HEALTH DIALOGUE ELEMENTS PRESENT DURING HEALTH COMMUNICATION BETWEEN PATIENTS WITH DIABETES AND NURSES IN A NORTHERN CAPE LOCAL MUNICIPALITY

by

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DECLARATION

I, Lesley Janette Talbot, identity number 5507010058088 and student number 2006069112, do hereby declare that this research project submitted to the University of the Free State for the degree MAGISTER SOCIETATIS SCIENTIAE (NURSING): HEALTH DIALOGUE ELEMENTS PRESENT DURING COMMUNICATION BETWEEN PATIENTS WITH DIABETES AND NURSES IN A NORTHERN CAPE LOCAL MUNICIPALITY, is my own, independent work, and has not been submitted before to any institution by myself or any other person in fulfilment of the requirements for the attainment of any qualification. I further cede copyright of this research in favour of the University of the Free State.

30/01/2018

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Date

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ABSTRACT

Patients and nurses in health facilities interact daily with the purpose of improving health outcomes. However, it is not known to what extent the elements of health dialogue are incorporated into each individual patient and nurse interaction. A concept analysis of “health dialogue” laid the foundation to identify the presence of the antecedent and empirical referent health dialogue elements during health communication between patients with diabetes and nurses in the Northern Cape.

The objective of the study was to assess, through observation, the presence of the health dialogue elements, namely, antecedents, which are a positive attitude, sensitivity and respect, and training; and empirical referents, which comprise shared responsibility and decision-making, a mutually beneficial health plan and context-sensitive communication strategies.

A quantitative, non-experimental, descriptive, cross-sectional research design was used. Data were collected using an observational checklist aided by a guideline at public and private health facilities (n=16) in the Sol Plaatje local municipality located within the Frances Baard District. Patients with diabetes (N=88) and nurses (N=22) were observed while they interacted during one-on-one consultations (n=88). Each nurse interacted with more than one patient. Audio-recordings of interactions were used to verify and support observations.

Data analysis was carried out using descriptive statistics, namely, frequencies and percentages for categorical data, medians and percentiles for continuous data, calculated per group, and comparing nurse and patient responses. McNemar’s test or Bhapkar’s test was applied to compare the statistical difference in responses between the nurses and the patients.

Inconsistencies (48.8%) in the presentation of the health dialogue antecedent elements and sub-elements of positive attitude and sensitivity and respect during nurse-patient interactions, were noted. The antecedent element findings for training noted nurse training in diabetes (19.3%) and in communication skills (30.6%), whilst patient training and information about diabetes (48.7%) and communication skills (3.4%) were found. In accordance with the concept analysis of health dialogue, the inconsistencies noted in the presentation of antecedent health dialogue elements imply that it was not likely that the empirical referents could be realised. However, both nurses and patients stated that the empirical referent elements of shared responsibility/decision-making, a health care plan of mutual benefit and the application of context-sensitive communication strategies to convey health messages were experienced during the study.

These findings indicate that both nurses and patients are unable to incorporate the antecedent health dialogue elements during interaction with one another. In addition, nurses and patients appear to be ill-prepared to include participatory health communication and health dialogue in interaction.

Capacity building of both nurses and patients is recommended to enhance participatory health communication.

CONCEPTUAL AND OPERATIONAL CLARIFICATION

DIABETES

Diabetes is a clinical disease characterised by the presence of elevated blood glucose levels due to an inability of the body to produce and/or use insulin, a hormone produced by insulin-producing ß cells in the pancreas. The disorder is characterised by a clinical syndrome of chronic hyperglycaemia and impaired carbohydrate, fat and protein metabolism. Chronic hyperglycaemia, in turn, is directly linked to long-term impairment and subsequent organ malfunction and destruction of major body organs, including the eyes, kidneys, heart and blood vessels. Diabetes is classified into four main categories, namely, Type 1 diabetes, Type 2 diabetes, gestational diabetes and diabetes associated with specific health and disease conditions (American Diabetes Association (ADA), 2016:S13; Pearson & McCrimmon, 2014:800; Society for Endocrinology, Metabolism and Diabetes of South Africa (SEMDSA), 2017:S5-S6). Whenever reference is made to diabetes in this study, diabetes refers to any one of the mentioned categories of diabetes.

HEALTH COMMUNICATION

Health communication involves the sharing of information, ideas, opinions, emotions and beliefs through messages that are created during ongoing transactional processes involving a sender and a receiver in an equal relationship, with the aim of creating mutual understanding to improve health outcomes using negotiation (Rensburg & Krige, 2011:78). In this study, health communication between the nurse and patient diagnosed with diabetes will be observed within the identified health facility using an observational checklist incorporating the identified elements of the concept health dialogue.

HEALTH DIALOGUE ELEMENTS

The concept clarification of health dialogue describes health dialogue as an equal, symbiotic health relationship between the patient and the health care provider, and the presence of reciprocal health communication for the delivery of a health message to attain an identified health goal (Reid, 2015). In this study, references to health dialogue are grounded in the aforementioned concept clarification as incorporated within the conceptual map (see Figure 1.2). Elements, in turn, refer to the necessary or typical parts of something (Hornby, 2010:474). The sum of the elements included within the concept health dialogue is identified by the antecedents, characteristics, empirical referents and consequences. Antecedents refer to incidents or events that must have occurred or which were present before the characteristics manifested (Walker & Avant, 2011:167-168). The empirical referents are elements that, as a result of the presence of the antecedents and characteristics, will be observable entities that enable the recognition of the characteristics (Walker & Avant, 2011:168-169).

NURSES

Nurses are a regulated group of health care workers. The South African Nursing Council (SANC) acts as the regulatory body. This body identifies and determines the scope of practice of nurse categories, including the scope of practice of registered nurses, registered midwives, enrolled midwives, enrolled nurses and enrolled nursing assistants (SANC, 1984:1–6). In this study, a reference to nurse will include only the registered nurse and the enrolled nurse.

PATIENTS

Patients are persons who are receiving medical treatment, especially in a hospital (Hornby, 2010:1076). In this study, patients will be deemed those people diagnosed with any category of diabetes and who receive treatment at an identified health facility.

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LIST OF ABBREVIATIONS

ADA	American Diabetes Association
DoH	Department of Health
IDF	International Diabetes Federation
SANC	South African Nursing Council
SEMDSA	Society for Endocrinology, Metabolism and Diabetes of South Africa
UFS	University of the Free State
WHO	World Health Organization
OCHDE	Observational checklist of health dialogue elements

CHAPTER 1: OVERVIEW OF THE STUDY

1.1 INTRODUCTION

In 2017, an International Diabetes Federation (IDF) study indicated that some 425 million people worldwide live with diabetes and that, by 2045, this number will have grown to 629 million. The rapid increase in the number of people with diabetes, which is a non-communicable and leading lifestyle disease, is a global manifestation, and is now frequently referred to as one of the leading health emergencies of the 21st century (IDF, 2017:41-42). Unhealthy lifestyle behaviours, which include tobacco use, physical inactivity, unhealthy diets and alcohol abuse, are documented as the leading causes of the global burden of non-communicable diseases, and are responsible for an estimated 63% of all deaths worldwide (Kushner & Mechanick, 2015:36). The current and continuing rise in the worldwide prevalence of diabetes places undesired pressure on and increases liability of the social, health and financial systems of the all countries affected (Ogurtsova, Da Rocha Fernandes, Huang, Linnenkamp, Guariguata, Cho, Cavan, Shaw & Makaroff, 2017:40).

Africa is not exempted from these patterns exhibited by non-communicable diseases. It is anticipated that Africa will experience an alarming 162.5% growth in the number of people living with diabetes by 2045. It is estimated that at least two thirds of adults living with diabetes are yet to be diagnosed (IDF, 2017:66). The South African Department of Health has taken note of the estimated increase in the number of people with diabetes in South Africa, and the undesired health and socio-economic consequences such an increase will have for unprepared and ill-equipped health services, (Department of Health (DoH), 2013:4). Addressing this multifaceted service challenge successfully appears to be dependent on effective therapeutic disease management enveloped within a patient-centred approach and facilitated by needs-driven health communication, if it is to achieve positive behavioural health outcomes (DoH, 2013:43).

Achieving a patient-centred approach to health service delivery within an apparent task-orientated service delivery milieu, requires a complex process strongly influenced by policy and supportive patient-centred organisational expectations. Effective health communication appears to have the ability to redirect the focus of health service delivery to the patient and to enable the service provider to truly understand the real needs and preferences of each patient. Doing so will, in due course, realise the development of successfully tailored and individualised health care plans for each patient (Tobiano, Marshall, Bucknall & Chaboyer, 2016:368; Zoffmann, Hörnstenc, Storbækkend & Grauee, 2016:400).

Within this context, health communication can be described as the giving and receiving of health information and the mutual sharing of ideas and feelings between persons involved in the communication process, with the aim of reaching a mutual understanding. Health communication, in addition, is deemed to be developmental in nature. The communication process is, therefore, presumed to be interactional, transactional and negotiated in an environment where all persons are deemed equal, as each strives to improve personal and community health (Rensburg & Krige, 2011:77–79). In principle, the progressive nature of health communication should bring about an enhancement in the lives of individuals, through inclusivity, active participation and the widening of their horizons, not only to increase lifespan, but also to improve overall quality of life (Govender, 2011:54-55). Recognition of the social, cultural and political contexts of the communication process is crucial; however, without genuine participation by all involved during health communication, development that empowers may be hampered (Govender, 2011:51–76). True participation during health communication involves interactive dialogue, and a communication process that encourages feedback, discussion, negotiation and collective decision-making (Govender, 2011:51–76). Instrumental in the attainment of true and genuine participation during patient and nurse communication, an understanding of the real meaning of dialogue is essential.

Dialogue, an influential concept in the work of Paulo Freire, lays a foundation for the participatory paradigm of development communication (Dyll-Myklebust, 2011:12–19). Freire (2005:85–90) describes his inference of dialogue as communication between people, who are in an equal relationship, in a search for understanding and meaning through critical thinking and self-realisation, which is central to learning. Importantly, dialogue is a process enveloped in the values of mutual respect, humility, trust, faith, hope, love and critical thinking (Freire, 2005:89–92). Dialogue is, thus, a means of enabling people to come to the empowering understanding that there is much to learn, and to realise that they are capable of learning if they take active ownership of their education and their lives (Govender, 2011:60). In this context, dialogue is seen as integral to participatory communication, as it is value-driven and educational and has the ability to facilitate and encourage change (Rule, 2011:930). Dialogue, therefore, needs to be recognised as an essential element of health communication. Recognising this may have significance for health care in South Africa and for realising the public health vision of, “a long and healthy life for all South Africans” (DoH, 2013:3).

In South Africa nurses deliver the bulk of health services in the primary health care environment, where they are supported by doctors in the communities they serve (Mash, Levitt, Steyn, Zwarenstein & Rollnick, 2012:2). Nurse-driven primary health care services are delivered by registered nurses and enrolled nurses, who are supported by enrolled nursing assistants in accordance with their respective scopes of practice (South African Nursing Council (SANC), 1984:2–5). Each respective scope refers to the actions or procedures that a specific category of nurse is permitted to execute by law, and is based on experience and educational qualifications (Lubbe & Roets, 2014:58).

It is here, in the primary health care environment – often the patient’s first contact with health services – that health communication between patients and nurses is so critical. This communication interaction between the patient and the nurse is viewed as a vital link to achieving health awareness and disease management, and it is a means to encourage attitudinal and behaviour change to improve health (Omego & Nwachukwu, 2014:144–146). Primary health care services in the Northern Cape, one of the nine provinces of South Africa, replicates the nature of primary health care services rendered nationally.

The essential role that communication takes in improving health outcomes has particular relevance for patients living with diabetes. These patients are often faced with the need to accept and adapt to lifestyle adjustments if they are to maintain optimal glycaemic control. Many patients, however, find it difficult to integrate these lifestyle changes into their daily lives (Berenguera, Molo Inesta, Mata Cases, Franch Nadal, Bolibar, Rubinat & Maurico, 2016:2323). Nurses are tasked with providing the personalised care, support and guidance needed to ensure that patients feel comfortable with the self-management of their own health (Meer, 2015:828).

In this context, using dialogue in communication between patients with diabetes and nurses may significantly improve the understanding of problems, needs and difficulties experienced by patients living with the disease. This could, in turn, appreciably influence the patient’s acceptance and acknowledgement of guidance and recommendations, and affect the manner in which the patient deals and lives with the disease (Damasceno, Zanetti, De Carvalho, Teixeira, Da Araújo & Alencar, 2012:689; Kushner & Mechanick, 2015:40; White, Eden, Wallston, Kripalani, Barto, Shintani & Rothman, 2015:148).

Essentially, successful management of diabetes requires a partnership between the patient with diabetes and the nurse (IDF, 2013:21–22). Using dialogue during health communication between patient and nurse appears to encourage such a relationship and offers a means to assist the nurse and patient to realise positive health outcomes within a patient-centred environment (Boykins, 2014:40; Wilkinson, Whitehead & Ritchie, 2014:111; Wu, Tung, Liang, Lee & Yu, 2014:194-195). Brown (2014:135) supports the use of a patient-centred approach to providing comprehensive health care to patients with diabetes. The presence of open, collaborative communication between patient and nurse, Brown suggests, encourages active participation, facilitates decision-making and self-management, and provides much-needed psychological support.

Dialogue, as a mechanism applied for health communication, appears to be the enabler of or means to assist nurses and patients to achieve open, collaborative communication, encourage participation, and enhance learning and self-empowerment.

1.2 CURRENT SITUATION

The Society for Endocrinology, Metabolism and Diabetes of South Africa (SEMDSA) Type 2 Diabetes Expert Committee guidelines provide recommendations for the management and delivery of health services to patients with diabetes. The guidelines offer the latest evidence-based information on the best way to care for patients with diabetes (SEMDSA, 2017:S6). While the availability and application of these guidelines is important, applying them correctly in practice within a patient-centred and participatory environment is of equal importance. The health benefits of integrating a patient-centred approach in the delivery of chronic health services and, in particular, diabetes management, have been documented widely. The achievement of these health benefits appears to be directly linked to the creation of a positive and caring learning environment for the patient, the inclusion of patient participation and perspective, and the confident activation of decisions into the patient’s daily living routine to improve overall health (Coulter, Entwistle, Eccles, Ryan, Shepperd & Perera, 2015:3; Johansson, Österberg, Leksell & Berglund, 2016:1-2; Svedbo Engström, Leksell, Johansson & Gudbjörnsdottir, 2016:1; Zoffmann *et al.*, 2016:400).

It was mentioned in Paragraph 1.1 that dialogue, used as a mechanism for health communication between the patient with diabetes and the nurse, may assist to enhance mutual participation and patient-centred health care. However, a literature search into participatory health communication in nursing studies revealed that the simultaneous observation of patients and nurses during health communication, using an observational checklist, was not well described. Self–introspection by the researcher ensued.

Over the years, and noting the return of a disturbingly high number of patients with diabetes and recurrent foot ulcerations in a wound care practice, the researcher questioned why patients were not following the prescribed treatment plan to manage the disease. Were these apparently unfavourable health outcomes perhaps related to the manner in which participatory health communication was integrated into the service provided? To the researcher, the term participatory communication and health dialogue simply implies that patient and nurse participate equally in the provision of the health treatment in the wound clinic. In practice and in the absence of guiding protocol regarding participatory communication, this approach resulted in the researcher doing most of the communicating and dominating the consultation by giving instructions. The need to provide as much information to the patient as possible was truly perceived by the researcher as helping the patient. A recent study noted similar findings. Even though patient participation was encouraged during nurse-patient communication interactions, the nurse remained in control of the manner in which the patient was to implement everyday self-management care (Tobiano *et al*., 2016:362).

The current situation informed the need for further investigation into participatory communication and the presence of health dialogue elements during patient and nurse interactions.

1.3 AIM OF THE STUDY

The researcher's self-introspection into communication practices, the scientific knowledge that health dialogue has a positive impact on patient health outcomes and the realisation that it is currently unknown whether health dialogue elements are present during health communication during the rendering of health services in the Northern Cape demands attention. This study aims to describe health dialogue elements present during health communication between patients with diabetes and nurses in a Northern Cape local municipality.

Being introduced to the concept of health dialogue as developed by Reid (2015) provided the researcher with a dual opportunity. The content of the concept analysis of health dialogue provided the researcher with, firstly, essential insight into the term health dialogue within the participatory communication paradigm and, secondly, the foundation upon which an investigation into the presence of health dialogue elements in local health facilities could be realised. Conceptualising health dialogue includes describing the antecedent and empirical referent elements that serve as the framework for this study, and provided the content for the development and implementation of the observational checklist used to gather data.

This opportunity will be now be addressed in accordance with the ensuing research question, the research aim and the research objectives, in pursuit of an answer to the concern raised in 1.2.

1.4 RESEARCH QUESTION

The research question to be answered is: ***Are health dialogue elements present during health communication between patients with diabetes and nurses?***

1.4.1 Research aim

The aim of the study is ***to describe the presence of health dialogue elements during health communication between patients with diabetes and nurses in a Northern Cape local municipality***.

1.4.2 Research objectives

The objective of this study is *to assess, through observation, the presence of the following health dialogue elements:*

- Antecedents, which include a positive attitude, sensitivity and respect, and training; and
- Empirical referents, which comprise shared responsibility and decision-making, a mutually beneficial health plan and context-sensitive communication strategies.

The research question, research aim, and research objectives need to be answered and met with a response that is considered to be scientifically acceptable. To produce scientific information, the researcher was required to follow a correct research process (Botma, Greeff, Mulaudzi & Wright, 2010:38). A description of the process that guided this study follows.

