coding approach, as outlined in (de Vos, 1998:343).

The researcher adhered to Tesch's open coding approach as follows:

- Read through the transcriptions and jotted down ideas to get a sense of the whole interview.
- Started with the most interesting and shortest interview transcripts (see Appendix 3 for an example) to elucidate the underlying meaning of the information, while writing thoughts in the margin.
- Made a list that referred back to the data, abbreviated the topics as codes, and wrote codes next to appropriate segments of the text, which helped the researcher to see whether new categories and codes emerged.
- Identified the most descriptive wording for the topics and turned them into categories.
- Listed several themes, categories, and subcategories that emerged from the data analysis.

2.8 Measures to ensure trustworthiness

Lincoln & Guba's framework on trustworthiness comprises four criteria, namely, credibility, dependability, transferability, and conformability (Polit & Hungler, 2001:312; Polit & Beck, 2008:539). The researcher applied the model of Lincoln and Guba (1985) for developing trustworthiness of the qualitative research reported in this study, i.e., to confirm whether the data represented the problems of newly diagnosed patients with DM, and not the researcher's bias.

2.8.1 Credibility

Credibility refers to confidence in the truth of the data and interpretations derived from the data (Polit & Beck, 2008:539). Credibility involves carrying out the investigation in such a way that the believability of the findings is enhanced (Polit & Hungler, 2001:312). In this study, data were collected on audiotape during interviews, and transcribed verbatim. The

literature control was outlined in Chapter 1. An independent coder also coded the data separately to ensure triangulation. Credibility was further confirmed by extended interviews until data saturation occurred. The proficiency of the researcher was verified by her two supervisors.

2.8.2 Transferability

Transferability refers to the extent to which the findings can be applied to other contexts or other participants (Barbie & Mouton, 2001:277; Polit & Beck, 2008:539). In this study, sampling method was purposive and included a specific population group, viz., newly diagnosed patients with diabetes mellitus. A complete description of the research design and methodology was given in addition to the literature control to promote transparency of results and all interviews were analyzed to ascertain clarity.

2.8.3 Dependability

Dependability refers to an inquiry that provides the audience with evidence that if it is repeated with similar participants in a similar context, its findings will be similar (Barbie & Mouton, 2001:278; Polit & Beck, 2008:539). In this study, an audit by the supervisors who followed the processes and procedures of the study determined whether they were acceptable. Additionally, consensus was reached between the researcher and the independent coder (Appendix 7).

2.8.4 Confirmability

Confirmability is the degree to which the findings of a study are the product of the focus of the inquiry and not the biases of the researcher (Barbie & Mouton, 2001:278). In this study, an independent coder, who is considered an expert in the field of qualitative research, did an independent examination of the raw data given by the researcher.

2.9 Ethical considerations

2.9.1 Permission to conduct the study

The researcher observed ethical standards throughout the study. Approval to conduct the study was obtained from the University of Limpopo Ethics Committee (Appendix 4). A letter requesting permission to conduct the study was submitted to the Limpopo Province Department of Health and Social Development before commencement of the study (Appendixes 2 and 6) The researcher was granted permission to conduct the study, in accordance with the ethical standards set by DENOSA (1998).

2.9.2 Nursing research is planned and executed in a way which fosters justice, beneficence and exclude harm or exploitation of participants

Before commencement of the study, the researcher assessed the physical area where interviews would be conducted to ensure privacy of the participants. The purpose of the study was explained to the participants so that they could sign informed consent forms.

2.9.3 The right to self-determination

The participants' right to self-determination in the research project was ensured by the researcher who:

- Outlined the objectives of the study to the participants so that they could decide whether to give informed consent.
- Obtained informed consent from participants before conducting the research.
- Advised the participants that an audiotape recorder would be used for the purpose of data collection during interviews, and that they could refuse to participate if they did not agree to the use of such a device.

2.9.4 Confidentiality and anonymity

Confidentiality and anonymity was maintained throughout the study by safeguarding the participants' identities, and not to link the information provided by the participants with their identity (DENOSA, 1998). Participants were made aware that an audiotape recorder would be used during interview sessions, and assured that the recordings will only be accessible to the researcher and the independent coder.

2.10 Conclusion

In this chapter, the research method and study design were discussed. Qualitative research methodology was used in this study. Data were collected using semi-structured individualized interviews.

CHAPTER 3

RESULTS AND LITERATURE CONTROL

3.1 Introduction

This chapter focuses on the discussion of the findings of the study according to the themes that emerged during data analysis using Tesch's open coding method. The themes were reinforced by the categories and subcategories. The subcategories were enhanced and corroborated by a presentation of direct quotations from the participants' responses - these are written in italic and a reflection or theoretical basis of the findings offered from the perspective of the literature.

3.2 Discussion of themes, categories and subcategories

Table 3-1 provides a summary of the findings according to the themes, categories and subcategories.

3.2.1 Theme 1:Participants' awareness of the illness

This category is discussed based on the subcategories that emerged during analysis of the data, and is supported by direct quotations from participants' responses, i.e., known diagnosis and awareness of the signs and symptoms.

Table 3-1: Themes and categories

Themes	Categories		Subcategories	
1. Participants' awareness of their health status	1.1	Awareness of health status	1.1.1	Known diagnosis
			1.1.2	Awareness of signs and symptoms
	1.2	Unawareness of health status	1.2.1	Unknown diagnosis
			1.2.2	Diagnosis awareness related to consultation
2. Participants' expression of problems associated with the diagnosis of diabetes mellitus	2.1	Problems associated with experienced ailments	2.1.1	Ailments experienced
			2.2.1	Denial and shock related to diagnosis
	2.2	Psychological problems associated with the diagnosis of diabetes mellitus	2.2.2	Feelings of being hurt, angry and frustrated

Continued/...

Table 3-1: Themes and categories (Continued)

Themes	Categories		Subcategories	
3. Participants' challenges of how they live with the condition	3.1	Participants' management of the condition	3.1.1 Follow-up treatment	
			3.1.2 Use of advice from nurses	
	3.2	Challenges experienced by participants in relation to the condition	3.2.1 Challenges related to treatment and diet	
			3.2.2 Loss of income	
	3.3	The impact of the disease on family members as perceived by participants	3.3.1 Use of family support system	
			3.3.2 Adherence to prescribed treatment follow-up	
			3.3.3 Adherence to dietary advice from nurses	
	4. Participants' advice to newly diagnosed people	4.1	Advice related to the condition	4.1.1 Acceptance of the condition
		4.2	Counselling related to the new diagnosis	4.2.1 Need for support systems

3.2.1.1 Awareness of health status: Known diagnosis

During the interviews, some of the participants indicated that they were aware of the other illnesses that they have, but not DM. This was reflected in the following statements:

One participant said: *“I am a person who is not well; I was diagnosed with hypertension long ago. I recently started to be sick and my daughter took me to the doctor”*.

Another participant said: *“I’m fine now, but at one stage I was sick and I came to the clinic for treatment, they checked me and found out that I’m HIV-positive. The nurse referred me to the ARV centre at the hospital, now I’m on treatment and I feel fine”*.

And another one said: *“I am not a person who often gets sick even when I go to the doctor it was for a minor problem, I just started so sudden to feel tired and weak”*.

The responses indicate that some participants were aware of their health status, but because they were not much worried about the signs and symptoms that they experienced, they did not go to the clinic for consultation. A study by Bourne and McGrowder (2009:356) revealed that approximately 25% of the sample population reported that they had poor health status while 33% indicated unspecified chronic diseases. The study concluded that whereas the majority of the respondents in the sample had good health, adults with poor health status were more likely to report having hypertension followed by DM and arthritis.

3.2.1.2 Awareness of health status: Awareness of the signs and symptoms

Participants stated that they did not know that they could be suffering from a chronic condition such DM, and they did not have any knowledge about early signs and symptoms of the disease. These were echoed in the following responses from participants:

One participant said: *“I have a problem of feeling thirsty more often, frequent urination and feeling tired, always angry, eating too much, but I am losing weight and during the month of January I was not seeing clearly”*.

Another participant said: *“I started feeling tired, weak, excessive thirst and frequent urination”*.

And another participant said: *“I just started feeling weak, confused, muscle pains and joint pains; frequently urinating and hungry more often”*.

The data indicate that most of the participants lacked information and knowledge about the early signs and symptoms of DM, and they generally thought that DM is just a minor illness. The study by Diabetes Mellitus information.com (2009) indicates that in type 1 DM, the symptoms may occur suddenly within a week or months. Type 2 DM has a slower onset, i.e., it may take years for the symptoms to appear. Diabetic symptoms are not always the same for everyone. The early symptom of untreated DM is a raised blood glucose level. Diabetic patients suffer from pain all over the body, including the legs, feet, arms and hands. Headaches are very common. The pain is mainly due to nerve damage caused by high blood glucose. The screening study conducted by Adriaanse et al (2005:14) showed that DM patients were afflicted with symptoms of hyperglycaemia and fatigue in the first year following diagnosis of type 2 diabetes. Moreover, symptom distress was associated with increased negative moods in both screening-detected diabetic patients and control subjects.

3.2.1.3 Unawareness of health status: Unknown diagnosis

The above categories were borne out by the following responses:

One participant said: *“Last year I started to lose weight and felt sick, other people advised me to see the doctor, so I went”*.

Another participant said: *“I’m not a person who often gets sick even if I go to see the doctor it was not for a serious problem; I was in town when I started to feel tired and weak”*.

And another participant said: *“I only had minor illness like headache until one day I came to the clinic not feeling well”*.

These responses confirmed that participants suffered from minor illnesses that did not bother them at all, until they had to consult the clinic as their condition worsened. According to a study by the National Health Service (2003), some participants did not have any symptoms and their illness was discerned only during routine visits to the healthcare facilities.

3.2.1.4 Unawareness of health status: Diagnosis awareness related to consultation

These categories manifested in the following quotations from the participants:

One participant said: *“One day I came to the clinic, the nurses screened us and found that my blood sugar is very high which means that I am suffering from diabetes mellitus”*.

Another participant said: *“I was in town when I started to feel tired and weak and I decided to go to the doctor and he checked me and found that my blood sugar is very high and I have to be admitted to the hospital”*.

And another participant said: *“I just started to lose weight and felt sick, other people advised me to consult the doctor I went for consultation and the doctor said I have diabetes mellitus”*.

The above responses implied that participants only found out about their diagnosis after consultation. It was evident from the participants’ descriptions that they were more concerned about their sudden illness.

According to Diabetes Mellitus-Information.com (2009), DM is frequently diagnosed in symptomatic patients during routine medical examination or when patients present with clinical manifestations of a late complication. So, millions of people do not even know they have DM. The study conducted by O' Connor et al (2006:15) suggested that primary care practices might boost the detection of undiagnosed diabetes, and improve 1-year outcomes by being vigilant for disease symptoms, by evaluating those at high risk for the disorder, and by instituting appropriate treatments at the time of diagnosis.

3.2.2 Theme 2: Participants' expression of problems associated with the diagnosis of diabetes mellitus

This theme and several categories and subcategories emerged from the data analysis. A significant number of participants expressed mixed feelings of their problems after they had been told about their condition.

3.2.2.1 Problems associated with experienced ailments: Ailments experienced

Participants have experienced a number of different ailments as indicated below:

One participant said: *"I started having headaches and my mouth was painful, especially when I drank cool drinks (soft drinks). I also get hungry often; I cannot stay a long period of time without eating"*.

Another participant said: *"I am always suffering from diarrhoea after I eat rice or buttered bread. I always have headaches; feel thirsty and tired most of the time"*.

And another participant said: *"I'm always feeling tired, weak and I have body pains. I suffer from headaches and I have lost weight. I make sure I do not spend a lot of time working because I get tired quickly"*.

Yet another participant said: *“I have problems like feeling thirsty mere often, frequent urination, tiredness, eating too much and this condition affected my eyes because during the month of January could not see clearly”*.

The above responses illustrated that most of the participants have experienced different types of ailments associated with DM. The study by Adriaanse et al (2005) strengthened the notion that DM is a multifunctional illness that correlates with a number of microvascular (e.g., retinopathy, neuropathy) and macrovascular (e.g., ischaemic heart disease) pathologies. The findings of this study showed that most participants did not have much knowledge about the signs and symptoms of DM, or that it was a chronic disease. These inferences were upheld by the fact that the majority of participants did not to seek immediate medical advice at a PHC clinic. According to the study conducted by Rathmann et al (2003:46), half of the total number of DM cases were undiagnosed. Since cardiovascular risk factors worsen among glucose tolerance categories, there is a need for screening and prevention of DM. Screening for undiagnosed diabetes could be most efficient in individuals with abdominal adiposity, hypertriglyceridaemia, hypertension, and genetic predisposition. The study conducted by Ralston et al (2004:328) suggested that chronic conditions are a growing public health challenge. Also, the focus on clinic visits in current healthcare systems does not meet the needs of many DM patients. Furthermore, Norberg et al (2007:76) showed that stress in the work environment may increase the risk of type 2 DM in women, but not in men. These findings not only contribute to our understanding of psychosocial stress as a potential risk factor for type 2 DM, but also point to the complexities associated with the disease.

3.2.2.2 Psychological problems associated with the diagnosis of diabetes mellitus: Denial and shock related to the diagnosis

Participants expressed different psychological problems after they were told that they have DM. This is exemplified by the response of one participant: *“I had denial at the first time the doctor I consulted in town told me I have diabetes mellitus. He said I need to go to the hospital for my blood glucose control. I did not go because I did not believe that I could suffer from diabetes mellitus, so I went home until I started having those signs again”*.

3.2.2.3 Psychological problems associated with the diagnosis of diabetes mellitus: Feelings of being hurt, angry and frustrated

The following quotations from participants illustrate the above categories:

One participant said: *“I was shocked, confused, surprised, very frustrated and hurt when the doctor told me I have diabetes mellitus. I went home; at first I did not say anything until I told my family about my condition”*.