1.5 RESEARCH PROCESS

Research is a structured and systematic process of scientific inquiry involving the implementation of a series of steps that will enable the researcher to find answers to the research problem and, over time, contribute to, “the understanding of the world around us” (Fouché & Delport, 2011:61). Fitting and logical decision-making is an essential element at each interconnected step or phase of the entire research process, which, if applied correctly, provides the “golden thread” permeating the study (Botma *et al*., 2010:90).

The researcher decided to apply a four-phase scientific research process to guide the entire study. Figure 1.1 refers to Botma *et al*., (2010:38) and depicts each of the four phases of research, namely, the *conceptual phase*, the *research design phase*, the *analysing and interpreting data phase* and, finally, the *phase of communicating and disseminating findings*. In addition, Figure 1.1 contains the specific steps included at each phase of the research process. The paradigm or philosophical framework of choice is central to the entire research process and guides all decision-making (Botma *et al*., 2010:40).

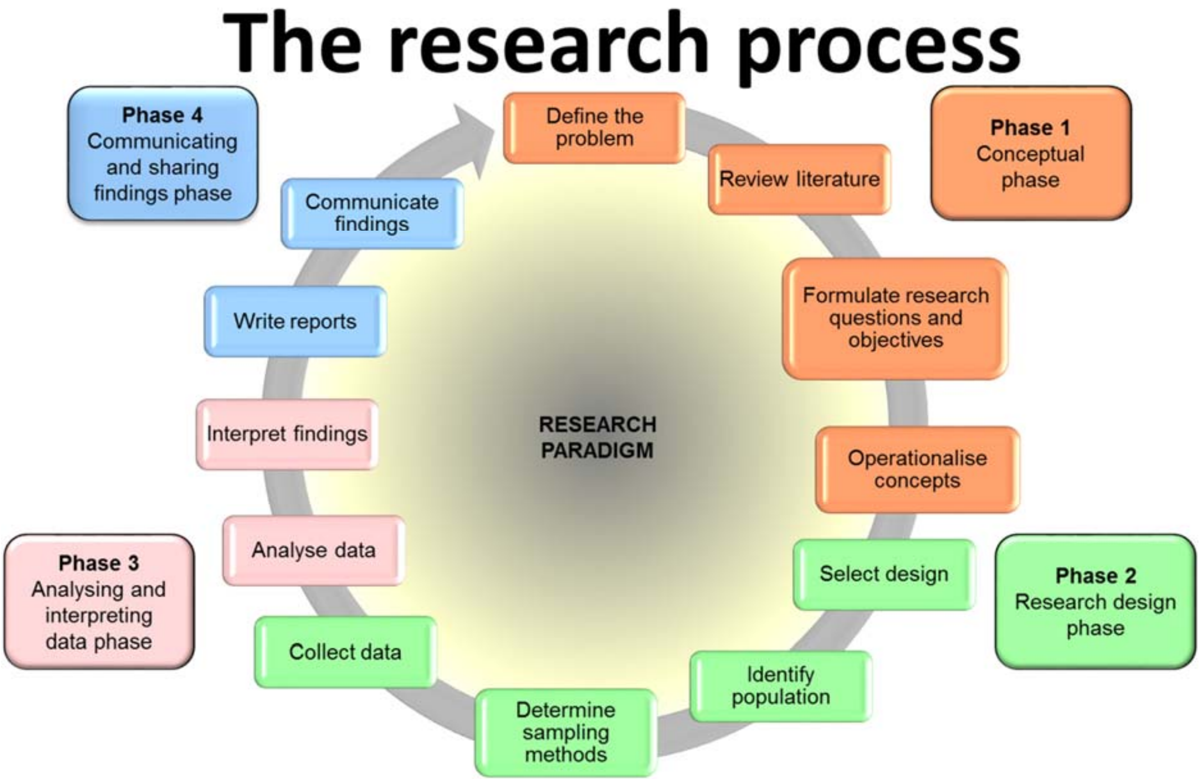

Figure 1.1: The research process - the four phases and steps (adapted from Botma *et al*., 2010:38)

To complete all the steps in the conceptual phase attention is now directed to the conceptual map of the study, which will provide the knowledge and organised perspective of the topic that was studied (De Vos & Strydom, 2011:35). The concept clarification of health dialogue by Reid (2015) creates an opportunity to describe the extent of the presence of identified health dialogue elements during health communication between nurses and patients diagnosed with diabetes within a Northern Cape local municipality. A description of the concept analysis of health dialogue follows.

1.6 CONCEPTUAL MAP

The framework of this study is guided by the conceptual map of health dialogue elements suggested by Reid (2015). Figure 1.2 illustrates how the framework is embedded in a participatory paradigm. This paradigm views communication as a means to achieve social change and is based on a dialogical model, which facilitates mutual understanding and the building of relationships or partnerships through trust (Mefalopulas, 2005:247–248).

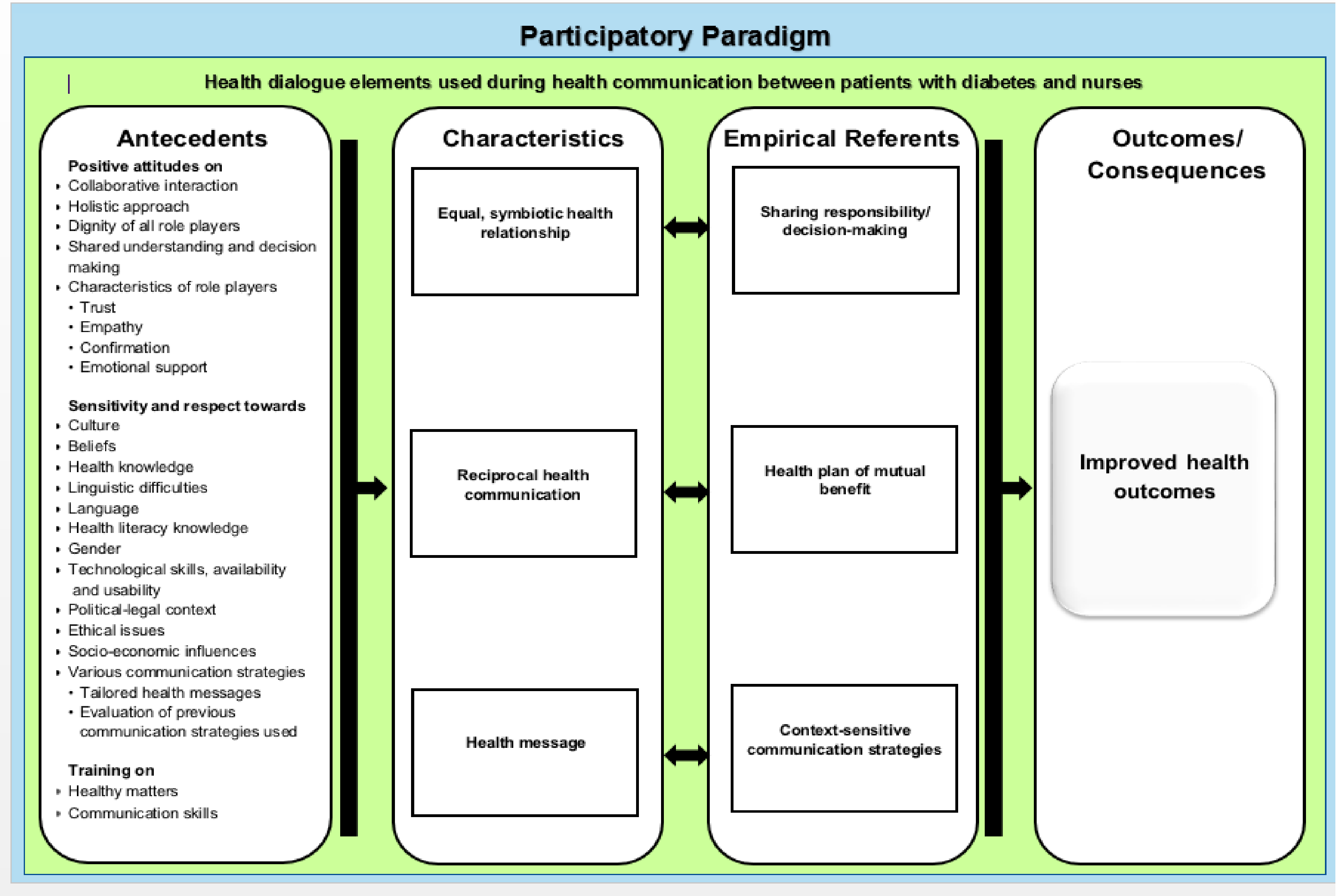

Figure 1.2: Conceptual map of health dialogue elements, adapted from Reid (2015)

The health dialogue elements identified included antecedents, characteristics, empirical referents and consequences. Antecedents are those incidents or events that must take place before the characteristics will occur, whereas characteristics are essential aspects that clarify a concept (Walker & Avant, 2011:167), in this case, the concept of health dialogue. Empirical referents, on the other hand, create the opportunity to measure the characteristics identified (Walker & Avant, 2011:168). Lastly, consequences are incidents or events that occur as a result of the implementation of the concept (Walker & Avant, 2011:167), such as improved health outcomes, in the case of health dialogue.

This study focused on two of the elements, namely, the antecedents and empirical referents needed during health dialogue between nurses and patients with diabetes. The reason for this focus is that the antecedents need to be considered to clarify the social context within which the health dialogue takes place, whereas the empirical referents create the platform for measuring the characteristics (Walker & Avant, 2011:167-168). The consequences of health dialogue between the identified role players fall outside the scope of this study.

The conceptual map by Reid (2015) identifies three **antecedents** that will be described in this study (see Figure 1.2). The first antecedent refers to the assessment of a *positive attitude* of the role players towards collaborative interaction, a holistic approach and dignity of all role players, a shared understanding of responsibility/decision-making, and relationship characteristics, such as trust, empathy, confirmation and emotional support. The second antecedent assesses the *extent of sensitivity/respect* and includes aspects such as culture, beliefs, health knowledge, linguistic difficulties, language, health literacy level, gender, technological skills/availability/usability, political-legal context, ethical issues and socio-economic influences. It will also include assessing sensitivity regarding communication strategies used, tailoring of health messages and whether previous communication strategies were evaluated. The third antecedent will assess the extent of *training* received on health matters and communication skills.

The three **empirical referents** listed on the conceptual map by Reid (2015) will also be addressed in this study. As shown in Figure 1.2, the visible presence of *shared understanding/decision-making* between the nurse and patient with diabetes will act as a measurement tool for the characteristic of an equal, symbiotic health relationship. The characteristic of reciprocal health communication will be measured through the presence of a *beneficial health plan* for both the patient and the nurse. Assessing whether a *context-sensitive communication strategy* was used will provide evidence of a health message.

1.7 RESEARCH DESIGN

The research design, Phase 2 of the research process, constitutes the structure within which the study took place. It served as the “director” of the entire research process, which guided the planning, implementation, and analysis of the study in order to answer the research question (Grove, Burns & Gray, 2013:195).

This study makes use of a *quantitative, non-experimental, descriptive, cross-sectional* research design cradled within the *philosophical paradigm of positivism*. The purpose of this design was to enable the researcher to collect observable data at a specific point in time using a checklist. The design then enabled the researcher to quantify, analyse and describe the findings in response to the research question: *Are health dialogue elements present during health communication between patients with diabetes and nurses?*

1.7.1 Research technique

Research technique refers to the data-gathering instrument used in quantitative research (Botma *et al*., 2010:133). The research technique applied in this study is the observational checklist, which enabled direct observation of the participants by the researcher and fieldworkers while they marked off observed health dialogue elements on an observational checklist.

1.7.2 Population

The target population refers to the entire set of persons, objects, behaviour or events and elements that meet the criteria for inclusion in a given situation (Grove *et al*., 2013:44). The accessible study population comprised the following people:

- All adult diabetic patients attending public health facilities (n=15) and private health facilities (n=3) in the Sol Plaatje Municipality in the Northern Cape; and
- All registered and enrolled nurses (N=86) working at these public health facilities, as well as registered nurses and enrolled nurses (N=3) working at the private health facilities.

1.7.3 Sample

A sample is a subset or portion of the accessible population identified for a study. The process of sampling entails the selection of a portion of the population or specific research participants to represent the accessible population (Botma *et al*., 2010:124).

Proportional sampling of public and private health facilities (n=18) resulted in 16 health facilities being included. This process was followed by convenience sampling of registered and enrolled nurses (N=89), and resulted in 30 nurses from the 16 health facilities being included. Each nurse was to consult with five adult patients with diabetes individually (n=150).

1.7.4 Pilot study

A pilot study was conducted, about which more detail is provided in Chapter 3.

1.7.5 Data collection

The gathering of data is an important administrative aspect of the study and it requires meticulous planning (Botma *et al*., 2010:145–146). Data collection is a process involving the thorough and methodical gathering of information relevant to the research purpose, objectives set and questions asked by the study (Grove *et al*., 2013:47).

Data collection started early in 2017, in accordance with a framework and timetable for data collection at each facility. The researcher and management of each health facility met to discuss the project and reach consensus prior to implementation. Detailed information about the data collection plan is provided in Chapter 3.

1.8 VALIDITY, RELIABILITY AND ETHICAL CONSIDERATIONS

Validity refers to the ability of a study to actually measure the concept it set out to measure. Validity, according to Delport and Roestenburg (2011:173), infers that the study instrument must, firstly, categorically measure the concept under investigation and, secondly, ensure that the concept is measured accurately. Measures to maximise the findings of the study and therefore enhance the validity must be implemented (Botma *et al*., 2010:174).

Reliability refers to the stability and accuracy of the valid measuring instrument (Botma *et al*., 2010:177).

Ethical considerations refers to the adherence to ethical principles throughout the study. The Belmont Report of 1979 directs research behaviour involving human participants, and includes guidelines about a commitment and adherence to the ethical principles of justice, beneficence and respect, which applied to all study participants throughout this study (National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research in Washington, 1979:1–40).

The concepts of validity and reliability, and measures implemented to apply ethical research principles are discussed in Chapter 3.

1.9 DATA ANALYSIS

Data analysis was managed by the Department of Biostatistics at the University of the Free State (UFS). Descriptive statistics, namely frequencies and percentages for categorical data and medians, were calculated per group, comparing the response of the nurse with that of the patient. Groups refer to the registered and enrolled nurses as well as the patients observed during consultation sessions. The groups were compared by means of McNemar’s test or Bhapkar’s test (Bhapkar, 1966:228-235).

1.10 CONCLUSION

This chapter provided the reader with information regarding the purpose, aim, and objectives of the study. A concept analysis of health dialogue was provided to familiarise the reader with the conceptual map and key concepts the study addressed. In addition, the four-phase research process that the researcher applied throughout the study was depicted by a written explanation and a diagram to facilitate reader understanding. An explanation was provided regarding the research design that was applied in answer to the research question, as well as a brief description of each of the main steps of the design process. This was followed by an introduction to the ethical aspects that were maintained throughout the study, as well as the important concepts of validity and reliability. Chapter 1 closes with a description of the data analysis was managed for this study.

The second chapter will provide a review of the literature in relation to the study, and Chapter 3 will provide detail of the study methodology. Analysed data will be presented in Chapter 4 in an article format. Chapter 5 concludes the report, and will provide recommendations based on the findings.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of the literature review is to provide a comprehensive description of the setting and significance of the research problem (Fouché & Delport, 2011:133). This chapter will offer an overview of the *South African health system* and will include information on the primary health care services offered by both the public and private health sectors. One of the health system's many current service foci, non-communicable diseases and *diabetes*, a lifestyle disease, will be explained*. Health communication* will be reviewed and discussed, with emphasis on health dialogue, the concept and the antecedent and empirical referents of the *health dialogue elements*.

2.2 SOUTH AFRICAN HEALTH SYSTEM

The mission of the Department of Health (DoH) in South Africa is to improve the health status of the population through the promotion of healthy lifestyles and the prevention of illness and disease. The health system is, therefore, geared for the delivery of a quality health care service that is accessible, equitable, efficient and sustainable. Achieving this goal requires the continuous reassessment and possible readjustment of current service plans, to ensure that progress that is made is in keeping with the entire mission statement (DoH, 2014:3).

The provision of health services to all who live in South Africa is based on the principles set out in the Constitution of the Republic of South Africa (2006). The Bill of Rights in Chapter 2 of the Constitution acknowledges health care as a basic and fundamental human right. This right is strongly underpinned by the values of social justice, equality under the law and respect for human rights. The Constitution, therefore, lays the foundation upon which legislation that guides health service delivery is based (South Africa, 1996:11-28; Van Rensburg & Engelbrecht, 2012:127).

The National Health Act (61 of 2003), based on the requirements of the Constitution, provides the legislative framework within which the establishment of a health system that provides public and private health care in South Africa is structured, provided and directed to ensure uniformity (South Africa, 2003:17-18).

2.2.1 Levels of governance

Three cooperative levels of government exist, namely national, provincial and local. Each level, with domain-specific functions and responsibilities, ensures that health care is provided through established systems (South Africa, 2003:3-4; South Africa, 1996:9; 28).

On a national level, the DoH is led by the director-general of Health, who is answerable to the minister of Health. In brief, the national level, mandated by the National Health Act (2003), is responsible for formulating and legislating health policy and health plans, building capacity of and providing support to provincial health departments and local government, regulating the public and private health sectors, and doing international health liaison (South Africa, 2003:28-34; Van Rensburg & Engelbrecht, 2012:138-139).

On a provincial level, the DoH and the provincial structures in each of the nine provinces execute national health policy, legislate on province-specific concerns and establish and support functional service-providing district health systems to enable the delivery of a comprehensive range of public health services (South Africa, 2003:34-36; Van Rensburg & Engelbrecht, 2012:139-140).

On a district level, the structures of national and provincial government are replicated in a similar way, so that health care can be provided to the inhabitants of each specific and defined geographical health district. It is on the district level, through the designed, developed and managed district health systems, that primary health care services are delivered (DoH, 1997:18; South Africa, 2003:38-42).

2.2.2 Primary health care

The Alma-Ata Declaration on primary health care (adopted in 1978 by the World Health Assembly) provides a philosophical, strategic and principled approach to the organisation and rendering of primary health care health services (World Health Organization (WHO), 1978:2-6).

Freeman, Hunter and Rispel (2015:64), in referencing the Declaration, record that this approach to primary health care services is value driven. The authors also acknowledge the political, economic, social and cultural environments within which services are provided. A conceptual map provided by these authors identifies three interconnected pillars of the primary health care approach, namely, primary health service delivery reforms, intersectoral collaboration, and community participation, as key elements of this methodology.

The district health system is the core of the strategic impetus of the primary health care approach to service delivery (DoH, 1997:9; WHO, 1978:3-5); therefore, it is more than just a system or a structure. It is the foundation on which the health system implements a “bottom-up” approach and through which it achieves its vision and mission (McCoy & Engelbrecht, 1999:132).

In practice, therefore, primary health care services should be geared to provide quality and comprehensive primary health care services that are accessible, and offer preventive, promotive, curative and rehabilitative services. These services must address the major health needs of the community, work in collaboration with all related sectors to address social determinants of health, and enthuse and incorporate community participation. The overarching intent of this approach is to encourage and promote human development and empowerment in the spirit of self-sufficiency and self-determination (Engelbrecht & Van Rensburg, 2012:484-485, 528-529; Freeman *et al.,* 2015:64; WHO, 1978:3-4).

The delivery of primary health services on a district level is the responsibility of both the public and the private health sectors, who work in a coordinated and collaborative manner (South Africa, 2003:36). The public health sector is funded by state revenue, and delivers health services to the majority of the population. The private sector, funded through medical aid contributions and direct payment for services, serves a far smaller portion of the population (Matsoso, Fryatt & Andrews, 2015:1-7).

2.2.2.1 Levels of primary health care

The health service is structured into three distinct, yet interrelated, levels of care within each of the health districts. These are the primary level of care, secondary level of care and tertiary level of care (Engelbrecht & Van Rensburg, 2012:486).

Primary level of care is graded into levels of services. Grade 1 level services refer to fixed and mobile primary health care clinics, which are open five days a week for eight hours a day. Grade 2 level services include the larger clinics, which render a 24-hour service and which are open seven days a week. Grade 3 level services, or community health centres and district hospitals, offer a 24-hour basic district hospital service. These institutions each serve a specific catchment area, and deal with referrals of a less serious nature from clinics within the district (Engelbrecht & Van Rensburg, 2012:486).

Secondary level of care refers to the level of care dealing with more complicated health conditions. These are hospitals, usually with 24-hour emergency services and a number of specialised services available. Admission to this level of care is normally via the district hospital; or admission may sometimes be direct (Engelbrecht & Van Rensburg, 2012:486).

Tertiary level of care involves an advanced level of specialised care by multidisciplinary teams at tertiary or academic hospitals. Referral to these hospitals are via district hospitals (Engelbrecht & Van Rensburg, 2012:486).

2.2.2.2 Primary health care in the private sector

The *private health sector*'s contribution to the eight elements of primary health care, namely, health promotion; food supply, nutrition, water and sanitation; family planning, maternal and child care; immunisation; prevention and management of local endemic diseases; promotion of mental, emotional and spiritual health; appropriate treatment for common diseases; and provision of essential drugs, is divided into two areas. The first is the private-for-profit sector, where there is a fee-for-service. The second area of service is the private-not-for-profit sector (Engelbrecht & Van Rensburg, 2012:508).

The *private-for-profit* sector provides primary health care services, such as medical, dental, pharmaceutical and rehabilitative services. It is operated by registered private practitioners, who provide only a small component of the comprehensive primary health care package; they focus mainly on primary medical care or primary curative care (Wolvaardt, Van Niftrik, Beira, Mapham & Stander, 2008:225).

The *private-not-for-profit* sector involves the vast number of organisations that deliver a primary health care services for a small fee or at no charge. These organisations are often referred to as non-governmental organisations and usually deliver a primary health care service to uninsured people. Structures such as these are established by volunteers, members of churches or service organisations, and private sector health providers, and are funded by donors (Wolvaardt *et al.*, 2008:225).

2.2.2.3 Primary health care in the public health sector

Public health sector service delivery in South Africa is provided via 52 health districts (Matsoso *et al.*, 2015:3). Service provision is based on primary health care principles and a philosophy that acknowledges that primary health care is not only the first point of health care contact, but is also the entry level of care, which may, if required, lead to referrals for an advanced level of care (Engelbrecht & Van Rensburg, 2012:486).

2.2.2.4 Staffing of primary health care establishments

Adequate *staffing* of primary health care service establishments is essential. Sufficient numbers of skilled health professionals and support health personnel are needed to provide a comprehensive primary health service. These staff include various professional categories, such as registered nurses, medical officers, social workers, pharmacists and dentists, as well as support health personnel, such as community health workers, health promoters, enrolled nurses and enrolled nursing assistants (Rispel, Moorman, Cherisch, Goudge, Nxumalo & Ndou, 2010:45).

The South African primary health care system is, however, mainly a public and nurse-based and nurse-driven system. Nurses represent approximately 80% of the total of all four professional categories of health workers, which include doctors, nurses, pharmacists and dentists who provide a service within the health system (DoH, 2011b:36).

According to Pick, Jacobs and Butelezi (2015:178), continuous personnel shortages and human resource inequalities, the latter not only between the public and private health sectors, but provincially within each district, makes it extremely difficult to address the community dimension of the comprehensive health care package. Service delivery often remains focused on clinical care. The desire of the DoH to address the health needs of the population necessitates addressing the need to increase numbers of mid-level health workers, such as pharmacy technicians, community health workers and clinical associates.

To address challenges such as these, health systems worldwide are constantly changing in response to both internal and external factors. In order to manage these changes meaningfully, new health policies and strategies are developed to direct health care delivery in an uniform manner (Van Rensburg, 2012:49-50).

2.2.3 Current emphasis on non-communicable diseases

In South Africa, there are a number of key financial, institutional and organisational reforms taking place, as headway is being made towards universal health coverage. The National Development Plan 2030 lists nine long-term priority health goals that address health system efficacy in the realisation of desired health outcomes. One of these goals is to reduce the prevalence of non-communicable diseases in South Africa (National Planning Commission, 2011:333-334).

Non-communicable diseases received worldwide attention in 2011, when the severity of this health crisis required universal reaction. Cardiovascular and chronic respiratory diseases, cancers and diabetes had become responsible for causing 63% of deaths in the world. Of the 36 million annual deaths from non-communicable diseases, 14 million involved people between the ages of 30 and 70 years. The majority of these premature deaths was recorded in low- and middle-income countries, of which South Africa is one. The large number of adults dying prematurely has had, and will continue to have, a devastating socio-economic impact on communities (WHO, 2013:1).

The South African Health ministry responded to the 2011 statistical information by hosting a national summit in this regard prior to attending the United Nations General Assembly meeting in September 2011 (DoH, 2011a:1-6). It was at this international meeting that nations around the world signed a commitment to actively address not only the health challenges but the accompaning development challenges posed by non-communicable diseases (DoH, 2013:7; WHO, 2013:92-103).

While tuberculosis and the human papilloma virus continue to be the major causes of morbidity and mortality in South Africa, multiple external factors, such as rapid urbanisation and lifestyles changes, contribute to rising non-communicable disease prevalence. Non-communicable diseases are now responsible for at least 33% of the disease burden in the country (DoH, 2014:13; DoH, 2013:7).

The Strategic Plan for the Prevention and Control of Non-Communicable Diseases 2013-2017 was published to address these concerns timeously. This strategic plan aims to contribute to the overall health of all citizens and requires the implementiation of the following measures:

- *Prevention* of non-communicable diseases and the promotion of health and wellness of individuals, families and communities;
- *Strengthening* of health systems and implementation of reforms to address the non-communicable disease burden meaningfully; and
- *Monitoring* the prevalence of non-communicable diseases and their key risk factors, and carrying out relevant and innovative research into all aspects of non-communicable diseases (DoH, 2013:7).

This implementation strategy dovetails with other current, major national health and health-related improvements that contribute to the National Development Plan 2030 vision, goals and priorities (National Planning Commission, 2011:333-334). Reducing the prevalence of non-communicable diseases is listed as one of the nine 2030 goals. The social determinants that so often affect health and result in disease and suffering, together with the promotion of health and the prevention and reduction of the burden of disease, are priorities listed to address this goal. Guided by and contributing to the 2030 vision, the promotion of health and prevention of disease and its burden is an approved national strategic goal of the DoH Strategic Plan 2014/15-2018/19 (DoH, 2014:14).

The domain of prevention and promotion on a primary health care level is of particular relevance in the management of non-communicable diseases. Non-communicable diseases, also referred to as diseases of lifestyle, need to be addressed at primary health care service level. Early intervention, through sustainable lifestyle modification and self-management strategies on an individual and family level, are a means to address this challenge. Although success is dependent on multiple health and other sector contributions, the use of a patient-centred approach and effective communication skills will make a meaningful contribution towards positive health outcomes (DoH, 2013:43).

Parchman, Zeber and Palmer (2010:410), claim that a patient-centred approach, where care is centred on patient needs and desires, and encouraging participatory decision-making during primary care meetings, improve clinical outcomes. Patients, especially those diagnosed with Type 2 diabetes, and who were involved in participatory decision-making, showed improvements in haemaglobin A1c levels, systolic blood pressure and cholesterol values. Parchman *et al.* (2010) also determined that active participation during visits was associated with additional positive health outcomes, such as improved medication adherence.

It could be that the complexity of managing and supporting patients with diabetes within the primary health care environment calls for the focus to be on this particular non-communicable disease. Awareness and knowledge of the disease itself, how it presents, how it impacts physiologically and psychologically on those diagnosed, together with the most appropriate, up-to-date treatment regimens, need to be addressed first. Doing so will provide insight into the patient with diabetes who presents for treatment and support at the primary health care centre.

2.3 DIABETES

Diabetes, a chronic, non-communicable metabolic disease, is affecting more and more people worldwide. This growing and largely unrestrained health challenge places pressure on economic and social environments, perhaps more than any other health challenge confronting health services today. Diabetes is a disease underpinned and driven by social, economic, political, environmental and cultural factors. These social determinants of the disease inform the unique contextual environment within which each person with diabetes needs to be treated (United Nations Development Programme, 2013:7, 17).

Diabetes is not a new disease. It has a long history, with the first documented recordings of the signs and symptoms of the disease being made on Egyptian papyrus as early as 1550 BC (Evans & Scriven, 2016:1). Over the past number of decades, however, the incidence and prevalence of the disease has shown an unrelenting and disturbing worldwide surge. This glaring reality has now emerged as a massive global public health challenge (WHO, 2016:15).

The IDF estimates that approximately 425 million people *worldwide* live with diabetes. It is projected that, by 2045, 629 million people will be living with the disease, unless this growing problem is addressed through effective prevention and management programmes (IDF, 2017:40, 42).

Type 1 diabetes, Type 2 diabetes and gestational diabetes remain the three most common forms of diabetes being diagnosed worldwide today (IDF, 2017:16). Type 2 diabetes accounts for 90% of all cases of diabetes, and Type 1 for approximately 8%. Gestational and other forms of diabetes account for the remaining 2% (IDF, 2017: 18; SEMDSA, 2017:S12). The resolute growth in numbers, especially in prevalence of Type 2 diabetes, appears to be influenced by multiple driving or risk factors, among which family history, ageing populations and the impact of increasing urbanisation on communities, which is often accompanied by rapid cultural and social change (IDF, 2017:18-19).

Diabetes in *Africa* emulates global disease patterns, with regional peculiarities. In 2017 an estimated 16 million people in Africa were living with diabetes, and this total is expected to escalate to 41 million by 2045. Although living with undiagnosed diabetes is a worldwide phenomenon, Africa has the highest number of estimated cases of undiagnosed diabetes - it is anticipated that more than two thirds of people living with diabetes in Africa are undiagnosed (IDF, 2017:9, 68). *South Africa,* with a population of approximately 57 million people in 2017, is recorded to have a national diabetes prevalence (confidence interval) of between 3.2 and 10.8. This estimated prevalence is based on national studies carried out in African countries over the past five years. The IDF, furthermore, estimates that there are 1,8 (1,0-3,6) million adults living with diabetes in South Africa (IDF, 2017:31, 112).

2.3.1 Disease classification

Disease classification is used as a diagnostic tool to assist in the determination of therapy. The American Diabetic Association, however, cautions that merely labeling a particular type of diabetes is not enough. Circumstances prevailing at the time of diagnosis may be misleading and it is often difficult to find an exact category that fits all individuals. A comprehensive understanding of the pathogenesis of hyperglycaemia is, therefore, imperative if we are to treat the underlying cause of raised glucose levels effectively (American Diabetic Association, 2014:S82).

Table 2.1 offers a classification of the different and most prevalent categories or types of diabetes, namely, Type 1, Type 2 and gestational diabetes. The pathogenesis of each of these types are included.

Table 2.1: Classification and pathogenesis of diabetes

Classification	Pathogenesis
TYPE 1 DIABETES **(Beta cell destruction and eventual absolute insulin deficiency)**	Cell-mediated autoimmune destruction of the beta cells of the pancreas occurs over a period of months or years. Chronic inflammatory cell infiltration of beta cells by macrophages, lymphocytes and other killer cells result in slow cell destruction and less and less insulin being available. This process usually results in complete insulin deficiency due to total cell destruction (Pearson & McCrimmon, 2014:803).
Immune-mediated diabetes	Immune-mediated diabetes may present with other autoimmune diseases, such as Hashimoto's thyroiditis, myasthenia gravis and pernicious anaemia (Pearson & McCrimmon, 2014:803). A genetic susceptibility is viewed as a precondition for the disease, however, environmental factors may actually precipitate the disease. The autoimmune destruction is thought to be activated by direct toxicity. Three different assaults on the pancreatic beta cells have been reported. These include viruses, specific drugs or chemicals and dietary ingredients (American Diabetes Association, 2014:S82-S83; Pearson & McCrimmon, 2014:803-804).
Idiopathic diabetes	No known cause has been identified, nor is there evidence of autoimmunity involved. A strong inheritance link is, however, acknowledged (American Diabetes Association, 2014:S83).

Classification	Pathogenesis
TYPE 2 DIABETES **(ranges from insulin resistance with relative insulin deficiency and insulin secretory defect with insulin resistance)**	Insulin resistance, the precursor to Type 2 diabetes, refers to the inability of body cells to use the available insulin effectively. Whilst the pancreatic beta cells are able to produce enough insulin to meet the increasing demand, blood glucose levels stay within a normal range. However, Type 2 diabetes will develop at a stage when the pancreas is unable to produce sufficient insulin. On diagnosis of Type 2 diabetes approximately 50% of the beta cell use has declined (Pearson & McCrimmon, 2014: 800, 805). The primary cause of insulin resistance and relative insulin deficiency is unclear, although it is thought that a malfunction in insulin signalling to the receptor cells is likely. Obesity, especially intra-abdominal obesity, is thought to be a contributory cause of insulin resistance (Pearson & McCrimmon, 2014:805). Adipose tissue secretes hormones and a range of pro-inflammatory mediators. The presence of macrophages and neutrophils and other immune cells identified within adipose tissue classifies this tissue as an active immunological organ. With tissue inflammation and a constant state of systemic low-grade inflammation, insulin signalling pathways are impaired. This contributes to the development of insulin-resistance, Type 2 diabetes and metabolic syndrome (Grant & Dixit, 2015:512; Tam & Redman, 2013:19). Metabolic syndrome is a cluster of conditions thought to be caused by a resistance to insulin. These include hypertension, abnormal levels of cholesterol in the blood, non-alcoholic fatty liver disease, polycystic ovarian disease and cardiovascular disease (Pearson & McCrimmon, 2014:805). Inactivity is also associated with insulin resistance and a decrease in insulin sensitivity. Muscles become more insulin sensitive with exercise, which aids the lowering of blood glucose levels and also reduces insulin resistance, albeit in the presence of obesity (Pearson & McCrimmon, 2014:805).

Classification	Pathogenesis
GESTATIONAL DIABETES	Gestational diabetes is associated with glucose intolerance that is usually detected around the 24th week of pregnancy. Should gestational diabetes be diagnosed in high-risk women, the diagnosis changes to diabetes and not merely gestational diabetes. There is usually a return to normal glucose tolerance after delivery. However, those affected are at risk of developing Type 2 diabetes later in life (American Diabetes Association, 2014:S84-S85; Evans & Scriven, 2016:1)

These classified types of diabetes all have the ability to disrupt the normal blood glucose metabolism of the body. To fully appreciate the impact this disruption has on the body, the mechanism of normal blood glucose metabolism needs to be explained.

2.3.2 Pathophysiology of diabetes

Ordinarily, blood glucose within the body is regulated efficiently. This vital activity, the maintenance of *glucose homeostasis*, is essential for the provision of a continuous supply of glucose and energy to body cells and organs, to enable them to function properly (Pearson & McCrimmon, 2014:800).