Another participant said: *“I was very angry and hurt, I thought about the children that I am taking care of and that if I die who will take care of them. I was also depressed and frustrated about the news”*.

Yet another participant said: *“I was scared, hurt and frustrated because people say that diabetes can kill you if you do not take treatment correctly”*.

The above responses implied that it was not easy for the participants to accept their diagnosis. Participants related how they easily became depressed, hurt, angry and confused. These findings are in agreement with a previous assertion that the healthcare professional who confirms the diagnosis is delivering the bad news and should thus consider the same issues

germane to telling patients that they have terminal illness (Warren, 2002:10). Because diabetes is an incurable, serious and life-long disease, patients experience a sense of loss and grief when they learn of the diagnosis, or realize the implications and complications of the disease, including loss of health and deprivation of ever being healthy again. According to Diabetes Mellitus.com (2009), stress and feelings like denial, anger and depression are not always bad. Although many newly diagnosed DM patients may feel sad, angry, scared, or even deny that they have the disease, such negative emotions and painful feelings are clues that something is wrong. Indeed, the study conducted by Schmitz et al (2008:652) implicated joint effects of psychological distress and activity limitations on short-term disability. Therefore, detecting and managing psychological distress might be particularly beneficial for persons with DM.

3.2.3 Theme 3: Participants' challenges of how they live with the condition

This theme describes the effect of living with DM. A discussion follows of the categories that emerged from this theme during data analysis.

3.2.3.1 Participants' management of the condition: Follow-up treatment

Participants described how they managed themselves living with DM.

One participant said: *"I take my treatment in time and follow advices I get from the clinic stuff which is to stop pouring sugar in the tea; not to use too much salt in food"*.

Another participant said: *"I go to the clinic to collect treatment and for my blood glucose checking, I only use sweetener for tea, no salt in my food, eat one apple or banana per day"*.

Yet another participant said: *“I always go to the clinic to collect treatment and for my blood glucose to be checked”*.

It can be inferred from the above responses that participants did not have a problem with follow-ups and taking DM treatment. Extensive studies and reports on DM indicated that the key functions of on-going follow-up and support include self-management of diabetes (e.g., insulin shots, blood glucose monitoring, eating proper meals, exercise), encouragement and facilitation of regular clinical care, and coping skills for changes in circumstances or evolving problems (La Greca et al, 1995:499)

3.2.3.2 Participants’ management of the condition: Use of advice from nurses

Participants have mentioned that using advice from nurses helped them in managing their condition:

One participant said: *“I follow the advices that the nurses gave me, now I have stopped eating food which contain sugar, salt and not to drink soft drinks”*.

Another participant said: *“The nurses advised me to stop eating big portions or too much food. I have to eat one apple per day and drink a lot of water and not eat sweet things, salty food or fat”*.

Participants indicated that the advice they got from nurses helped them in managing their condition, and this is in accordance with a study conducted by Edege (2003:26) which found that the nurse’s advice appears to be effective at changing hypertension-related lifestyles in people with DM, regardless of gender or ethnicity. However, the study noted that advice on increasing physical activity did not seem as effective.

3.2.3.3 Challenges experienced by participants in relation to the condition: Challenges related to treatment and diet

Participants experienced different challenges as reflected in the associated categories and subcategories.

One participant said: *“The most challenging part for me it was to take my treatment on time and I have to eat frequently small portions of food with no salt, no sugar in tea and maintaining my weight”*.

Another participant said: *“The most challenging part for me was when I have to stop eating the food which I like, for example chocolates, fatty meat and start to eat food which does not have salt or sugar. I have to take treatment everyday and eat small portion of food which does not taste nice to me”*.

Yet another participant said: *“It was difficult to stop pouring sugar in tea, salt in food or fat and I have to eat before nine in the morning so that I can be able to take treatment, it took me a long period to adjust.*

The aforementioned responses confirmed that newly diagnosed DM patient’s experienced some difficulties in adapting to the treatment regimens imposed on them. Participants also indicated that it takes them time to alter their lifestyle in order to fit in their DM treatment and diet management schedules.

The study conducted by Malpaas et al (2009:74) suggested that providing diet and physical activity information together encouraged patients to use physical activity in strategic ways to aid disease management and that most patients found undertaking multiple lifestyle changes helpful. Increasing physical activity can act as a gateway behaviour, i.e., conduct that can produce positive effects in other behaviours. Thus, healthcare practitioners should provide

diet and physical activity information jointly to encourage patients to do physical activity. However, the study conducted by Sudhir et al (2001:69) maintained that there is no consensus behaviour on diet and exercise for DM patients, and several factors should be considered before generalized decisions are taken. For example, an individual could be compliant with diet and treatment, but not exercise and foot care.

3.2.3.4 Challenges experienced by participants in relation to the condition: Loss of income

Most participants experienced economical hardship as illustrated by their responses.

One participant said: *“I have stopped working because of my illness which affected my productive; I was always sick not coping well at work and I am no longer having money to buy food at home”*.

Another participant said: *“I am always tired, with no energy. Suffering from diabetes also affected my work as a domestic worker; I cannot stand for a long period doing household chores and my salary has been cut down because I am no longer working everyday”*.

It is clear from the above responses that newly diagnosed DM patients experienced loss of income because some of them are no longer able to work. Kumari and Mamot (2004:164) observed that participants working in the lower employment grades had a higher incidence of DM-related problems than those in higher employment grades, which contributed to their loss of income. Norberg et al (2007:76) established that work stress and emotional maltreatment predisposed type 2 DM patients to psychosocial stress which contributed to absenteeism.

3.2.3.5 The impact of the disease on family members as perceived by participants: Use of family support system; Adherence to prescribed treatment follow-up; Adherence to dietary advice from nurses

During interviews, participants indicated that their families understood what they were suffering from. The separate and individual responses from participants are presented below.

“My children have contributed most in giving me explanations, gave me an example about our priest who is living with diabetes mellitus and they know which foods I have to eat ”.

“My children support me and they understand my condition and give thanks to the doctor who had found out the problem. They always encourage me to stay positive and to accept myself”.

“The children were worried at the beginning but now they understand and they are very much supportive”.

“The grandchildren I am staying with help me with the cooking and they know which food I have to eat”.

“I am staying with my children, they are very much helpful in the house; they have accepted my condition and remind me to take the medication”.

These responses confirmed that participants received support from family members who themselves were also coping well with the participants' diagnosis. Parry (2004:21) is of the opinion that adequate input from family and healthcare providers is needed to ensure that diagnosis at first contact may avoid the problem of patients feeling 'in limbo' or uncertain whether they have type 2 DM. Most participants indicated that advice given by nurses and family members helped them in managing their condition. Therefore, family support is linked

to both short- and long-term adherence, and increased family support and cooperation are helpful for the anticipated coordination of activities of newly diagnosed DM patients. According to Sudhir et al (2006:19), home monitoring of DM patients by community health nurses improved diabetic control and care. Accordingly, it has been advocated that individuals with diabetes be monitored not only in the hospital, but also in their homes for comprehensive evaluation.

3.2.4 Theme 4: Participants' advice to newly diagnosed people

This theme reflects the participants' expressions of advice that they would give to other people diagnosed with DM. The following categories emerged:

3.2.4.1 Advice related to the condition: Acceptance of the condition

One participant said: *“People need to accept their condition, take their treatment, stop eating what is not good for their health and they must not get angry because they will make their condition worse. They need to stay calm and drink lots of water”*.

Another participant said: *“People need to do and follow what they are told at the clinic, to take treatment and come to the clinic for their check-ups”*.

Yet another participant said: *“People need to accept their condition once they have been told about their condition; they must follow advises from the nurses and they must not be angry”*.

These responses demonstrated that the participants were able to cope with their conditions based on the advice they would give to other newly diagnosed DM patients. Interestingly, the study by Moser et al (2008) have shown that individuals learned about short- and long-term

management of their condition, as they were also able to give advice to other newly diagnosed DM patients.

3.2.4.2 Counseling related to the new diagnosis: Need for support systems

Participants indicated that people who were diagnosed with DM need to talk to nurses as it will make them feel better. The responses below reflected such sentiments.

One participant said: *As a person who is suffering from the condition talking to nurses and my family members it helps me to understand and able to live a positive life*".

Another participant said: *"The nurses have explained that I must not get angry because it will make my condition worse and by talking to the nurses helped me to understand my condition"*.

Yet another participant said: *"Some of the nurses here at the clinic talk to us always when we come for treatment and also on taking care of ourselves. we need people to give us support."*

The above responses will have brought out that newly diagnosed DM patients need continuous counselling and support from healthcare providers and family members. Moser et al (2008) pointed out that support from specialist nurses, family and caregivers is a necessity for self-managing DM care. Thus, effective strategies to increase healthcare provisions for DM patients should include efforts to improve access to regular sources of care and patient-physician communication.

3.3 Conclusion

The observations of this study and the literature control indicated that DM patients should be appropriately informed and educated to comply with diet, regular follow-ups and adherence to prescribed medications. There is also a need to emphasize the development of self-discipline by DM patients so that they can deal with the challenges imposed by their illness. Since newly diagnosed DM patients need continuous counselling and support from healthcare professionals in order to help them understand their condition, health communication about DM should be the foundation for them to accept and manage their condition.

CHAPTER 4

THEORETICAL FRAMEWORK AND GUIDELINES FOR HEALTH EDUCATION

4.1 Introduction

Chapter 4 provides the theoretical framework and information pertinent to the formulation of health education guidelines based on the findings of the study. Callista Roy's theory was used to configure the theoretical framework (Whittemore et al., 2002:18-25; George, 1995:276).

4.2 Theoretical framework

According to Brink (2003:215), a theoretical framework is based on the propositional statement from a theory or theories, and it helps to organize the study and provides a context in which to examine a problem by gathering, analysing and interpreting data. Nursing is a multidisciplinary profession, and although conditions and techniques will change over time in many parts of the world, its heritage will remain entrenched. Any new modality of care or technology may be incorporated in terms of the overall provisions of nursing care. Therefore, nursing research contributes to nursing theory and patient care (Searle, 2002:129; Polit & Beck, 2008:3). In this study, Callista Roy's adaptation model was used (Whittemore et al, 2002:18-25; George, 1995:276; Polit & Beck, 2008:147). According to Roy's theory, a person is a highly adaptive system that receives input of external or environmental stimuli, is able to process or adapt to such stimuli internally, and produce output stimuli that affect the external environment (Polit & Beck, 2008:147). Input stimuli have focal and contextual stimuli. Focal stimuli are those stimuli that confront a person and, hence, in this study the

problems faced by newly diagnosed DM patients in PHC facilities of the Mopani district in the greater Giyani municipality, Limpopo Province, South Africa. The contextual stimuli are internal and external stimuli that may have a positive or negative influence on the situation. In this study, the context was the newly diagnosed DM patients, healthcare providers, family support systems, and challenges posed by diet, treatment, coping mechanisms and lifestyle. All these variables influence the adaptation of DM patients to their environment. The range of responses to stimuli or challenges is unique to the individual. The individual's experience also influences the adaptation level.

Therefore, output responses can be observed, measured and subjectively reported. In this study, the output responses were the problems faced by newly diagnosed DM patients within their first six months after diagnosis. They became feedback and control processes to the person and the environment. In this study, the results provided a feedback instrument to formulate and propose guidelines for health education and improvements on healthcare management of newly diagnosed DM patients, and consequently they bolster the significance of the study. This study identified the problems faced by newly diagnosed patients as they lived with the condition, and also reflected on the lifestyle changes and coping mechanisms which DM patients used.

4.3 Guidelines for health education

- Health education can play a vital role in enabling effective self-care. In the context of this study, DM patients will be able to make the best choices about the way they live with their illness if they were better informed about their condition, and given the necessary coping skills.
- The findings of this study indicate that health education should be prioritized for all DM patients, a process that necessarily involves community healthcare workers. Healthcare workers would be better poised to assume this central role if they received

in-service training, accredited professional development or enrichment, e.g., how to assist the DM patients in measuring their blood glucose levels, and taking medication, planning their meals, and advising them how to lose weight and to acquire coping skills.

- If Callista Roy's adaptation model were to be applied to health education of DM patients, the importance of physical exercise becomes more apparent, e.g., adaptation could include regular walks and doing some chores, instead of living a sedentary lifestyle. Patients have to know that they are prone to infections due to DM and that the illness can reduce blood flow to the feet and make them feel cold. Patients must check their feet carefully every day; wash and dry them well, especially between the toes and wear comfortable shoes. Patients must avoid injuries because they may develop into serious problems if left unchecked.
- Likewise, DM patients need to be taught about the need for them to eat healthy foods more regularly (i.e., 3 times a day) and in smaller portions, e.g., sufficient vegetables, fruits, less red meat, and avoid sugar and fatty foods.
- Diabetes sufferers also need to know that they have to make sure that their blood glucose is not too high or too low. Since high blood sugar may affect eyesight, patients must have their eyes tested at least once a year, and they must brush their teeth at least twice a day because diabetes can make their breath smell bad. Education about self-monitoring of blood glucose should be a continuous process according to the patient's individual needs at any stage of their diabetes management (Peel et al, 2007).
- Healthcare facilities should incorporate health education as a focus on treatment and explain to DM patients the importance of taking tablets and the need to take tablets every day at the same time with meals, that they should always come for follow-ups and never stop taking tablets or share tablets with other diabetics.

- Motivating and coaching patients with diabetes requires a caring attitude and good communication skills (Neuhann et al, 2002:509).

4.3.1 Guidelines relating to participant's awareness of the illness

- Regular health awareness campaigns in relation to DM will empower the community with pertinent information and make them aware of the importance of knowing their health status.
- The formation of DM interest groups will encourage people living with DM to share their experiences and advise each other on self-care management and coping skills.