Glucose homeostasis is reached through the coordinated actions of many organs, however, this process largely reflects a balance between the entry of glucose into the bloodstream from the liver, glucose supplemented by absorption during the ingestion of food, and uptake of glucose by the peripheral tissues, such as skeletal muscle and the brain (Pearson & McCrimmon, 2014:800-801).

Glucose molecules from broken-down carbohydrates are absorbed into the bloodstream, thereby raising the circulating blood glucose levels. In response to this, *insulin,* an anabolic hormone, is secreted from the beta cells in the pancreas into the portal circulation. This circulating insulin has the ability to bind to cellular receptors, such as those found in muscle, fat and other tissue cells. Glucose is then able to move from the bloodstream into these body cells, where it is metabolised and used for energy (Evans & Scriven, 2016:2).

Between meals and during sleep, insulin is still released from the beta cells in the pancreas, but in much smaller amounts. During this time, the alpha cells in the pancreas secrete another hormone, known as *glucagon,* in response to the lowered blood glucose levels. This reaction stimulates the liver to release stored glucose. The liver then resumes the glucose production and glucose homeostasis is maintained. These two hormones, *insulin and glucagon*, are primarily responsible for maintaining a constant level of glucose in the blood (Pearson & McCrimmon, 2014:801-802; Smeltzer, Hinkle, Bare & Cheever, 2010:1197-1198).

Glucose homeostasis, as illustrated in Figure 2.1, is a disciplined biochemical process that is, however, at risk of being disturbed.

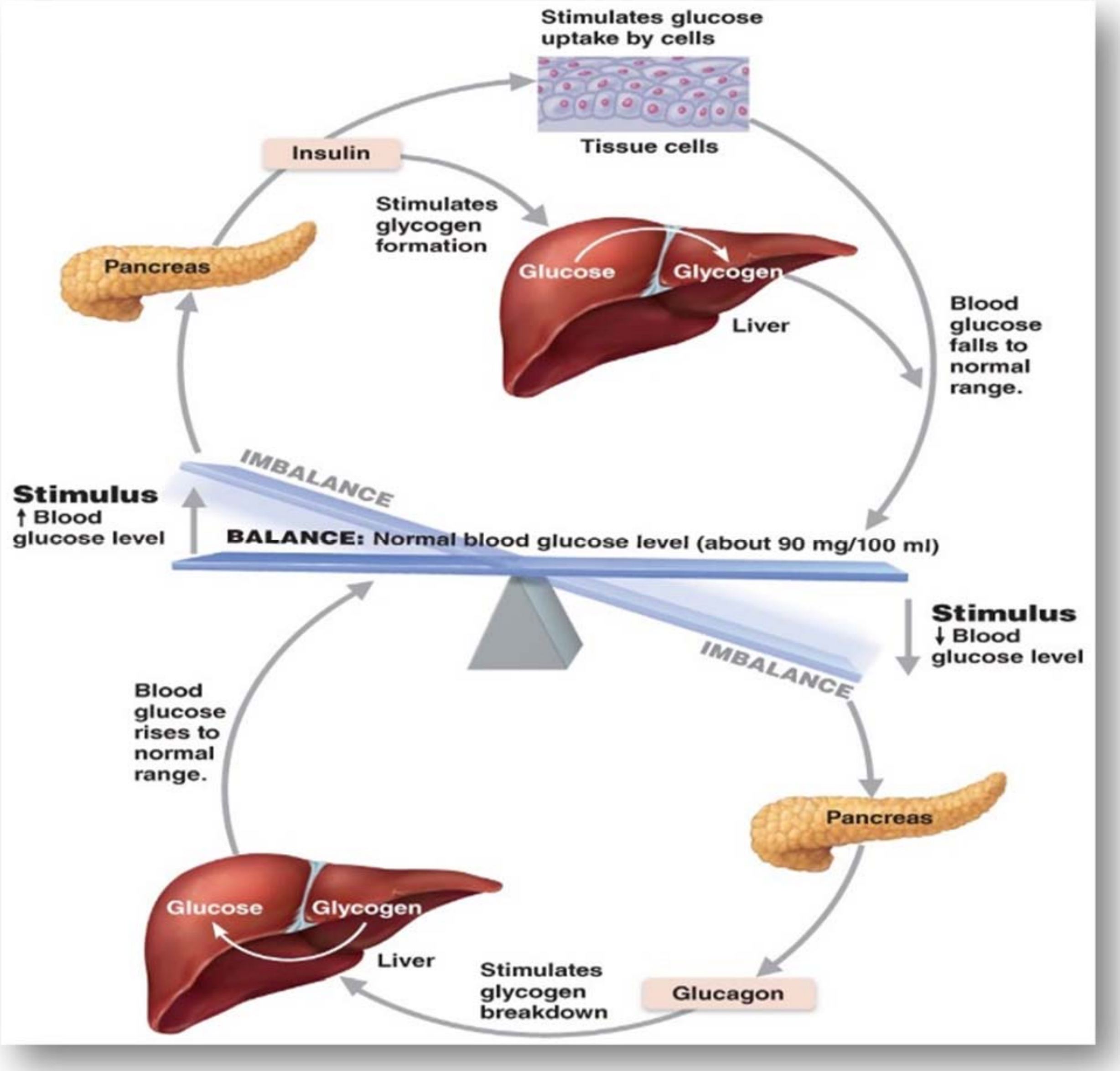

Figure 2.1: The process of glucose homeostasis (Pearson Education, 2013:online)

In *Type 1 diabetes*, the underlying pathophysiology involves an autoimmune response and the progressive destruction of the beta cells in the pancreas. This leads to a steady decrease in the production of insulin and, ultimately, total inability of the beta cells to produce insulin (Pearson & McCrimmon, 2014:804).

In *Type 2 diabetes*, the underlying pathophysiology involves normal pancreatic beta cells. In this instance, two important insulin complications, namely, insulin resistance and impaired insulin secretion, are found. Insulin resistance refers to the presence of decreased tissue sensitivity to insulin. This decreased tissue sensitivity results in insulin being unable to bind, or binding ineffectively, to the special receptors on cell surfaces. An impaired glucose metabolism follows, as insulin is no longer effective and able to encourage glucose uptake by the tissues. In response to the build-up of glucose in the blood, increased amounts of insulin are secreted by the pancreas in an attempt to lower and/or maintain normal glucose levels, namely, glucose homeostasis. Should this process be allowed to continue unattended, the beta cells in the pancreas will eventually become unable to respond to the demand for insulin and the rising glucose levels will result in Type 2 diabetes (Smeltzer *et al*., 2010:1199).

Uncontrolled blood glucose levels will impact negatively on many parts of the body and cause complications that need to be identified and reflected on.

2.3.3 Complications of diabetes

Successful control and management of diabetes is a prerequisite for the prevention of impending health complications and a compromised quality of life. The risk of premature death and disability increases exponentially with mismanagement of the pre-diagnostic phase and the acute and chronic states of hyperglycaemia. Diabetes was the cause of a total of 3.7 million deaths worldwide in 2012; at least 43% of these deaths involved individuals under the age of 70 years (WHO, 2016:21, 31).

Diabetes-related deaths worldwide in 2015 surpassed the combined total number of deaths recorded for the group of infectious diseases comprising tuberculosis, HIV/AIDS and malaria (IDF, 2015:57). The progressive and often silent nature of diabetes is responsible for acute metabolic complications and long-term microvascular and macrovascular complications (IDF, 2017:84). A brief overview of the acute complications that arise due to impaired glucose homeostasis will now be given. This will be followed by an explanation of the chronic complications which may arise should glucose homeostasis fail to be managed well in the long term.

2.3.3.1 Acute complications

Hypoglycaemia occurs when the amount of circulating glucose decreases to a level that is inadequate to sustain normal body function. This is approximately at ≤4 mmol/litre. Symptoms of hunger, sweating, dizziness, irritability, inability to concentrate, increased pulse rate, confusion, irrational behaviour and, eventually, loss of consciousness, may be experienced.

This condition more often affects people who have been diagnosed with Type 1 diabetes. An excess of administered insulin is often the cause. Hypoglycaemia has also been implicated as the cause of sudden death in people with either Type 1 or Type 2 diabetes (Evans & Scriven, 2016:21-22).

Diabetic ketoacidosis occurs when there is an absence or even total absence of insulin, leading to hyperglycaemia, acidosis and ketosis. This medical emergency is often brought on by an illness and the accompanying stress response of the body. A failure to adjust the insulin dosage in response to this event results in clinical symptoms, such as thirst, nausea, vomiting, abdominal pain, blurred vision and signs of dehydration, increased pulse rate, low blood pressure, acetone breath, confusion and eventual coma. This condition presents mainly in individuals affected by Type 1 diabetes, and is more frequently noted in the newly diagnosed and, especially, young children and adolescents (Pearson & McCrimmon, 2014:811-812).

Hyperosmolar hyperglycaemic state occurs in Type 2 diabetes, with infection and medication being among the causes. There is sufficient insulin to regulate the glucose levels, which may be as high as 40 mmol/litre. In this instance, ketoacidosis is avoided, as no breakdown of fat and muscle occurs. Symptoms of dehydration and disorientation, together with muscle cramps, weakness and diminished visual ability, may be noted (Evans & Scriven, 2016:23).

2.3.3.2 Chronic complications

Both *microvascular and macrovascular complications* are long-term tissue and organ complications as a result of chronically raised blood glucose levels and inflammatory biochemical reactions (Smeltzer *et al.*, 2010:1230).

Microvascular disease is characterised by a thickening of the capillary basement membrane. This entails membranes of small blood vessels reaching almost double their size and, in turn, affecting normal function. The retina and the kidneys are noticeably affected by this occurrence (Smeltzer *et al*., 2010:1231).

Pearson and McCrimmon (2014:826) refer to this small vessel disease as diabetic microangiopathy. In addition to contributing significantly to mortality due to kidney disease and renal failure, many sufferers will experience debilitating consequences, such as loss of sight, bowel and bladder dysfunction and peripheral nerve impairment, with increased risk of lower limb tissue ulceration, requiring eventual limb amputation.

Macrovascular disease occurs as a result of changes in the medium and large blood vessels. These blood vessels thicken and harden and gradually become obstructed by plaque that adheres to the vessel wall (Smeltzer *et al*., 2010:1230).

Three major circulatory systems are involved, namely the coronary, the cerebral and the peripheral systems. Myocardial infarction and angina are typical cardiovascular complications, and transient ischaemic attacks and stroke are listed as common cerebrovascular complications of diabetes. The peripheral vascular system is also affected, and the narrowing of the arteries results in inadequate circulation to the extremities. This complication is accompanied by peripheral claudication, ischaemia and poor wound healing (Evans & Scriven, 2016:26-28; Pearson & McCrimmon, 2014:826).

Many complications can be avoided by early diagnosis. The SEMDSA provides guidelines regarding diagnostic procedures to be used (SEMDSA, 2017:S15-S19). These guidelines will be explained in more detail.

2.3.4 Diagnosis

Diabetes is relatively easy to diagnose. There are various blood tests that can be used to measure the amount of circulating blood glucose within the human body. The 2017 SEMDSA Guideline for the Management of Type 2 Diabetes suggests using any one of four formal diagnostic blood tests available for establishing or confirming a diagnosis in the presence of disease symptoms:

- Random plasma glucose test can be performed at any time of day. A reading of ≥11.1 mmol/litre is diagnostic of diabetes;
- Fasting plasma glucose test is performed when there has been no oral intake for at least eight hours. A reading ≥7.0 mmol/litre is diagnostic of diabetes;
- Two-hour plasma glucose test involves the administration of oral glucose. A reading of ≥11.1 mmol/litre is diagnostic of diabetes; and
- Glycated haemoglobin AIc (HbA1c) test can be performed at any time. A reading ≥6.5 mmol/litre is diagnostic of diabetes (SEMDSA, 2017:S16).

Diabetes is a disease recognised by a number of classical features and signs and symptoms, which, in conjunction with the recommended blood glucose test regime, offer guidance to establish a diagnosis.Table 2.2 provides a synopsis of the classical presentation of Type 1 and Type 2 diabetes, the most commonly occurring categories of diagnosed diabetes.

Table 2.2: Classical presentation of type 1 and type 2 diabetes, according to Pearson and McCrimmon (2014:808-810)

FEATURES	TYPE 1 DIABETES	TYPE 2 DIABETES
Age onset	Usually associated with persons under the age of 40 years.	Usually associated with persons who are older than 50 years.
Disease onset	Disease presents suddenly – within a couple of weeks.	Disease has a slow and gradual onset, often remaining undisclosed for a number of years.

FEATURES	TYPE 1 DIABETES	TYPE 2 DIABETES
Body mass	Low body weight or recent weight loss is noted.	Overweight or obesity is usually present. There is a distinctive presence of abdominal or truncal obesity.
Clinical picture on presentation	Hyperglycaemia is usually present. Symptoms of hyperglycaemia include increased thirst, polyuria, nocturia, rapid weight loss, visual disturbances, body rashes, nausea, headaches, mood changes, tiredness and a preference for eating sweet foods. Ketoacidosis is usually present with ketone bodies and glucose detected in the urine. Clinical signs and symptoms of soft tissue infection, such as abscess formation, may be present.	Hyperglycaemia is usually not present as this diagnosis is more often made by chance during a routine medical examination. Non-specific complaints, such as chronic tiredness and apathy, may be voiced. Ketoacidosis and glycosuria are seldom present. Clinical signs and symptoms of soft tissue infection may be present, primarily due to the uncontrolled and undiagnosed hyperglycaemia, which alters the body's ability to fight infection.
Co-morbidities	Co-morbidities are usually absent and complications are rare.	Co-morbidities are usually multiple and include conditions such as hypertension and dyslipidaemia. Complications, such as peripheral vascular disease or cardiovascular disease, are already detected in

FEATURES	TYPE 1 DIABETES	TYPE 2 DIABETES
		at least 25% of all newly diagnosed Type 2 diabetes.

With the knowledge that Type 2 diabetes can remain undetected for many years, it is recognised that appropriate screening of an asymptomatic adult population is necessary to identify and reduce complications that may arise due to untreated hyperglycaemia. To ensure that targeted and opportunistic screening is carried out correctly, strict guidelines have been provided to enable identification of high-risk individuals; these guidelines also prescribe the frequency and preferred test method to be applied (SEMDSA, 2017:S16).

High-risk individuals are defined as all adults of any age who are overweight or obese (body mass index of ≥25 kg/m^2) and who have one or more of the following additional risk factors:

- Physical inactivity;
- Blood pressure ≥140/90;
- Family history of diabetes;
- Dyslipidaemia;
- Polycystic ovarian syndrome;
- High-risk ethnic group, such as those of South Asian descent;
- History of cardiovascular disease;
- Gestational diabetes or delivery birth weight of baby >4 kg;
- Prior impaired fasting or impaired glucose tolerance tests;
- Other conditions associated with insulin resistance; and
- If no risk factors as mentioned above, the age ≥45 years is included as a risk factor (SEMDSA, 2017:S19).

Confirmation of a diagnosis and the provision of treatment precedes an individual treatment plan. Each treatment plan should address a number of important issues, which will be discussed in more detail in the next section.

2.3.5 Treatment

The discovery and introduction of insulin in 1921 provided a much needed lifeline in the medical management of diabetes. Insulin has improved the quality and prolonged the lives of many people who live with the disease. Continued medical advancement in the field of diabetes, new, value-added oral and injectable medication, and improved technology all aid the treatment of people who live with the disease today (Evans & Scriven, 2016:3).

The treatment of diabetes has, until recently, concentrated predominantly on lowering and stabilising blood glucose levels. Today, the recommended treatment plan includes medication and blood glucose monitoring, together with a focus on lifestyle issues and dialogues. These inclusions emphasise interventions such as smoking cessation, the lowering of blood pressure to acceptable levels, and lipid reduction, in order to make an impact on the duration and quality of the lives of people living with diabetes (Erlich, Slawson & Shaughnessy, 2014:256-258).

This contemporary approach is addressed by the 2017 SEMDSA document, which provides comprehensive guidelines for the management of diabetes within the South African health care environment. As Type 2 diabetes is acknowledged to be a major health problem affecting more than 90% of the diabetic population, it is appropriate to focus on this specific treatment plan (SEMDSA, 2017:S12).

An *individual treatment plan* is developed once a diagnosis of diabetes has been confirmed by a formal laboratory test. This plan includes history taking, a physical examination and special investigations, diabetes self-management education and lifestyle modification, ongoing nutrition therapy and guidance about the importance of physical activity, glycaemic control and target determination, and pharmocotherapy (SEMDSA, 2017:S20-S21).

During *history taking,* information is gathered about current medical and psychosocial history, medication, vaccinations and lifestyle aspects, such as physical activity, eating habits, smoking and the use of alcohol. A *physical examination* is carried out to obtain weight, height and blood pressure measurements. The feet, mouth and eyes are also examined. *Special investigations,* such blood tests, are used to measure glucose, lipid, creatinine and potassium levels, and HIV status. Urine is tested for glucose, ketones and protein. The frequency of further examinations and tests carried out during the first health visit will depend on the findings. If no abnormalities are noted, the recommended schedule is to be followed (SEMDSA, 2017:S20-S21).

Diabetes self-management education forms the foundation of each individual treatment plan. The aim is to promote diabetes self management using an interactive learning process. Sharing knowledge about the disease, discovering coping skills and providing ongoing pscyhological and emotional support all contribute to successful health outcomes and *lifestyle modification*. Topics include basic knowledge of diabetes, self-monitoring of blood glucose levels, the management of hypoglycaemia and hyperglycaemia, oral and injectable medication, foot care, nutrition and weight management, smoking cessation, addressing psychosocial issues, such as stress management, involvement and educaton of family members, as well as wearing an identification disc or bracelet. Whether this evidence-based education takes place within small groups or on a one-to-one basis, the education should always be made available (SEMDSA, 2017:S22-S23).