4.3.2 Guidelines to assist the patient cope with the challenges of the condition

- The use of family support systems should be emphasized as this will help newly diagnosed DM patients to cope better with clinic attendance, follow-ups and adherence to dietary and treatment advice.

4.3.3 Guidelines relating to participant's expression of problems associated with the diagnosis

- Continuous counselling of people diagnosed with DM should be incorporated into clinical practice in order to encourage patients to accept their condition and be able to manage minor ailments and psychological problems associated with the diagnosis.

4.3.4 Guidelines relating to participants' challenges of how they live with the condition

- The emphasis should be on both healthy eating habits rather than a "diabetic diet". The best dietary interventions are those the patient can sustain. Information on

dietary issues with patients and their families should be reinforced constantly by all members of the diabetic management team.

- Group training of diabetic patients, if possible, would certainly benefit and allow patients opportunities to raise common concerns. This should be initiated where there are large numbers of diabetics receiving care.
- The process of education and training begins at diagnosis, including what diabetes is, how it might affect them.
- A clear explanation on the different types of diabetes, their basic physiological defects will facilitate an understanding of the different modes of therapy currently in use.
- The emphasis of the role of diet, weight loss and exercise at this stage is also important.
- Compliance with diet and prescribed medications, as well as regular exercise should be stressed so that DM patients can develop self-discipline.
- Accentuating DM as a chronic illness that requires many life-style adjustments and therefore regular support, will enhance such understanding (Mollentze et al, 2003:6)

4.3.5 Guidelines relating to participant's awareness of the illness

- Public health awareness campaigns should cover signs and symptoms of DM amongst communities. Family members of diabetics should be aware of the higher risk they have for developing this disease.
- When people are able to recognize certain disease patterns that are unusual, they become aware of such abnormalities and their manifestations. Awareness of DM among individuals in society can also be improved with a diabetes health education course convened in consultation with healthcare providers.

4.3.6 Guidelines relating to participants' expression of problems associated with the diagnosis

- DM patients need much reassurance at the time of diagnosis. It is important to ascertain what DM patients know about diabetes, and to assess their knowledge and attitude towards their disease, and they should be given an opportunity to express this. Important also is to establish who in the family had diabetes and if they experienced any complications, and if so, whether the patient has vivid memories of the suffering of the person. Therefore, it is important to demystify the diagnosis and basic nature of the disease.
- Patients need to be reassured that many chronic complications can largely be prevented, delayed or reduced. Complications such as the nagging and frustrating symptoms of polyuria, polydipsia, weight-loss, tiredness, blurred vision, will improve rapidly with establishment of glycaemic control.

4.3.7 Guidelines relating to participants' advice to newly diagnosed people

- Family support is essential, but it should be borne in mind that the diabetic patient should be treated as normally as possible.
- When guiding on the type of the diet to be followed by the DM patients, it is often wise to advise the family to gradually change over to a diabetic type of diet. Since DM has a strong genetic predisposition and is often linked to lifestyle and dietary habits, other family members may benefit from strict dietary control.
- Patients need to be educated that although diabetes can be controlled it is not curable at present.

4.4 Conclusion

This chapter presented the description of the theoretical framework applied in the study. Guidelines regarding health education were formulated, based on the problems faced by newly diagnosed DM patients.

CHAPTER 5

CONCLUSIONS LIMITATIONS AND RECOMMENDATIONS

5.1 Conclusions

The findings of this study revealed that newly diagnosed DM patients are faced with different problems at PHC facilities and their home environment. The themes that emanated from the participants' response were summarized, viz., awareness of their illness, expression of problems associated with the diagnosis, challenges of how they lived with the condition, and the advice they would give to other newly diagnosed DM individuals. It is imperative that newly diagnosed DM patients get good medical care, support and encouragement, advice on coping with the illness and develop self-caring skills. Good quality care will help them to live a full life with fewer complications and comorbidities.

The findings of this study also shed light on the challenges faced by newly diagnosed DM patients with regard to treatment, the anxiety associated with chronic complications and demands of complex lifestyle changes. Both the disease and its treatment can significantly impact on the family as well as the person with diabetes. It was established that DM patients need continuous reassurance, especially at the time of diagnosis. Thus, DM patients need health information pertinent to the basic nature of the diseases, and its signs and symptoms. It is also important to assess the patient's knowledge and attitudes towards the disease, and they should be given the choice to express such.

The study by Fisher et al (2007:33) indicated that initiatives and projects pertaining to DM should emphasize self-management care that can be promoted in the “real world” of communities and primary care settings serving diverse and disadvantaged populations.

5.2 Limitation of the study

The study was limited to 3 PHC facilities of the greater Giyani municipality in Mopani District. Therefore, the findings cannot be generalized to all PHC facilities in the Limpopo Province.

5.3 Recommendations

5.3.1 Recommendations with regard to participants’awareness of their health status

It is recommended that all healthcare users be routinely screened for DM and be given more detailed health education about the early signs, symptoms and complications of the disease which can develop if a person does not seek early intervention. The process of education and training begins at diagnosis, including what diabetes is, how it might affect the individual and family, and what tests are going to be performed - these messages need to be reiterated at subsequent visits. The patients should be encouraged to visit their PHC facilities or any qualified staff member for advice they might need. It is important for them to have confidence in the team that provide healthcare. Meaningful patient education has been a largely neglected area of diabetic care. Medical practitioners, nurses and patients alike have traditionally believed that it was the doctor’s responsibility to institute therapy (usually medication) and the patient was a passive recipient of instructions that cannot be questioned (Peel et al, 2007:335-493). These attitudes and behaviours need to be reconditioned to allow participation of all involved in diabetic management and care.

5.3.2 Recommendations with regard to participants' expression of problems associated with the diagnosis of diabetes mellitus

Patients diagnosed with DM need continuous assessment and counselling from healthcare professionals in order for them to cope with the disease. Diabetic control can be achieved when patients are knowledgeable about their disease and assume responsibility for their health. Patients need much reassurance at the time of diagnosis. It is important for DM patients to actively participate in appraisals that evaluate their knowledge and their attitudes towards the disease, who in the family had diabetes, what the complications were, and if they have any recollection of the person suffering from the condition. Healthcare professionals should explain why and how diabetes can be controlled, and that current knowledge of the disease has greatly increased with newer therapies that offer major benefits. It is important to demystify the diagnosis, the nature of the diagnosis and the basic manifestations of the disease.