Medical nutritional therapy and ongoing support is of utmost importance, in order to delay or prevent the onset or even to reduce the severity of diabetes-related complications. Healthy lifestyle changes, such as reduced calorie intake and following a balanced eating plan, are of special relevance to obese and overweight individuals. Using a patient-centred approach and the outcome of the nutritional examination, individualised nutritional goals are mutually determined to ensure that patient means, needs and preferences are taken into consideration (SEMDSA, 2017:S25-S26).

Physical activity, together with nutritional therapy, are influential lifestyle adjustments that can delay impaired glucose tolerance that can lead to Type 2 diabetes. Patients with Type 2 diabetes are encouraged to take part in regular physical activities, such as cycling and brisk walking for at least 150 minutes per week. This improves cardiovascular health, encourages a sense of well-being and reduces the abdominal and overall body fat percentage (SEMDSA, 2017: S30).

Glycaemic control and the determination of *individual glycaemic targets* is primarily aimed at reducing blood glucose to acceptable levels. In so doing, both micovascular and macrovascular complications can be prevented, or the onset delayed. The aim of setting individual short- and long-term glycaemic haemoglobin A1c is to avoid undertreatment. This target can then be converted to an estimated average glucose level when self monitoring blood glucose devices are used (SEMDSA, 2017:S34).

Pharmocotherapy must always be complemented by lifestyle modification. The aim of therapy is to assist with reaching and maintaining glycated haemoglobin A1c levels just below the set target. Metformin remains the drug of choice on initiation of treatment, with a progressive dose increase as needed over time. Insulin therapy is almost always required in the long term, as advised in the stepped treatment algorithm provided by the guidelines (SEMDSA, 2017:S53-S56).

These individual patient-centred treatment plans, which incorporate the aforementioned elements, should be developed, implemented and monitored regularly within a structured health care environment. The concept of patient-centred health care will now be elaborated comprehensively in order to clarify the link between patient-centred health care, health dialogue and health communication.

2.4 PATIENT-CENTRED HEALTH CARE

The South African health system, based on the principles of decentralised delivery and management of health services, makes provision, not only for the care of persons with diabetes, but for patient-centred health care for all people in South Africa, in keeping with the vision of long and healthy lives for all (DoH, 2014:3; Van Rensburg & Engelbrecht, 2012:181).

Morgan and Yoder (2012:8) view patient-centred care as a holistic approach. This approach incorporates the delivery of care that attends to the bio-psychosocial-spiritual aspects of individuals. Individualised care takes place within a therapeutic environment and is characterised by information, respect and negotiation of care. Individuals are allowed and offered choices and encouraged to make decisions on matters affecting their own health. This process, of being actively involved with the health care provider in health care, serves to empower the individual.

High-quality communication is acknowledged to be a determining influence and facilitator of patient-centred health care in support of patient health. Essentially, communication in health is the enabler that sanctions the health worker to develop into a patient-centred health provider (Mulder, Lokhorst, Rutten & van Woerkum, 2014:1; Slatore, Hansen, Ganzini, Press, Osborne, Chestnutt & Mularski, 2012:410). Street (2017:2132-2133) believes that a patient-centred approach to health care is achievable through the application of patient-centred communication. Patient-centred communication is viewed as a goal-directed process that relies on the mutual participation of the health provider and the patient in the creation of a patient-centred care environment. In addition, patient-centred communication goals provide much-needed measurement guidelines to establish the patient-centredness of interaction between the patient and the provider. These goals include:

- Revealing the patient’s perspective;
- Exploring the biopsychosocial context of the patient’s health;
- Promoting a trusting and mutually respectful relationship between the patient and the health provider;
- Providing detailed disease information and treatment options, in such a way that this information is easily grasped by the patient;
- Encouraging active patient participation during the consultation and decision-making process;
- Acknowledging that problems experienced are genuinely understood, and providing meaningful alternative management solutions; and
- Providing evidence-based support and alignment to patients’ values and beliefs in decision-making (Street, 2017:2131).

Recent studies show that, even though communication has become a core topic of discussion, patients are still experiencing a lack of involvement. Results from research highlight patient concerns that are experienced as barriers to their ability to apply self-care. Communication with the health care provider is mentioned as a key barrier, together with related issues, such as the desire for education and the provision of culturally sensitive health care (Norgaard, Kofoed, Kyvik & Ammentorp, 2012:698; Wilkinson *et al*., 2014:111).

Related research studies in South Africa report comparable findings. An absence of patient-centred health care in South Africa means there is a genuine need for health teams to implement this approach. Patients express that they feel ill-equipped to self-manage their chronic diseases, leaving many of them feeling anxious and frustrated about the quality of their health care, primarily due to a failure to address their needs (Murphy, Chuma, Matthews, Steyn & Levitt, 2015:1; Mshunqane, Stewart & Rothberg, 2012:1).

Health communication, in light of the aforementioned, appears to be a noteworthy topic for clarification. An understanding of the inherent substance of health communication will now be provided.

2.5 HEALTH COMMUNICATION

Health communication is a multifaceted and multidisciplinary field of research, theory and practice (Schiavo, 2014:5). In this context, the fields of health and communication are integrated with the intention of enhancing, influencing and supporting personal and public health outcomes through the application of an appropriate communication strategy (Rensburg & Krige, 2011:77; Schiavo, 2014:9).

In application, health communication strives to inspire, through information sharing, behaviour modification and social change, desired health outcomes. The success of each health communication interaction, based on a two-way dialogue, is reliant on the full participation and understanding of the information exchanged by the people involved. The resulting increase in health and health-related knowledge and understanding that affects all parties involved in health communication forms the basis for development and change. Sustaining this change and ensuring continued development requires ongoing behavioural, social and organisational support and interactive health communication (Schiavo, 2014:7-9).

Rensburg and Krige (2011:78) note that health communication is akin to development communication. With this in mind, health communication will, thus, be transactional in nature, which entails that the entire communication process, involving various role players, must therefore be a negotiated one. During this process the role players share information and endeavour to gain a mutual understanding through dialogue.

2.5.1 Transactional communication model

Communication theorists have, over time, used several models to explain how the communication process works. Barnlund (1970:45) captured his knowledge, understanding and experience of interpersonal communication in a diagram that depicts a complex, functional and symbolic model of transactional communication. He believes that a symbolic model could contribute meaningfully to improving human communication and allowing for the development of new hypotheses and data (Barnlund, 1970:61).

In the same way, Wood (2012:9) recognises the value of communication models that have the ability to reflect the progress made over time in the search for a deeper understanding of the communication process. A present-day transactional communication model designed by Wood features communication as a continuous and dynamic process that is constantly changing (Wood, 2012:11). Figure 2.2 depicts the very essence of the transactional communication process as represented by the model.

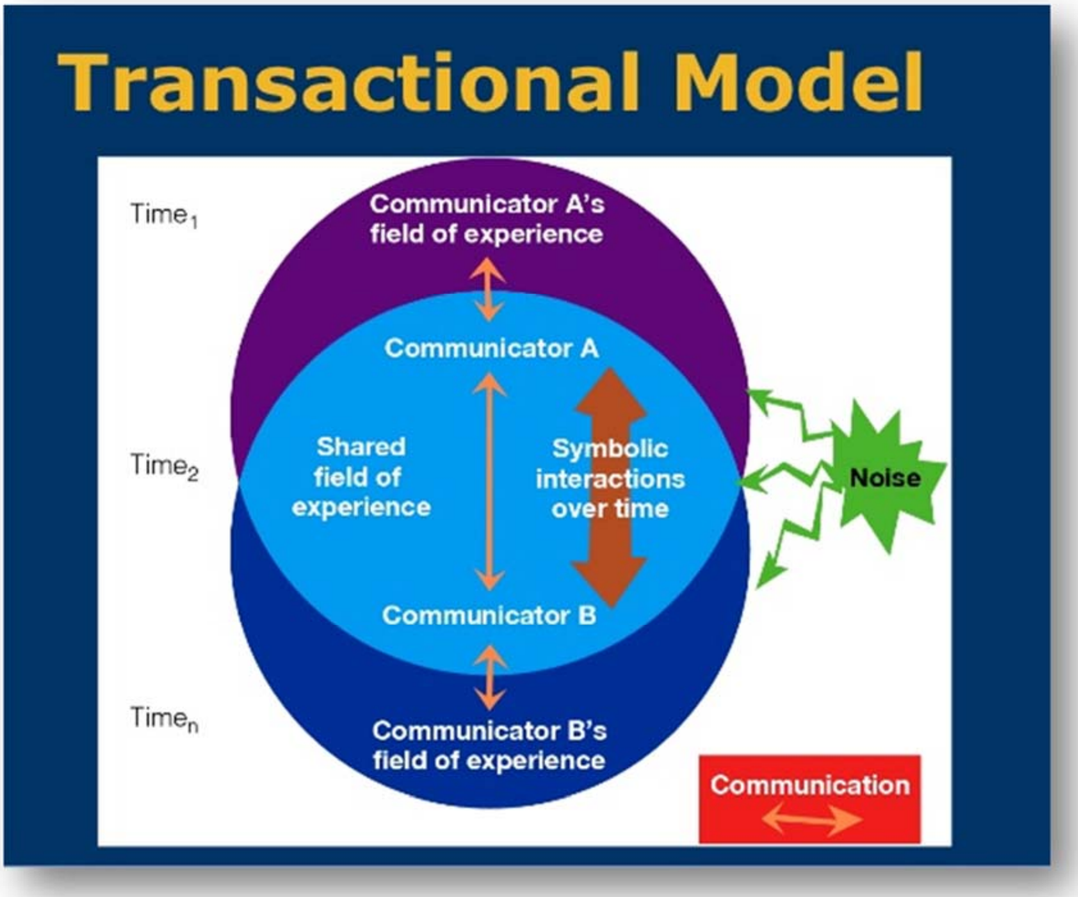

Figure 2.2: Transactional model of communication (Wood, 2012:11)

The outer frame of the model in Figure 2.2 encapsulates communication as it occurs in interconnected systems that, in themselves as individual systems, have the ability to affect communication and meaning. This interrelatedness of all the elements, in turn, impact on communication and meanings attributed during the process.

Each communicator brings *individual life experiences* into the communication process. Within that framework the communicators may have *shared life experiences,* such as culture, or even shared personal experiences, such as friends. This, together with what transpires and is gathered during each communication interaction, builds *symbolic shared experiences*. Development and change will occur within each communicator, together and apart, *over time* and within simultaneously changing environments. Development and change will also include encounters with other people, and will further expand the *fields of experience* (Wood, 2012:10-11).

The transactional model includes the aspect of *noise*. Noise is seen as anything that has the ability to affect the intended communication. Noise could be external or internal to the communicators. External noise could include people talking loudly nearby or, perhaps, repeated knocking on the door. Internal noise refers to inherent feelings or concerns held by the communicator, which may affect the way messages are received. Importantly, this model views all persons involved in the communication process as being equal in relation to their contributions. Both parties will be active senders and receivers of information. Neither one dominates the other (Wood, 2012:11).

Although other prominent and influential communication theories and models will not be discussed as part of this study, it must be acknowledged that there are a number of communication theories, models and strategies that guide health communication interventions. These interventions take place on a number of different levels, and in various contexts (Schiavo, 2014:81).

2.5.2 Health communication environment

The public health environment is aware of the critical importance of health communication as a discipline. The scope of health communication is far-reaching and includes disease prevention, health promotion, health care policy as well as improving the quality of life and health of community members (Schiavo, 2014:23; United States Department of Health and Human Services, 2010:11-3) .

The context or systems within which health communication takes place is reflected in Figure 2.3. It shows the audience, community or key groups; health and social services; the social environment; and the political environment. It is within these environments that change should occur and be continued through effective communication (Schiavo, 2014:22).

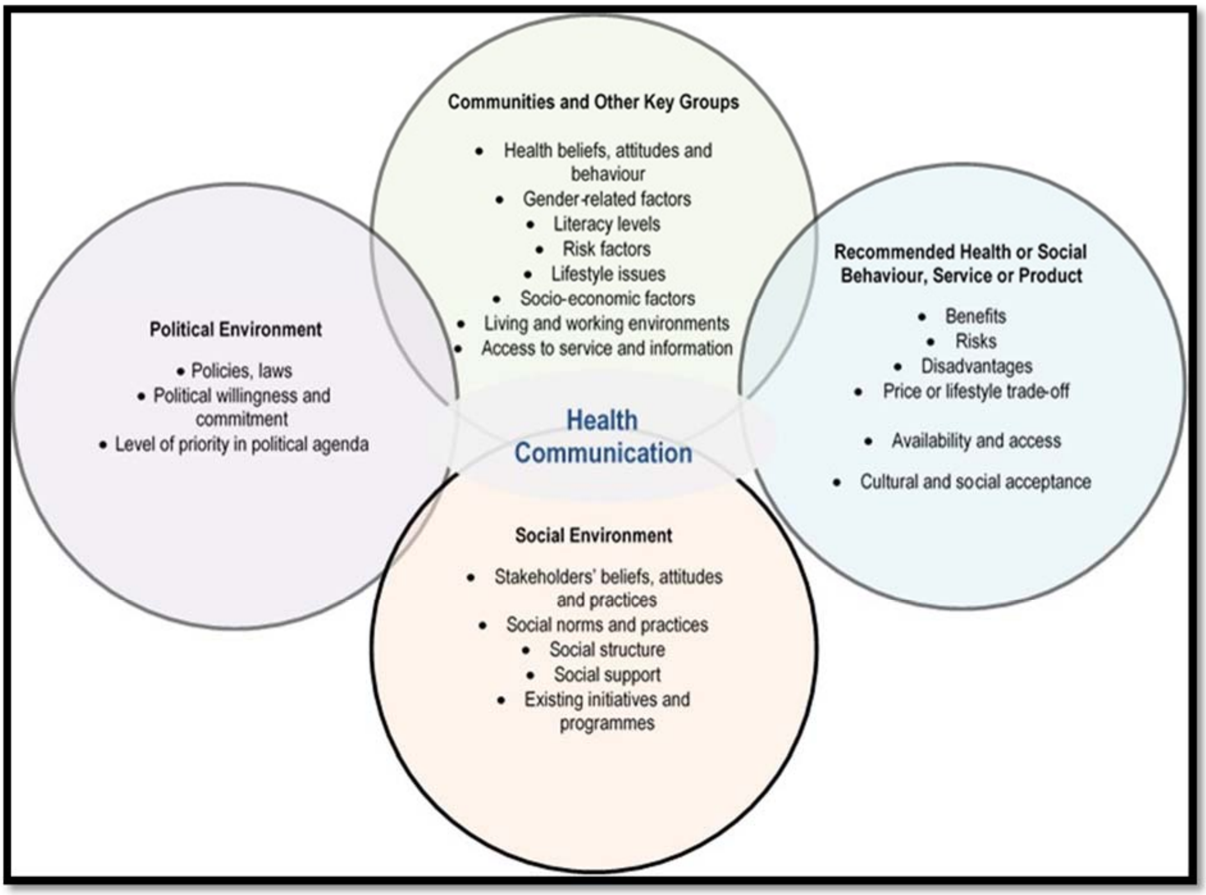

Figure 2.3: The health communication environment (Schiavo, 2014:22)

Effective and comprehensive health communication programmes alone will, however, not be able to change systemic problems related to health, such as poverty or inadequate povision of services. As documented in *Healthy People 2010,* the task is, therefore, to exploit the system within which the communication is to take place, sufficiently during the design of health communication progammes (United States Department of Health and Human Services, 2010:11-5,11-6).

2.5.3 Levels and location of health communication

Health communication messages are shared on a number of levels, in a variety of settings and through the use of an array of communication channels. Levels of communication include communication that occurs intrapersonally, interpersonally, within a group or with an organisation, as well as on a public and mass audience level. Locations of health communication are just as varied, and include schools, private homes, doctors' consulting rooms, hospitals and workplaces. Advances in communication technology offer a number of communication channels, in addition to face-to-face interaction, within which health information can be shared; these channels include social media and social networks, mass communication, mobile networks and telehealth programmes (Rensburg & Krige, 2011:80).

Interpersonal health communication, which takes place in a one-on-one or within group context, appears to be one of the most significant formats of health communication in the reach of patient-centred health care, relationship building and achieving health outcomes. The success of applying the transactional and dialogical approach to communication is nonetheless conditional to the equal participation of all who interact (Schiavo, 2014:26-27).

According to Street (2017:2133), achieving patient-centred health care through the realisation of patient-centred communication goals appears to require the presence of health communication that is *transactional, dialogical* and *participatory.* All three these requirements are located within the participatory communication paradigm, which will now receive attention.

2.5.4 Participatory communication paradigm

The participatory paradigm is a global approach to development and health communication prompted and supported by the teachings and writings of Paolo Freire, a Brazilian educator. His work on critical pedagogy and the value of dialogical interactions spanned the time from 1972 to 1990 (Tomaselli, 2011:8, 13).

White and Nair (1994:5-6), in describing participatory communication, support a move away from top-down models of communication, to communication models that are transactional. The rationale for this move is that participatory communication is inherently transactional and particularly dialogical in nature. The movement away from communication monologues, to dialogues, involves sharing knowledge and information in an environment of equality and empowerment.

Participatory communication, in principle, therefore, encourages and facilitates learning and creativity through the development of critical thinking and critical realization. Individuals are engaged in interactive dialogue in search of answers to questions and problems. Communication in this instance is characterised by discussion, feedback, negotiation and collective decision-making (Govender, 2011:60).

Dialogue, used as a means to achieve the participation of individuals, is therefore valued as an important process of the participatory developmental communication paradigm (Dyll-Myklebust, 2011:13). Dialogue as a process gives rise to the need to shed light on and offer understanding of what the term health dialogue entails.

2.6 HEALTH DIALOGUE

Within the participatory paradigm, the term health dialogue means a distinct communication technique or mechanism. This implies that health dialogue should not be considered as yet another category, type or format of health communication, which includes activities such as health promotion, health information, counselling and health education. Dialogue, when it is viewed as a specialised form of conversation where there is a merging of ideas in an atmosphere of understanding and exploration in search of common ground, is of particular value for health promotion in the field of health communication, as well as in many other diverse fields of communication that seeks collaboration (Jones & Mittelmark, 2007:33-34).

Reid (2015), in search of clarity for a working definition of the concept health dialogue and its envisaged contribution to improved health outcomes, applied the concept analysis framework provided by Walker and Avant (2011:160). The process that Reid (2015) followed, delivered three defining attributes or characteristics that are most frequently associated with health dialogue and which described the concept best at that moment in time. These characteristics are the following:

- An equal and symbiotic health relationship;
- Reciprocal health communication; and
- The health message is combined with a health goal (Reid, 2015).

The next step involved in the process Reid (2015) followed, included identifying antecedents, which are described as events or incidents that must materialise before the characteristics of health dialogue will become evident. The identification of antecedents was followed by the identification and determination of empiricial referents by Reid (2015), where reference is made to the actual events that will occur that will enable recognition or measurement of the characteristics and antecedents, and not the concept itself (Walker & Avant, 2011:167-168).

The identified elements or components of the *antecedents* and *empirical referents,* as determined during the concept analysis of health dialogue, will now be explained in more detail, as these elements hold special significance for this study.

2.6.1 Health dialogue elements

Within the health environment of the study, someone or something is the catalyst that activates the process of dialogue (Tufte & Mefalopulos, 2009:11). Reid (2015) provides specific antecedents or precursors that must be present within the social context before dialogue between the health care provider and the patient with a chronic disease, in this case diabetes, will actually occur.

2.6.1.1 Antecedents

Three elements must be present and will precede the manifestation of health dialogue during the health communication interaction between the health care provider and the patient with diabetes. These fundamental precursors, depicted in Figure 2.4, are as follows:

- *Positive attitude* towards health dialogue demonstrated by the patient and the health care provider;
- *Sensitivity and respect* demonstrated by patient and health care provider towards cultural, contextual and societal influences; and
- *Training* received by patient and health care provider on communication skills and health matters (Reid, 2015).

Antecedents

Positive attitudes on
- Collaborative interaction
- Holistic approach
- Dignity of all role players
- Shared understanding and decision making
- Characteristics of role players
  - Trust
  - Empathy
  - Confirmation
  - Emotional support

Sensitivity and respect towards
- Culture
- Belief
- Health knowledge
- Linguistic difficulties
- Language
- Health literacy knowledge
- Gender
- Technological skills/availability/ usability
- Political-legal context
- Ethical issues
- Socio-economic influences
- Various communication strategies
  - Tailored health messages
  - Evaluation of previous communication strategies used

Training on
- Health matters - diabetes
- Communication skills

Figure 2.4: Health dialogue antecedents (Reid, 2015)

Each of the three fundamental precursors that were identified require detailed explanation. This specific detail is depicted in Figure 2.4 and will now be discussed more fully to provide clarity.

A ***positive attitude*** is indicative of recognition of and a willingness by both the health care provider and the patient to incorporate the essential sub-elements of *collaborative interaction, holistic care*, *mutual dignity*, a *shared understanding and decision-making,* and that they demonstrate and believe in the essential elements of value, namely, *trust*, *empathy, validation and emotional support* (Reid, 2015).

Collaborative interaction, in this instance, refers to the joint social interactive communication process between nurse and patient, where they both work together with the primary aim of finding mutual and beneficial solutions for the shared goals, which satisfy both parties (Lai, 2011:2). In acknowledging the complexity of the nurse-patient interaction, Sumner (2012:26) states that, in that moment, both are vulnerable human beings who each bring individual and specific knowledge and skills and expectations to the interaction, which need to be recognised.

Holistic care refers to the manner in which the human interaction is approached. Health interactions that use a holistic care approach provide the nurse with an opportunity to gain insight into patient wholeness. This implies taking into consideration all the dimensions of the patient, namely, physiological, psychological, sociological and spiritual, in the provision of care. Essentially, a holistic health care approach places emphasis on the premise that the patient actively uses “inner resources” to improve the quality of life. Holistic care will therefore demand a compassionate and empathetic approach by a nurse with personal or self-awareness. This approach encourages patient involvement during the interaction, and facilitates a focus on genuine patient needs and relationship building (Byatt, 2008:169).

Dignity afforded within the health environment refers to providing care that supports, promotes and avoids demoralising a person’s self-respect, irrespective of individual differences. Dignity is maintained when there is a sense that treatment that is provided is executed respectfully and humanely (Allen & Dennis, 2009:594). Berger and Villaume (2013:31) refer to the importance of respecting the inherent beliefs, concerns and thoughts of patients through refection and exploration in search of understanding. This process allows for the recognition and validity of patients’ beliefs, even if these beliefs are not based on facts.

Shared understanding and decision-making imply that the nurse and the patient work together to make decisions. Partnership and relationship-building forms the philosophical foundation of this unity. This unity is guided by implementation tools, such as identifying problems, discussing options after receiving information, checking for understanding and deciding on the chosen treatment. Both nurse and patient are aware of their respective roles within this relationship. Patients are experts on themselves, their needs, beliefs and opinions, and know what the best treatment plan is for their means. The nurse, in turn, is seen as the enabler and supplier of a variety of treatment plans and clinical expertise (Da Silva, 2012:2).

Trust, the belief that someone is sincere and honest and will not harm you, is an essential component of building partnerships and growth, and fostering relationships that enable people to reach their goals (Hornby, 2010:1601; Moore & Tschannen-Moore, 2010:18).

Empathy is defined as the respectful understanding of another person's experience, including his or her feelings, needs and desires. Empathy seeks solely to understand and value, through respect and compassion, another person's experience. In addition, empathy is accompanied by a genuine warmth and desire to connect with another human being. Empathy does not involve judgement, instead, it is about understanding someone's origins and motivations. This empathetic connection builds trust and often encourages the further sharing of information (Moore & Tschannen-Moore, 2010:64-65, 161).

Validation or confirmation of information that is received involves reflecting words received during the interaction. Doing so not only serves the purpose of ensuring that the verbal and non-verbal information received was understood correctly, but also allows for further discussion and clarification of ideas or feelings, if needed. This format of active listening, where what is said is actually heard and genuinely acknowledged, encourages mutual acceptance and builds self-confidence and self-esteem. Self-belief is a critical requirement for the realisation of personal goals (Moore & Tschannen-Moore, 2010:68, 71).

Emotional support refers to the manner in which a person is regarded and supported. A foundation based on a collaborative partnership, acceptance of people as they are, compassion, a true commitment to serve the best interests of the patient, and an obligation to call on the patient's own wisdom and skills, will foster a sense of well-being and build self-esteem (Steinberg & Miller, 2015:11-13).

Respect and sensitivity, the second of the three fundamental precursors, has a number of sub-elements. Respect for and sensitivity towards *gender and stereotyping, language and linguistic challenges, cultural diversity, health literacy challenges, socio-economic environmental influences, the political and legal environment, ethical* *awareness, the ability to use technology and the use of communication strategies* must be present prior to health dialogue taking place (Reid, 2015).

Gender refers to the roles and responsibilities normally assumed by men and women, and which is accepted by the family and society in general to be the norm. The word gender refers, in this instance, to the cultural values associated with a given sex. During communication, gender stereotyping and labelling of persons must be avoided at all costs. Gender sterotyping should rather be acknowledged and explored to understand the impact this may have on the decision-making process during communication (Schiavo, 2014:91).

Awareness of and respect for *language and linguistic challenges* offer insight into the best way to approach interaction with someone. A person’s ability to read, write, understand and respond to promotional health messages, health care plans and medication instructions within the health environment is directly linked to quality of collaborative nurse-patient decision-making and health care provided (Australian Commission on Safety and Quality in Health Care, 2014:10-11).

Being aware of patients’ linguistic abilities leads to respectful provision of information that is not difficult to understand, or which is at such a low level that it patronises the patient. Awareness can lead to information being presented in an appropriate format and in an accessible manner, to suit the individual patient’s understanding of information about health and health care (Australian Commission on Safety and Quality in Health Care, 2014:11, 42).

Culture can be defined as acquired knowledge, beliefs, language, thoughts and customs that shape people within the group and society to which they belong. Understanding and accepting *cultural diversity* is an essential element of nurse-patient interaction. The willing incorporation of these values during decision-making and information-sharing will support and encourage the patient to contribute actively to the determination and achievement of health goals (Australian Commission on Safety and Quality in Health Care, 2014:27, 45; Smeltzer *et al*., 2010:108). Culture, according to Schiavo (2014:85), is a defining factor that, in combination with other factors, such as age, religion and geographical locality, meaningfully influence the way in which people view and respond to health and illness.

Health literacy refers to the knowledge, skills, ability and motivation of the person who obtains and receives the health information; it refers not only to comprehension of what was said, but also to the ability to use the information to make and implement informed health decisions once the message has been evaluated (Australian Commission on Safety and Quality in Health Care, 2014:10; Wheeler & Kanne, 2013:11). Health literacy is, furthermore, influenced by a variety of personal, social, environmental and cultural factors. Addressing these challenges on an individual basis is seen as a means to reduce health disparities (Australian Commission on Safety and Quality in Health Care, 2014:23).

Acknowledgement of existing health knowledge involves a non-judgemental approach to considering what is already known and understood about that which is under discussion.This approach will enable insight into the specific health needs of the person, and make it possible to provide appropriate information in order to promote understanding during decision-making (Australian Commission on Safety and Quality in Health Care, 2014:42).

Technology provides means of electronically distributing health information, in written, oral and visual presentations, through websites, email, television, radio and cellular networks. Technology is also viewed as a means to reinforce the verbal communication between the nurse and patient, as well as a channel of communication that may stimulate discussion. As important as it is to provide health information to as many people as possible, it is equally important to provide this information by means of opportunites that are accessible to and suitable for individual patients (Australian Commission on Safety and Quality in Health Care, 2014:45).

Political-legal environment refers to the requirement that the health communication process and the delivery of health services must be compliant with and principled in the application of the laws, policies and procedures that govern the practice of health care delivery in South Africa, in keeping with the Constitution and the National Health Act (61 of 2003) (Educational Support and Services Trust, 2007:1-6).

Ethical awareness or mindfulness refers to sensitivity regarding the request for and receipt of informed consent before any patient information is obtained, treatment is provided or a health plan is decided upon. Informed consent is an important part of ethical health care delivery and, regardless of the treatment plan that is to be followed, it is always required. Obtainining informed consent involves giving every well-informed individual the right to decide, without prejudice, what may or may not happen to his/her body (Australian Commission on Safety and Quality in Health Care, 2014:28).

Ethical awareness demands that every person demonstrates the ability and openess to objectively consider the other person's concerns. In that moment, equal weight is afforded to the needs of both parties present in an atmosphere of mutual respect and open-mindedness (Gunaratana, 2011:18).

S*ocio-economic influences* that affect health outcomes need to be determined, appreciated and approached with sensitivity in order to find the best possible solutions to implement individual health care plans. Among the factors that should be considered are people's living and working conditions, access to affordable and nutritious food, and the availability of health care facilities and outdoor spaces to support physical activity (Schiavo, 2014:12-13).

Communication strategies refer to the overall approach used to realise the communication objectives. The confirmed, genuine and desired needs of the target audience, as well as the communication method and content used to address these needs, should be aligned to enable the accomplishment of health communication objectives (Schiavo, 2014:16).

Health communication strategies, in principle, aim to inspire people to pay attention to a shared health message and to make use of the content of the health message. The health care provider should regularly contemplate previously used communication strategies in order to determine their efficacy and, if warranted, make required strategy adjustments (Rensburg & Krige, 2011:94-95).

Training, the third of the antecedents, refers to the extent and content of training received in the two focus areas of *diabetes* and *communication skills.* Effective health communication is reliant on the premise that both the health care provider and the patient are able to appreciate each other's viewpoints, have an understanding of the health condition under discussion, and a shared understanding of the purpose of the interaction (Epstein & Street, 2007:3).

2.6.1.2 Empirical referents

The empirical referents that were determined and that relate directly to the characteristics of health dialogue that were identified, namely, an equal and symbiotic relationship, reciprocal health communication and the health message and goal, provide the researcher with observable impact phenomena. Impact phenomena include an observed *sharing of responsibility* for *decision-making, a health plan of mutual benefit* and *the use of context-sensitive communication strategies* during nurse-patient interaction. The presence of these phenomena will imply that the health dialogue has occurred (Reid, 2015; Walker & Avant, 2011:168-169). These empirical referents or impact phenomena, as depicted in Figure 2.5, will now be defined and explained more fully.

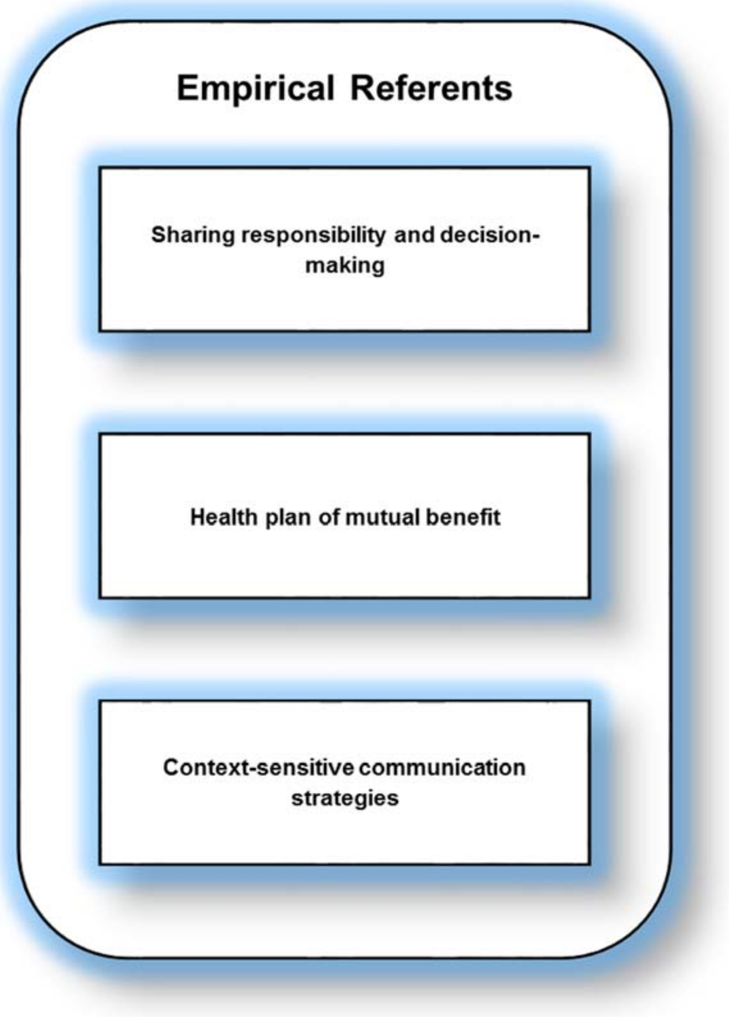

Figure 2.5: Health dialogue empirical referents (Reid, 2015)

Sharing responsibility for decision-making is dependent on a collaborative relationship between the nurse and patient. This type of relationship represents a role shift, from the traditional, paternalistic nurse approach, to one that expects the nurse to act as a coach and enabler. The patient is recognised as being the person responsible for determining the extent to which the needed lifestyle changes could be realistically incorporated into his/her daily lifestyle. The nurse provides evidence-based information, support and encouragement during this process (Madsen & Fraser, 2015:51).

Coulter and Collins (2011:11) consider the practice of shared decision-making during patient-health care provider interaction as an ethical imperative. Each interaction is founded on the spirit and belief that both the patient and the health care provider bring diverse but equally important forms of expertise to the decision-making process (Coulter & Collins, 2011:2).

Figure 2.6 lists the expertise that the health care provider and patient respectively bring to each encounter; thereby highlighting individual differences, which should, ideally, be shared between the parties, to ensure joint responsibility during the decision-making process.

Figure 2.6: Health provider and patient expertise (Coulter & Collins, 2011:3)

A health plan of mutual benefit is derived from the ability to follow the systematic consultative process depicted in Figure 2.7. During this process, the health care provider and the patient involve themselves with equal intensity and responsibility in a search for the best, personalised care plan. The process is also one of continuity, and not a once-off incident (Coulter, Roberts & Dixon, 2013:7).