5.3.3 Recommendations with regard to participants' challenges of how they live with their condition

Healthcare professionals should ensure that all DM patients are educated on matters relating to their illness, that some of the diabetic complications may be prevented with prompt diagnosis, effective patient and health professional education, and comprehensive long-term care. Effective self-management is the cornerstone of successful diabetes control and self-monitoring of blood glucose may have an impact on this. Self-management consists of complex and dynamic processes that are deeply embedded in the patient's unique life situation (Peel et al, 2007). Managing diabetes in newly diagnosed patients is most effective when the entire family becomes involved. Families should be encouraged to share concerns and experiences related to DM with healthcare providers so that better management strategies can be devised for the everyday care of diabetes patients. Since physical health is not

detached from emotional health, DM patients need constant motivation to learn skills and healthy behaviours. Once the diagnosis of diabetes is made, the doctor should discuss an appropriate personalized diet with the patient, or if lacking ability in this field, should refer the patient to a dietician who understands and is familiar with the patient's traditional diet. Food models and pictures can greatly assist in understanding quantities of food allowed, rather than talking about 'grams' of food. Audiovisual messages also have a great reinforcement value (Mollentze et al, 2003:5).

5.3.4 Recommendations with regard to participants' advice to newly diagnosed people

Newly diagnosed DM patients need continuous counselling and education about the condition and must be able to accept that they have to live with the illness. This will enable them not only to care for themselves, but also for other newly diagnosed DM patients. Such a notion had been corroborated by Moser et al (2008) who have shown that if patients learned about the management of their condition, they would also be able to give advice to other newly diagnosed DM patients.

5.3.5 Recommendations for nursing practice

It is well-known that not all nurses are involved in the care of DM patients. The health systems need to review the strategies and policies on chronic disease management. The primary care providers need to be nurses who have special training and background in caring for and teaching patients with DM. Having more nurses who are proficient in diabetes care, no matter what field or subspecialty they work in, will help in addressing the needs of the growing population of people with DM, as well as their family members, who may be at risk for the disorder (Seley et al, 2007).

Although a team-based approach (e.g., a doctor, diabetic nurse, educator, dietician, psychologist and chiropract) to the control and management of diabetes is idealistic, it is not always practicable in all contexts. However, doctors taking care of diabetics must be well informed and willing to spend the time necessary to educate their patients. It is also recommended that health staff be trained to deliver supportive guidance to patients. If more than one healthcare professional is providing advice and care to diabetics, they should be consistent, e.g., if DM patients are referred to a dietician, it is important to know what the dietician is saying in order to avoid any conflicting messages.

5.3.6 Recommendations for patient education

Health information and education campaigns should incorporate general awareness of telltale signs of diabetes amongst all communities. Family members of diabetics should be aware of the higher risk they have for developing the disease. Strong evidence is emerging from studies like the US Diabetes Prevention Program that preventive methods, such as starting a healthy diet and regular exercise, long before diabetes might develop, are highly beneficial (Mollenteze et al, 2003:8). The emphasis of the complementary roles of diet, weight loss and exercise at this stage is also very important. DM patients need to know what to do in emergencies, how to recognize early hypoglycaemic symptoms, and whom to contact for further advice - family support is essential in this regard. The diabetic should be encouraged to participate in sports or physical activity, and why pre-meal snacks before or after exercise are essential.

Group training of diabetic patients, if possible, is certainly advantageous and allows patients the opportunity to raise common concerns. This could be organized at clinics or communal settings where large numbers of DM patients converge for care or shared activities. Furthermore, grouping patients into type 1 DM and type 2 DM groups may be beneficial for personalized training purposes.

There are some common myths that diabetic diets are special and, therefore, expensive. Health education and promotion should dispel such misconceptions and emphasize that diabetic diets are in fact much cheaper than conventional diets. Many DM patients also need reassurance that they can safely use sweeteners (Mollentze et al, 2002:5). When recommending patients on which type of diabetic diet to follow, it is prudent to advise the family to gradually change over to the diabetic type of diet. Thus, the value of a strict diet and exercise programme cannot be ignored since diabetes may either have a genetic or lifestyle aetiology, and other family members may develop it in future, and more especially when the progression to diabetes in those with impaired glucose tolerance is progressively being established. More importantly, in any event, a diabetic diet is a very healthy diet.

Compliance with diet, regular exercise and prescribed medications necessitates an overemphasis of the importance for DM patients to develop self-discipline. The disease is chronic and requires many life-style adjustments, and therefore regular support and understanding is crucial in the long term. Planning of the acute treatment with the DM patient should encompass an outline of immediate goals and encouragement why it is desirable for them to ask as many questions as they wish. DM patients should be provided with a basic understanding of drug action, so that they can take medications correctly (Weinger et al, 2002). Furthermore, health information on the different types of diabetes, their basic physiological defects, and the different modes of therapy need to be simplified so that DM patients will understand the concepts more easily.

Complications such as the nagging and frustrating symptoms of polyuria, polydipsia, weight loss, tiredness, blurred vision, and burning feet will improve rapidly with the establishment and maintenance of proper glycaemic control. Health educators should as well explain to DM patients the significance of their participation in disease management, and reinforce the fact that the care of their diabetes is a shared responsibility and partnership between the patient, their family and healthcare professionals.

DM patients need to be educated that although diabetes can be controlled, it is not curable, that the current therapy is life-long and requires regular follow-ups and monitoring. DM patients need to be advised about what to do when infections or other illnesses develop, the importance of early attention to their illness, and the importance of ensuring that cough mixtures and medications are sugar-free. Patients must also understand why they are continuously being tested for both fasting and postprandial (after a meal) blood glucose levels, and the need for checking them whilst experiencing unusual symptoms (Stone et al, 2005:1-6). Patients who are monitoring their blood glucose levels are usually highly motivated, well controlled and have a high compliance rate. They also have superior control compared to patients not similarly supported. Modern glucose reflectance meters (glucometers) have computer-based programs that allow for downloading of patient data, and hence afford accurate assessment of day-to-day, and even weekly profiles, to assist with adjustments to therapy, all within minutes.

Finally, diabetics should be encouraged to join organizations such as the South African Diabetics Association, who conduct regular training sessions and publish informative newsletters for diabetics. Education is the key to better DM control and, after all, knowledge is empowerment.

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APPENDIX 1

INTERVIEW GUIDE

1. Tell me about your health status.
2. Share with me your problems of living with diabetes mellitus.
3. How did you feel after you were told you had diabetes mellitus?
4. How has diabetes affected your life?
5. How do you manage this condition?
6. What was the most challenging part of managing diabetes mellitus?
7. What helped you most with diabetes mellitus?
8. What is the biggest change you have made after being diagnosed with diabetes mellitus?
9. What impact does diabetes mellitus have on your family?
10. What advice can you give to someone who has just found out that he/she has diabetes mellitus?

APPENDIX 2

LETTER TO REQUEST PERMISSION TO CONDUCT RESEARCH

Po Box 1286
Giyani
0826

The Manager
Primary Health Care
Department of Health Greater Giyani sub district
Giyani
0826

RE: Request for permission to conduct research

I am Khizamane Joyce Mbombi Masters of Curationis (MCur) student of the University of Limpopo. I hereby request permission to conduct research in the following healthcare facilities: Giyani Health Centre, Thomo clinic and Kremetart Clinic.

The title of the study is problems faced by newly diagnosed diabetes mellitus patients at primary health care of the Mopani district, Limpopo Province.

Clearance certificate from the ethics committee of the university of Limpopo is attached.