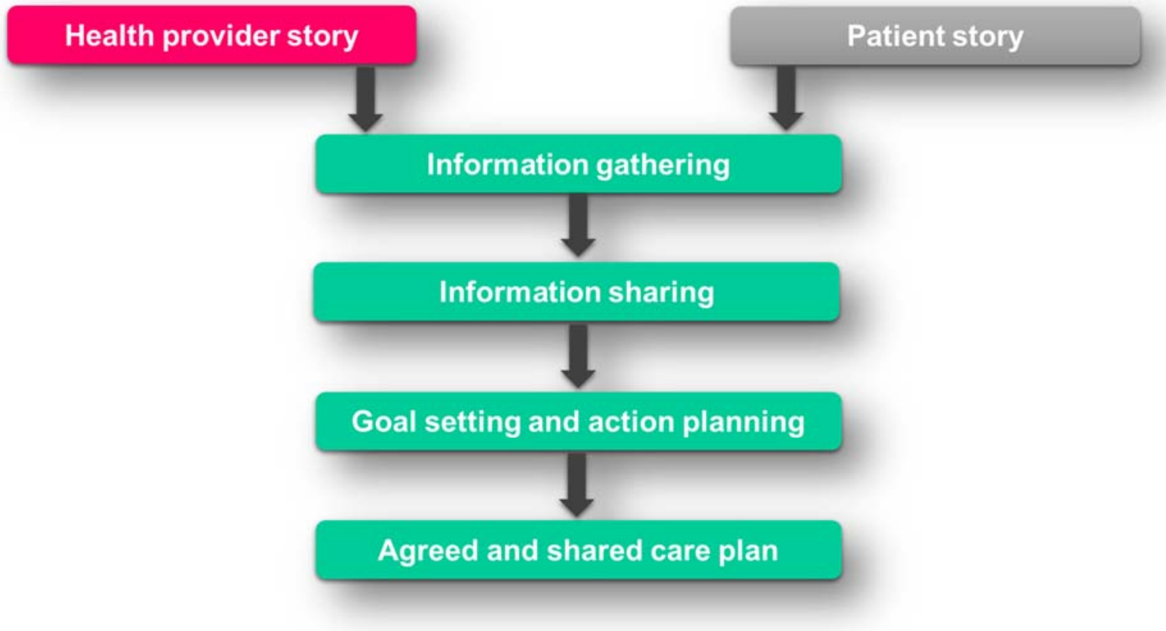

Figure 2.7: Systematic consultative approach (Coulter *et al*., 2013:8).

To enable the realisation of the health goal, **context-sensitive communication strategies** must be used during health communication and delivery of the health message. A communication strategy is the approach that is to be followed to meet the specific and jointly determined health goals that are usually aimed at meeting behavioural outcomes (Schiavo, 2014:357). The strategy and techniques of choice for delivery of the health message are directly influenced by the context, which includes cultural and social factors, age and gender traits, literacy and health literacy levels, as well as personal preferences and attitudes of the health provider and patient (Schiavo, 2014:118).

Briscoe and Aboud (2012:620) recommend using multiple techniques efficiently as a way to engage meaningfully with participants. Successful programmes seeking behaviour change use techniques targeting the behavioural, social, sensory and cognitive levels. These techniques include demonstrations, social involvement and support, use of media, such as pictures or songs, problem-solving to overcome barriers, and giving information. Furthermore, the continuous use of these techniques appear to consolidate learning and facilitate recall, especially when behavioural change is needed.

2.7 CONCLUSION

This chapter provided a review of the *South African health system,* as well as the primary health care services offered by public and private health sectors. The current DoH service delivery focus on non-communicable diseases and, in particular, *diabetes*, a chronic lifestyle disease, was elaborated on. *Health communication* and health dialogue within the participatory paradigm was addressed. In addition, the identified *health dialogue elements,* namely, antecedent and empirical referents, were described. The next chapter will provide information on the research methodology used in the study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology guides research undertaken to answer a research question (Sutherland, 2017:38). In this chapter, the research methodology selected for this study will be explained. An explanation of the research paradigm or philosphical framework within which the study took place, the research design, as well as the research technique that was appropriate for gathering data, will be provided. This will be followed by an account of the research population, sampling and the pilot study carried out prior to data collection. The essential concepts of validity and reliability, together with important ethical issues that were integrated into the entire research design, will also be explained. Lastly, an overview of the data analysis process will be provided.

3.2 RESEARCH PARADIGM

Research is a scientific, systematic and diligent process of inquiry in search of knowledge (Botma *et al*., 2010:34). Scientifically obtained knowledge provides a well-founded and comprehensive foundation on which professional practice is based and built. Research is, therefore, a necessary component of any profession, and is often referred to as the cornerstone, hallmark and lifeblood of the development and growth of a profession (Brink, Van der Walt & Van Rensburg, 2012:1).

The *research paradigm* is the all-encompassing philosophical framework within which scientific knowledge is produced. Based on the philosophical assumptions of ontology, epistemology and methodology, a research paradigm is, in essence, an accepted set of beliefs or values that guide and direct the entire research process in response to the research problem. The dominant research paradigms of inquiry, namely, positivism, critical theory and interpretivism, are categorised in terms of the manner in which responses are received in answer to specific philosophical questions (Brink *et al*., 2012: 24-25; Botma *et al*., 2010: 39-40).

After examining each of the philosophical assumptions in relation to the research question, the researcher determined that a positivist approach, due to its quantitative nature, would be applied in this study (Killam, 2013:10; Polit & Beck, 2012:22). A discussion of the application of the research question to each of the three philosophical assumptions, namely, ontology, epistemology and methodology within a positivist approach, follows.

3.2.1 Ontology

Ontology is a branch of philosophy dealing with the nature of existence (Hornby, 2010:1027). In research, ontology refers to the study of our lives and the fundamental nature of reality or being. Beliefs about what is real or true determine what can be known about reality (Killam, 2013:7). In other words, the researcher's ontological perspective, which integrates what is true, what exists and how existing reality can be sorted, will determine the manner in which the research problem is addressed (Botma *et al*., 2010:40).

In this study, the researcher identified that the research question, which is in search of observable facts, can be answered using a positivist paradigm. Reality can be measured objectively and that implies that the researcher would be able to observe patients and nurses interacting, in a neutral and detached manner (Botma *et al*., 2010:42; Polit & Beck 2012:22). Empirical evidence collected on health dialogue antecedents and empirical referents during each interaction as it occurred in health facilities, could then be generalised to inform and provide meaning to other health services involving patients with diabetes and nurses communicating with one another.

The second philosophical assumption, epistemology, is strongly influenced by ontological beliefs (Killam, 2013:8).

3.2.2 Epistemology

Epistemology is the branch of philosophy that deals with the way knowledge is acquired and how we come to know what we know and clarify matters, instead of concentrating on the content of that knowledge. It concerns the relationship between knowledge and the researcher during discovery of that knowledge. The researcher's ontological beliefs regarding the way to address the research problem will dictate how objective the relationship is between the researcher and what can be known. Epistemology also defines the methods, theories, concepts, rules and the procedures that must be applied during research (Botma *et al.*, 2010:40; Killam, 2013:8).

In this study and in alignment with the ontological positivist approach, knowledge was obtained using a structured observational checklist with standardised guidelines, thereby ensuring that the facts are established empirically. The use of standardised procedures for each patient-nurse interaction enabled the researcher to describe the presence of health dialogue antecedents and empirical referents as they were observed. According to Botma *et al*. (2010:42), in this instance, the researcher is impartial and removed from that reality and is present purely to observe and record that which occurs.

Methodology, the third philosophical assumption, is closely related to epistemology (Killam, 2013:8).

3.2.3 Methodology

Methodologies are purely the philosophical approaches to the discovering of knowledge. The term methodology is distinct from the term methods, which is applied during the data collection phase of research. Methodology, grounded in theory, refers to the discovery of knowledge in a systematic way; it pertains to the rules and procedures that specify how the researcher is to study or investigate what is to be known, and it is specific and practice-based. Importantly, methodology is driven by the researcher's ontological and epistemological beliefs (Botma *et al*., 2010:41; Killam, 2013:9).

In this study, the positivist approach was applied, and methodological assumptions correspond with ontological and epistemological assumptions. Reality, according to positivism, is measurable; thus, permitting research methods that focus on quantitative data. This important fact enables the researcher to collect data in an objective manner by applying a quantitative, non-experimental research design. The researcher's personal values are suspended and do not influence the collection of data (Botma *et al*., 2010:41-42). Information was gathered using a structured observational checklist, which was used to mark and, ultimately, quantifiably measure the presence of already determined health dialogue antecedents and empirical referents as they occur.

3.3 RESEARCH DESIGN

A research design "sets the stage" for the researcher to search for the truth and provide valid answers to the research questions within an organised environment (Grove *et al*., 2013:212). A research design is, moreover, a detailed and structured plan that provides a set of logical steps that the researcher needs to take to answer the research question. The research design process depicted in Figure 3.1 can be referred to as the backbone of a study, and it directs the selection of a population, research environment, sampling process, methods of measurement and a plan for data collection and analysis, in order to obtain results. In providing the blueprint, a solid research design expedites meaningful control over factors that may interfere with the desired outcome of the study. In theory, for every research question there is one design that would be considered the most appropriate for maximising the validity of the research study and providing the strongest possible evidence in answer to the question (Botma *et al*., 2010:108, 175; Brink *et al*., 2012:96; Grove *et al*., 2013: 36, 43).

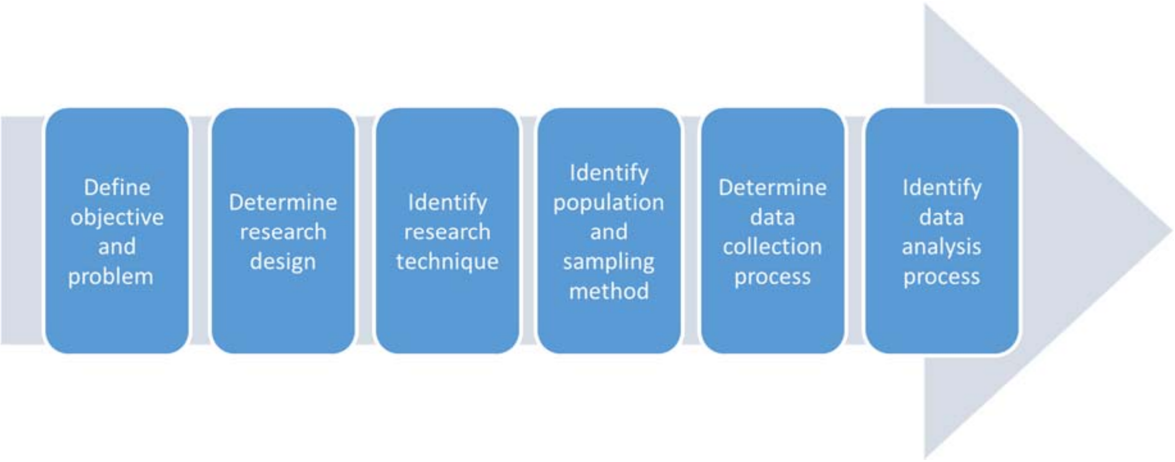

Figure 3.1: The research design process of this study

The research problem and research question that had been determined during the conceptual phase of the study, poses the question, ***Are health dialogue elements***

present during health communication between patients with diabetes and nurses? The researcher chose to follow a *quantitative, non-experimental, descriptive, cross-sectional research design* to answer the question.

3.3.1 Quantitative research

Quantitative research is cradled within the philosophical underpinning of positivism and is defined as an objective, organised and logical way of doing research that accentuates the importance of observable facts (Botma *et al*., 2010:42). The rationale for this study, which used a quantitative paradigm approach, is the need to answer a specific question and to collect observable data to quantify the findings in an attempt to answer the research question.

Fouché and Delport (2011:66) explain quantitative research, which has its epistemological roots in positivism, as involving a research design that is standardised according to a fixed procedure that can be replicated. Data are obtained systematically and objectively. In this study the application of a standardised, structured observational checklist and guidelines for the completion of the observational checklist enabled the collection of data in a systematic and objective manner. The observational checklist was completed by means of the same organised procedure for each nurse-patient interaction observed.

Sutherland (2017:37) highlights an important aspect of quantitative research that has relevance for this study. The empirical nature of quantitative research implies that reality can be observed and reported on numerically in order to obtain a clearer picture of the incidence of the variable. In this study, which used a quantitative research methodology, the researcher was able to identify the presence of health dialogue elements as they occurred during patient-nurse interaction; the elements were noted an observational checklist and each element was analysed numerically.

3.3.2 Non-experimental research

Brink *et al*., (2012:112) describe non-experimental research as studies carried out in natural settings; data is collected through observation of phenomena as they occur.

Non-experimental research includes studies where the units of analysis selected to form part of the research are measured on all the applicable variables at a specific time. In non-experimental research the researcher is not regarded as a participant. No manipulation of the independent variable takes place and no control or experimental group is involved. However, to ensure valid study results, the researcher must consider all peripheral and unnecessary variables that may threaten the validity of the study. Sutherland (2017:39) refers to non-experimental research as non-intentional research, and explains that, during data collection, the researcher is not involved with the study participants other than, for example, to explain how and for what purpose the data is to be collected.

This study implemented a non-experimental descriptive design, which permitted the collection of data whilst the researcher and fieldworkers observed the patient and the nurse interacting in the health facility where the health service was being provided. The researcher and fieldworkers did not intervene and had no intention of interacting with the research participants during data collection.

Non-experimental research designs include descriptive research, which reports on an accurate description of phenomena (Polit & Beck, 2012:725). These research designs are extremely useful for generating knowledge in a variety of settings (Brink *et al*., 2012:112). The purpose of this study was to identify the presence of antecedent and empirical referent health dialogue elements during nurse-patient interaction in the health facility. The specific data collected as listed on the structured observational checklist enabled the researcher to describe the presence of each health dialogue element.

3.3.3 Descriptive research

A descriptive research design is classified as a non-experimental design and is used to describe a variable of interest as it occurs naturally and in situations where little or no information is available on the topic (Fouché, Delport & De Vos, 2011:142–158). The need to assess the currently unknown presence of health dialogue elements during nurse-patient communication, through the acquisition of knowledge during direct observation, appears to make a descriptive research design the most appropriate design.

The overall purpose of descriptive research is to observe, describe and document phenomena or events as they occur in real-life situations (Grove, *et al*., 2013:49; Polit & Beck, 2010:236; Sutherland, 2017:39).

A descriptive research design is utilised in situations where insufficient and incomplete research knowledge exists on a particular phenomenon, and the variable is open to description. Descriptive research can also be performed after an extensive literature review, or for cases where a known concept requires investigation. The literature review and the investigation will then provide the theoretical framework for the study (Brink *et al*., 2012:113). In this study, a concept analysis of health dialogue created the theoretical foundation according to which information was gathered to answer the research question. Before data collection, no information about the presence of health dialogue was available for the study population, namely, patients with diabetes and nurses in a Northern Cape local municipality.

According to Botma *et al.* (2010:110) nonexperimental descriptive studies are also able to provide information on the frequency of the occurrence of the phenomena it seeks to describe. Without manipulating the variables, the researcher searches for accurate information from a representative sample of the population. In this study, a cross-sectional research design was used to obtain data.

3.3.4 Cross-sectional research

Cross-sectional research designs gather data from a cross-section of the population of the study at one point in time. This implies that data are collected only once from a specific population sample (Botma *et al.,* 2010:113; Brink, 2012:115; Wood & Ross-Kerr, 2011:118). According to Polit and Beck (2010:239) a cross-sectional design has a time dimension within the research design, which indicates how often and when data collection is to occur, which may be at a single point in time, or at multiple times during a relatively short period of time, and enables the researcher to provide a description of the phenomenon as it occurred at a specified point in time. In this study, data were collected from a representative sample population, namely registered and enrolled nurses employed by public and private health facilities, while they interacted with patients with diabetes. These patients attended the facilities for follow-up visits during an eight-week period early in 2017.

3.3.5 Strengths of quantitative research

Quantitative research holds advantages for,

- Generating and *accumulating scientific nursing knowledge*, which permits and motivates the continuous development and improvement of nursing practice, nursing education and the nursing management (Botma *et al*., 2010:82). According to Polit and Beck (2010:238) nursing knowledge and practice is enriched by descriptive quantitative research. Knowledge obtained through this study provided deductive evidence of the presence of the conceptualised health dialogue elements, as supplied by both the patient with diabetes and the nurse during the health communication process.
- *Generalising the research results*. The very essence of quantitative research is ensuring valid and reliable results through its structured and predetermined research design and methodology, with the aim of generalising the results to a larger population. Because data is collected systematically and objectively from a random, representative population sample, and using numbers as the element of analysis to achieve results based on statistical analysis, findings can be generalised and applied to a larger population (Botma *et al*., 2010:82-83; Fouché & Delport, 2011:63-64). In this study data were collected using a quantitative methodology, and this means the study findings can be generalised to the broader community of patients with diabetes, and nurses in public and private health facilities, in a Northern Cape municipality.
- *Quantifying research* results to answer research questions relating to what, who and when. Quantitative research lends itself to collecting data to investigate phenomena that permit precise measurement and quantification, and answering research questions that are specific and concise (Fouché & Delport, 2011: 64; Polit & Beck, 2010:565). In this study, the research question posed asks whether and what health dialogue elements are present during patient-

nurse interactions. In order to provide a meaningful research outcome, the most suitable answer to the research question would be a numerical one.

- Using numbers to *improve understanding of reality* (Sutherland, 2017:58). This study investigated the presence of health dialogue elements during health communication between patients with diabetes and nurses. The numerical result obtained provided a picture and enabled the description of the incidence of health dialogue as it was observed during nurse-patient interactions.