Thanking you in advance

Yours truly

KJ Mbombi

Date

APPENDIX 3

INTERVIEW TRANSCRIPT

R= researcher

P=participant

R= Tell me about your health status?

P= I started with high blood pressure, not eating foods which contain salt, sugar, and those which are sour. When I eat food which are not good for me my whole body become swollen. One day I come to the clinic and they told me that my blood sugar is high.

R= You were coming to the clinic for consultation?

P= Yes because I was not feeling well.

R= Share with me the problems that you face as you live with diabetes mellitus?

P= I started having headaches most of the time and my mouth was always painful especially when I drink cold drinks (soft drinks). “Ni tshama ni kari ni ri na ndlala”- I am always hungry.

R= Mmm! Continue I am listening.

P= Lo ko ndzipfuka ni fanele ku dya, hi kuva ni nge fikisi nine ni nga si dya”- when I wake up i need to eat because I cannot stay till nine in the morning without eating.

R= How did you feel after you were told you had diabetes?

P= At first I was very hurt, depressed and confused, I went back home. I explained to my children that I am from the clinic and they said that my blood sugar is high (diabetes mellitus) and told them they must not make me angry.

R= Mmm!

P= I told them that my condition is not good and it can kill me anytime, so I asked my children to treat me the same way they have done while I was diagnosed with high blood pressure.

R= Mmm! You said they must treat you the same way while you were diagnosed with high blood pressure, could you elaborate more on that.

P= Yes I told them that they must not make me angry because these disease is very dangerous; It makes a person to feel dizzy and you may collapse.

R= How has diabetes mellitus affected your life?

P= Many things have changed. I do not have to eat food that has fat, salt and sugar. “Ni fanele ku dya swa kudya swo titimela”- I have to eat food which does not contain spices.

R= Mmm! (Nodding)

R= How do you manage this condition?

P= I always come to the clinic to collect treatment and for checking the level of my blood glucose. I also follow advices which the nurse give us.

R= A point of clarity please. Which are the advices the nurses give you?

P= I only use sweetener for tea; no salt in my food, eat one apple or banana per day. They said I have to stop worrying about my condition.

R= What was the most challenging part of managing diabetes mellitus?

P= I kept quiet for some time and took a long deep breath”. It is difficult to stop pouring sugar in tea, salt in food or fat and I have to eat before nine in the morning so that I can be able to take treatment. “Swi ni tikela swinene ku landzelerisa swi leriso”- It took me a long time to follow orders.

R= Ok! (nodding) I am listening, go ahead.

P= “Swa tika swinene ka nwananga”- It is very difficult for my child

R= What helped you most with this condition?

P= My children have contributed most in giving me explanations of this condition

R= Mmm! Please elaborate more.

P= My children gave an example about our priest lives with diabetes mellitus and that he follows advices which the doctor and nurses give.

R= You have indicated the most challenging part is to stop eating that you were used to.

P= Yes I said so ‘nodding the head and breathing loudly at the same time.

R= Mmm!

R= What is the biggest change you have made after being diagnosed with diabetes mellitus?

P= I am no longer getting angry, worried, having arguments with people as I used to. Now I have accepted my condition and personally I have changed.

R= What impact does diabetes have on your family?

P= My children support me and they understand my condition. I give thanks to the nurses for finding out what was wrong with me

R= Mmm!

P= Nurses here at the clinic encouraged me to stay positive and accept myself. “Va hi pfuna swinene”- they help us.

R=What advice can you give to someone who has just found out that he she has diabetes?

P= Keeps quite for some time and took a long deep breath facing down.

P= People need to accept to accept their condition, take treatment, stop eating what is not good for their health and they must not get angry.

R= Mmm! Why, please elaborate.

P= If you may become angry it makes their condition worse and they need to stay calm and drink a lot of water because it helps.

R= Mmm! Is there anything you need to ask or tell me about?

P= Mmm! Nothing more to say.

R= Ok, let me take this opportunity to say thank you for sharing with me the information you have been a good participant. Thank you.

APPENDIX 4

UNIVERSITY OF LIMPOPO CONSENT FORM

Statement Concerning Participation in Research Project

Name of Study

Problems Faced by Newly Diagnosed Diabetes Mellitus Patients at Primary Healthcare Facilities of the Mopani District, Limpopo Province, South Africa

I have read the information on the aims and objectives of the purposed study and I was provided the opportunity to ask questions and given adequate time to rethink the issue. The aims and objectives of the study are sufficiently clear to me. I have not been pressurised to participate in any way.

I understand that participation in this study is completely voluntary and that I may withdraw from it at any time and without supplying reasons. This will have no influence on the regular treatments that holds for my condition neither will it influence the care that I received. I know that this study has been approved by the Research, Ethics and Publication Committee, Faculty of Health Sciences, University of Limpopo -Turfloop Campus. I am fully aware that the result of this study will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

I hereby give consent to participate in this study.

Name of patient

Signature of Patient

Place

Date

Witness

Statement by the Researcher

I provided verbal and written information regarding this study.

I agree to answer any future questions concerning the study as best as I am able.

I will adhere to the approved Protocol.

----- ----- ----- -----
Name Signature Date Place

APPENDIX 5

LETTER FROM THE UNIVERSITY OF LIMPOPO RESEARCH ETHICS COMMITTEE

APPLICATION FORM FOR PROPOSED
RESEARCH PROJECT UNIVERSITY OF
LIMPOPO
Medunsa Campus



MEDUNSA CAMPUS RESEARCH ETHICS COMMITTEE

A. PARTICULARS OF APPLICANT/CHIEF RESEARCHER

Title: Mrs. First name: Khizamane Joyce Surname: Mbombi

Department: Nursing Tel: 0152682384/3036

School: Healthcare Sciences

B. DETAILS OF RESEARCH PROJECT

(Tick appropriate block(s) with a 'x')

1.a	New project	X	or : Continuation of project	
1.b	Independent research :		or : Contract research:	
	Post-graduate research:	X	or : Undergraduate research :	

Degree (specify) _____

At which university is the degree registered? University of Limpopo, Turfloop
Campus

2. a. Title of project: Problems faced by newly diagnosed diabetes mellitus patients at Primary Healthcare facilities of Mopani District, Limpopo Province

b. Co-workers (Not for post-graduate research. See Guidelines)

Name	Department/Institution	Signature
Not applicable		

c. Research Co-ordinator (In the case of independent or contract research)

Name	Department/Institution	Signature
Not applicable		

d. Supervisor (In the case of post-graduate research)

Name	Department/Institution	Signature
Dr. M.E. Lekhuleni	Nursing	

e. Co-supervisor (In the case of post-graduate research)

Name	Department/Institution	Signature
Mrs. T.M. Mothiba	Nursing	

f. Hospital Superintendent/Healthcare Manager

Name	Department/Institution	Signature

g. Other involved departmental heads

Name	Department/Institution	Signature
Not applicable		

C. SPECIAL REQUIREMENTS

Will the research involve the following:

	Yes	No		Yes	No
Experimental animals		X	Approval from Animal ethics Committee attached (separate application form required)		X
Special apparatus		X	Is it available at Medunsa?		
Special drugs (medicaments)		X	Explanation of who will supply the drugs attached		
Radio isotopes		X	Completed radio Isotopes form attached (Appendix 4)		

Special laboratory facilities		X	Is it available at Medunsa? If no, attach a statement of requirements		
Electron microscopy		X	Completed Electron microscope form attached (Appendix 3)		
Healthcare services	X		Signature of healthcare manager attached		
Statistical analysis	X		Has a statistician been consulted? If yes, attach form. (Appendix 2) If no explain.		

D. ETHICAL ISSUES

1. *Indemnity*

If a hospital (human, dental or veterinary) will be involved, please attach the written approval of the Superintendent. Should the use of the service laboratories be required, attached a letter of consent of the hospital management that this is in order.

2. *Consent*

Will patients/human volunteers form part of the experiment/trial/survey? If so, kindly modify the attached form, specifically for your project. (Appendix 1)

E. BUDGET

Who will finance this project? (Tick appropriate block with a “x”)

University of Limpopo (Medunsa Campus)		Health Department		Self	X	Other (specify)	

Please indicate the institutions where application has been made for financial support or where it is intended to apply for financial support.

MRC		NRF		CSD		Other (specify)	

NB: Approval of the research project does **NOT** imply that the requested funds will be made available to the applicant.

F. DECLARATION BY RESEARCHER(S)

Should this project be approved, I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research. I/we guarantee to ensure compliance with these approved conditions. Furthermore, I/we undertake **not to change the procedure as detailed in the protocol but will submit a further application to the Research Committee if changes become necessary**

SIGNATURE: _____ **DATE:** _____
CHIEF RESEARCHER:

SIGNATURE: _____ **DATE:** _____
HEAD OF DEPARTMENT

SIGNATURE: _____ **DATE:** _____
DIRECTOR OF SCHOOL

APPENDIX 6

LETTER FROM THE LIMPOPO DEPARTMENT OF HEALTH AND SOCIAL DEVELOPMENT



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
HEALTH AND SOCIAL DEVELOPMENT
MOPANI DISTRICT

ENQ:MASILANI ML
TEL NO:0158120785
FAX NO:0158120571
14 JANUARY 2009

TO WHOM IT MAY CONCERN

PERMISSION TO CONDUCT RESEARCH IN GREATER GIYANI PHC

PROBLEMS FACED BY NEWLY DIAGNOSED DIABETES MELLITUS PATIENTS
AT PHC FACILITIES OF MOPANI DISTRICT. LIMPOPO PROVINCE

The above matter refers

1. Permission to conduct research at Greater Giyani PHC is granted to Mbombi KJ regarding the topic mentioned above with effect from 14 January 2009.
2. Please note that conducting a research does not involve salary or remuneration by the Department.
3. The candidate shall not willfully disclose any information which may prejudicially affect the institution and the Department.
4. We hope that you will find this in order

Thank you

MALULEKE MF
M. Maluleke
Sub-District Manager

Private Bag X628, GIYANI, 0826
Tel: (015) 811 6500 Fax: (015) 812 3162 Website: <http://www.limpopo.gov.za>

The heartland of Southern Africa – Development is about people!

APPENDIX 7

LETTER FROM INDEPENDENT CODER

CODING REPORT

FOR: Khizamane Joyce Mbombi

DATE: 27 October 2010

TITLE: PROBLEMS FACED BY NEWLY DIAGNOSED DIABETES MELLITUS PATIENTS AT PRIMARY HEALTH FACILITIES OF MOPANI DISTRICT, LIMPOPO PROVINCE, SOUTH AFRICA.

BY: Dr. R.T Lebese

Raw data from interviews conducted by Joyce Mbombi on the study mentioned above was analysed qualitatively using Tech's eight steps which are:

Get the sense of the whole, Pick one document and read through, List the topics, Go back to the data, Describe the topics, Abbreviate categories, Assemble the dates and Recoding. The following themes categories and sub-categories emerged as reflected in Table 1.

Table 1 Themes, categories and sub-categories

Themes	Categories	Sub-categories
1. Participants awareness of the illness	1.1 Awareness of health status	1.1.1 Known diagnosis 1.1.2 Awareness of signs and symptoms
	1.2 Unaware of health status	1.2.1 Unknown diagnosis 1.2.2 Diagnosis awareness related to consultation
2. Participants expression of problems associated with the diagnosis of diabetes mellitus	2.1 Problems associated with experienced ailments	2.1.1 Ailment experience
	2.2 Psychological problems associated with the diagnosis of diabetes mellitus	2.2.1 Denial and shock related to the diagnosis 2.2.2 Feelings of hurt, angry and frustrated
3. Participants' challenges of how they live with the condition	3.1 Participants management of the condition	3.1.2 Use of advise from nurses.
	3.2 Challenges experienced by the participants in relation to	3.2.1 Challenges related to treatment

	the condition	3.2.2 Loss of income
	3.3 The impact of the disease to family members as perceived by participants.	3.3.1 Use of family support system 3.3.2 Adherence to prescribed treatment 3.3.3 Adhering to dietary advises from nurses
4. Participant's advice to newly diagnosed people.	4.1 Advice related to condition.	4.1.1 Acceptance of the condition 4.1.2 Need for support system

Was saturation of data achieved if yes give details if no give details.

Saturation of data was achieved as the same information kept on repeating from different sources.

How the transcribed notes were, were they up-to standard if no outline if yes outline.

Data was well transcribed and typed. It was easy to work with. Some of the questions that were asked were leading. I also identified that the candidate had more questions that required in a qualitative study.

I would have expected the candidate to have few questions and use the skill of probing, paraphrasing and follow up questioning to deepen the discussion. Information that should have been captured in field notes was found to be lacking.

Thank you for giving me the opportunity of coding the students data.

.....
Dr. R.T Lebesse 015 962 8393/ 071 561 8263

.....
University of Venda School of Health Sciences
Advanced Nursing Department
Private Bag x 5050
Thohoyandou
0950

APPENDIX 8

LETTER FROM LANGUAGE EDITOR



FACULTY OF NATURAL SCIENCES
DEPARTMENT OF MEDICAL BIOSCIENCES



Donavon C. Hiss, Ph.D (Medicine)
University of the Western Cape
Private Bag X17
Bellville 7835
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Tel: +27 (0) 21 959 2334
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25 October 2010

To Whom it May Concern

This serves to confirm that I have edited the language, spelling, grammar and style of the MCur Mini-Dissertation by Khizamane Joyce Mbombi: **Problems Faced by Newly Diagnosed Diabetes Mellitus Patients at Primary Healthcare Facilities of the Mopani District, Limpopo Province, South Africa.**

Sincerely Yours

Donavon C. Hiss
Ph.D. (Medicine), Dip. Freelance Journalism, Dip. Creative Writing



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WESTERN CAPE**

A place of quality, a place to grow, from hope to action through knowledge