3.3.6 Limitations of quantitative research

Limitations of quantitative research are restrictions that may arise at any time during the study. These limitations have the ability to impact negatively on the generalisability of the findings and diminish the quality and credibility of the study (Grove *et al*., 2013:48, 598; Sutherland, 2017:57). Prominent areas of concern that should receive meticulous attention to detail prior to and during the study, are,

- *Theoretical limitations* of the study, which include flaws in the conceptual map and the conceptual and operational definitions of the variable under investigation (Grove *et al*., 2013:598). The theoretical framework or foundation of this study is based on the findings of the concept analysis of the term health dialogue (Reid, 2015). Answering the research question required an investigation into two critical elements, namely, the antecedents and empirical referents of health dialogue – this requirement had been determined during the concept analysis phase. The research question incorporated additional concepts, that of health communication, nurses and patients with diabetes. Each of these concepts was defined and operationalised to create a clear link or path between the theory and the research design, which included the manner of data collection and the research outcome, thereby providing an answer to the research question.
- *Methodological limitations* of the study, which refer to flaws in the actual study design that may limit the study's credibility and generalisability. Grove *et al*., (2013:598) explain these weaknesses as problems with nonrepresentational population samples, weak designs, and limited control during implementation and data collection, as well as data collection instruments with restricted

reliability and validity. Grove (2017:27) elaborates further, stating that control is a unique aspect of quantitative research that is in search of an accurate portrayal of reality, and demands careful management of control during the entire study. In this study, the researcher was able to limit and conceptually define the concepts listed by the research to reduce the amount and effects of superfluous variables, and to keep the focus on the dominant areas of concern, namely, patients with diabetes, nurses, health dialogue and its elements during health communication. Each of the health dialogue elements defined and explained during the literature study were listed on the observational checklist and provided with guidelines for completing the observational checklist. Data were collected after fieldworkers had been trained, to ensure that research findings represent reality as precisely as possible, in keeping with quantitative research philosophy.

Now that the choice of research design to answer the research question, namely, a quantitative, non-experimental, descriptive cross-sectional study, has been justified, an explanation of the method or technique the researcher used to obtain the required data will be provided.

3.4 RESEARCH TECHNIQUE

The research technique refers to the specific method or instrument of measurement selected by the researcher to gather and organise data in response to the research question (Polit & Beck, 2012:741). In essence, measurement refers to the allocation of numbers to elements or events, which are presented on instruments that have been developed within specific guidelines in order to measure a study variable (Grove *et al*., 2013:44-45; Sutherland, 2017:53).

Delport and Roestenburg (2011:171) mention that quantitative data collection methods consider structured measuring instruments to be the most appropriate means by which to gather information in compliance with the research question and design. A researcher, however, needs to consider the appropriateness and efficacy of the instrument, together with its validity and reliability in relation to the specific study of choice. If these factors are not considered carefully, they may affect the generalisability of the study findings negatively (Brink, 2012:171, 174; Delport & Roestenburg, 2011:172, 177).

3.4.1 Observational checklists

Observational checklists are structured and recognised instruments of measurement that are used to indicate the occurrence of selected behaviours, events or characteristics, and that involve the technique of observation in order to record the data that is collected (Botma, *et al*., 2010:143; Brink *et al*., 2012:150; Polit & Beck, 2012:313,326; Polit & Beck, 2014:214). A checklist is also described as a type of a structured questionnaire compiled in accordance with the reseach concepts listed as a series of items or questions. These checklists can be ticked off by the respondent or filled in by the researcher during observation of the phenomena being investigated (Delport & Roestenburg, 2011:202). In essence, this process links the perceived reality to a number, which offers a quantification of findings and results (Polit & Beck, 2012:329).

The researcher made use of an existing, validated observational checklist instrument (Reid & Joubert, 2015) (Annexure A). Open and closed-ended questions on the checklist focussed on addressing the health dialogue elements that had been identified conceptually, and which could be observed during data collection. The checklist was formatted to depict three specific components, namely, *nurse profile and patient profile, antecedents* and *empirical referents,* which were investgated in an attempt to answer the research objectives.

3.4.1.1 Strengths of observational checklists

Observational checklists have a number of advantages, including the following:

- *Accuracy and objectivity* of the data gathered are *enhanced*. The structured nature of observational checklists has the tendency to limit deviation from the desired outcome by compelling the observers to observe only that behaviour which has been listed or asked for (Grove *et al*., 2013:422; Polit & Beck, 2012:326). The observational checklist was designed for a specific reason, namely, to assess the presence of observed antecdent and empirical referents during health dialogue. The observational checklist enabled the observers to focus exclusively on those specific elements.

- Observational methods are an excellent way to *operationalise concepts*. Listing a number of closed-ended questions for each concept category on a checklist permits the marking of one of the formatted responses to indicate the occurrence or frequency of behaviours observed (Polit & Beck, 2012:325-326). The observational checklist questions mirror the content of the conceptual map of health dialogue. Each question was clarified and documented in the guidelines for the completion of the observational checklist (Reid & Joubert, 2015) (Annexure B).
- Using a structured observational approach, instead of questionnaires or interviews, is more suitable *for addressing some health care problems or areas of concern* scientifically. Respondents may be unable to answer questions, or may offer answers that do not reflect reality (Botma *et al*., 2010:142; Brink *et al*., 2012:152; Polit & Beck, 2012:318). The study participants were nurses and patients from diverse population groups. The researcher decided that, in this situation, direct observation by the researcher and trained fieldworkers would offer a more precise and objective result in relation to the presence of health dialogue elements than a questionnaire completed by the participants.
- Brink *et al.* (2012:152) add that using observational techniques *offers a more comprehensive source of information* than alternative methods of data collection. Grove *et al*. (2013:421) agree that using the technique of observation is *often the only way to obtain data* in relation to a practice. In this study, the researcher and trained fieldworkers were able to collect data on the presence of all the antecedent and empirical referent health dialogue elements using an observational checklist. The direct observation of health dialogue elements in the health facility by the researcher and trained fieldworkers was considered by the researcher to be the most appropriate and time-efficient method for collecting data on each health dialogue element and to answer the research question.

3.4.1.2 Limitations of observational checklists

Researchers should be aware of the potential weaknesses of observational checklists and how this could affect the quality of the data collected. These weaknesses include the following.

- Using an observational checklist to gather data demands *skilled researchers* and data gatherers (Botma *et al*., 2010:143; Grove, 2017:402; Polit & Beck, 2012:326). Data gatherers who are appointed should be good-natured, have good interpersonal skills and share similarities, such as language and culture, with the study population. Data gatherers who fail to display these characteristics are at risk of jeopardising achieving the aim of collecting data in an impartial and non-threatening manner (Polit & Beck, 2012:321-322). Fieldworkers who met these criteria and who presented as the most appropriate people to collect data at the respective facilities were selected. Training was provided before, during and after the pilot study, to ensure that each fieldworker possessed the necessary skills and confidence.
- Observational measurement is often viewed as the most *subjective method* of measurement and, therefore, according to Grove (2017:402), may lack credibility. This view is primarily due to the risk of observation bias in the observers. Observers may unknowingly collect data that has the potential to misrepresent the true state of affairs, because they are influenced by their own value systems, attitudes and preconceived expectations. Steps can be taken to diminish this disadvantage; however, subjectivity can never be eliminated completely (Botma *et al*., 2010:142; Polit & Beck, 2012:326). Using a structured observational checklist, together with observational guidelines, assisted in fieldworkers to remain focussed on the task at hand. Furthermore, audio-recorded information enabled verification of data.
- Observation is time-consuming and can be *costly,* especially when it involves training observers (Brink *et al*., 2012:152). This reality deserves consideration. In this study, the researcher’s effort and time spent on training and support of each fieldworker enabled her to remain connected to the study during the data collection phase. Costs incurred were budgeted for in the study budget.

- The visible presence of observers and awareness by participants that they are being observed, may *impair the natural behaviour* of participants (Brink *et al.*, 2012:152; Polit & Beck, 2014:215; Polit & Beck, 2012:318). Study participants were prepared and a non-judgemental environment was created prior to each observation. Participants were fully informed and gave signed consent. In most observational situations, the fieldworker was positioned outside the direct view of the participants.

3.4.1.3 Structure of the observational checklist

The researcher was able to locate and make use of an existing and appropriate observational checklist to collect data (see Annexure A). Permission to use the observational checklist was requested and received from the authors, Reid and Joubert, (2015).The observational checklist was used in the format provided, with only reference to chronic condition being replaced with diabetes.

Critical to the success of collecting high-quality data using an observational checklist, is a well-defined, written explanation of each of the elements or events that needed to be observed. This important obligation determined the criteria would apply to each of the items or events that were to be observed and, consequently, attempts to reduce the risk of observer inferences (Polit & Beck, 2012:314). In this study, the guidelines developed for completion of the chosen observational checklist were available as depicted in Annexure B (Reid & Joubert, 2015). These guidelines were used in this study once authorisation had been received from the authors.

The printed observational checklist consisted of a total of 43 questions, which were completed by the researcher and the fieldworkers (Annexure A). These questions were divided into an introductory set of questions and a total of four main sections. The specific sections consisted of *Part 1: Nurse and patient profile, Part 2: Antecedents, Part 3: Empirical referents* and *Part 4*: *Interviewer question*. Each of the 43 questions will now be elaborated on to provide a more in-depth understanding of the purpose of each.

Questions 2, 5 to 8 and 11 gathered demographic data from study participants. Questions 1 and 4 related to date and place of the interview. Questions 12 and 39 referenced the interview length and Question 3, the language used during the interview. Question 43 required the fieldworkers and the reseacher who had observed the interview to rate the health message provided to the patient using the scale provided.

The remainder of the questions on the observational checklist were designed specifically to meet the objectives of this study, namely, to determine the presence of antecedent and empirical referents during nurse-patient interaction. The questions that provide data on both these health dialogue elements are presented in Table 3.1.

Table 3.1: Observational checklist depicting antecedents and empirical referents

Health dialogue elements		Observation number on checklist
Antecedents	Positive attitude	13-26
	Sensitivity and respect	27-38
	Training received	9-10
Empirical referents	Shared responsibility	40
	Health plan of mutual benefit	41
	Context-sensitive communication strategies	42

The study population will be discussed under two headings, namely, the population and the population sample.

3.4.2 Population

The population of a study, referred to as the target population, consists of the entire cluster of people or objects of focal interest to the researcher. However, researchers seldom have access to the entire cluster and will therefore need to determine the accessible or study population by means of assigning study criteria to select participants from the cluster. The accessible population is a selection of the population and consists of prospective participants who meet the criteria and will be accessible to the researcher for data collection during the study. The intention is to generalise the findings to a broader target population (Brink *et al.*, 2012:131; Polit & Beck, 2012:273-274).

In this study the accessible population included nurses who met the inclusion criteria for selection within the public (n=15) and private (n=3) health facilities. All the health facilities were located in the Sol Plaatje Municipality within the Frances Baard district, the most densely populated of the five main service districts of the Northern Cape. Each facility is staffed by various categories of staff; however, of interest to this study were registered and enrolled nurses (N=86) employed by these public health facilities and registered and enrolled nurses (N=3) employed by private health facilities. The rendering of a health care service to the Sol Plaatje community includes comprehensive service delivery to patients with diabetes. The number of patients with diabetes who attend public health facilities on a monthly basis was estimated at 2 840, and 110 for private health facilities. Health communication between patients with diabetes and a particular registered or enrolled nurse delivering this service, is a service requirement. Table 3.1 presents a visual depiction of the accessible study population, and is followed by an explanation of the inclusion criteria.

Table 3.2: Accessible population of study

Public health		
Facility	Nurses	Patients per month
Beaconsfield Clinic	7	200
Betty Gaetsewe Clinic	9	240
City Clinic	8	500
Dr Winston Torres Clinic	6	120
Florianville Clinic	7	200
Galeshewe Clinic	3	80
Greenpoint Clinic	4	100
Ma Doyle Clinic	9	140
Mapule Matsepane Clinic	8	120
Masakhane Clinic	7	400
Phutanang Clinic	7	60
Ritchie Clinic	6	250
Riverton Clinic	1	30
Kimberley Hospital Complex	-	-
Specialised Clinic	3	150
Diabetic Education and Screening Unit	1	250
TOTAL	**86**	**2840**

Private health		
Facility	Nurses	Patients per month
Wound Clinic	1	50
Diabetes & Endocrinology Clinic	1	30
Occupational Health & Safety Unit	1	30
TOTAL	**3**	**110**

According to Grove (2017:331), inclusion criteria are characteristics the target population must meet to be eligible for inclusion in the sample. The following inclusion criteria directed decision-making regarding the selection of the study participants.

Inclusion criteria applicable to the registered and enrolled nurses:

- Employment in the identified health facility in the Sol Plaatje Municipality;
- Registration with the SANC as registered or enrolled nurse;
- Consent to participate in the study;
- Being in consultation with an adult patient diagnosed with any category of diabetes; and
- Able to speak Afrikaans, English or Tswana during observation.

Inclusion criteria applicable to adult patients:

- At least 18 years old at the time of the research;
- Diagnosed with any category of diabetes, and returning for a follow-up consultation;
- Signed, informed consent to participate in the study; and
- Able to speak Afrikaans, English, or Tswana.

3.4.3 Sampling

Sampling involves the process of selecting a sample or subsection of the accessible population. The sample derived consists of the selected study participants (Strydom, 2011:223; Grove, 2017:329-330) . The selected sample must be considered to be representative of the total population to which the study findings are to be generalised. To ensure that the sample is representative or has the same characteristics as the population from which it is derived, the technique of random or probability sampling is applied. This method of drawing a portion of the total implies that each member of the population has an equal chance of being selected (Strydom, 2011:226).

With the assistance of the Department of Biostatistics at the UFS, the researcher applied the method of proportional random sampling to the population of the study as described in Paragraph 3.4.2. Convenience sampling, according to Polit and Beck (2014:203), involves selection of the most suitable and available people as participants. Table 3.3 depicts the result of the proportional random sampling process and the convenience sampling.

A total of 150 (n=150) patient-nurse interviews were to be observed at thirteen public and three private health facilities (n=16). Each registered or enrolled nurse (N=30) was to be observed interacting one-on-one with patients. Each nurse was to interact with five different patients. At each facility the registered and enrolled nurses were grouped together and listed alphabetically according to surname, starting from A. The nurse participants were assigned numbers, starting from the first surname on the alphabetical list.

Table 3.3: Proportional random sampling of public and private health facilities and convenience sampling of nurses

Public health			
Facility	Nurses		Observations
	Sample	Number	Number
Beaconsfield Clinic	2	5, 7	10
Betty Gaetsewe Clinic	3	3, 4, 6	15
City Clinic	3	2,5,6	15
Dr Winston Torres Clinic	2	2, 4	10
Florianville Clinic	2	1, 5	10
Galeshewe Clinic	1	2	5
Greenpoint Clinic	1	1	5
Ma Doyle Clinic	3	2,5,6	15
Mapule Matsepane Clinic	3	2,4,6	15
Masakhane Clinic	2	5, 7	10
Phutanang Clinic	2	4, 5	10
Ritchie Clinic	2	4, 5	10
Kimberley Hospital Complex			
Specialised Clinic	1	1	5
TOTAL	**27**		**135**

Private health			
Facility	Nurses		Observations
	Sample	Number	Number
Wound Clinic	1	1	5
Diabetes & Endocrinology Clinic	1	1	5
Occupational Health & Safety Unit	1	1	5
TOTAL	**3**		**15**

A pilot study preceded the main study, and is explained in Paragraph 3.4.4.

3.4.4 Pilot study

A pilot study is viewed as a small study replicating the actual research study prior to the main data collection phase (Brink *et al*., 2012:216; Polit & Beck, 2012:198; Sutherland, 2017:54). Using a small section of the research population and a reduced research environment to conduct a “trial run” study provided the researcher with an indication whether the research methods and plans proposed for data collection would be effective. Doing a pilot means problems identified can be addressed and adjustments made; in this way the quantitative methodology is strengthened (Ingham-Broomfield, 2015:35). Should no amendments be necessary, the information gathered may be used in the main study (Grove *et al*., 2013:343).

Two fieldworkers were appointed and underwent training on both the observational checklist (Annexure A) and the guidelines for completing the observational checklist (Annexure B) prior to the pilot study. Both fieldworkers were fluent in Afrikaans and English, and one had communication skills and fluency in Tswana. Five nurse-patient observational checklists were completed at each of the Wound Clinic of Gariep Hospital and the Specialised Clinic of the Kimberley Hospital Complex. The researcher was present for all 10 observations and completed observational checklists for each one of these nurse-patient interviews. A fieldworker was present at each one of these nurse-patient interviews. The fieldworkers recorded what they observed independently by completing an individual observational checklist document. Each fieldworker observed a total of five nurse-patient interviews and completed the observational checklists for each of these interviews. Each interview was audio-recorded to ensure that what appeared on the observational checklist was an accurate reflection of what had transpired during the interview. The manner in which the pilot study process was conducted enabled comparison and discussion of findings by the researcher and the fieldworkers involved. Confirmation of understanding and question interpretation of each observational checklist was addressed and enhanced once the audio-recorded findings had been retrieved. No changes or amendments were required to the observational checklist or the guidelines for implementation of the observational checklist, which meant the researcher could incorporate this data into the main study data.

The pilot study afforded the researcher and fieldworkers with an opportunity to emphasise appropriate conduct for fieldworkers during the data collection phase. In addition, the pilot study made discussion of the most suitable data collection plan possible, which included aspects of time and how to maintain consistency throughout the process (Grove *et al*., 2013:515). A discussion of the data collection process follows in Paragraph 3.4.5.

3.4.5 Data collection process

Data collection is a process that involves the collection of data in an orderly and structured manner, in keeping with the research design and method of measurement. The purpose of data collection is to provide valid and meaningful results relevant to the research purpose and objectives (Gray, 2017:493; Polit & Beck, 2012:293).

The data collection process followed for this study is depicted in Figure 3.2. The data collection phase commenced by obtaining written permission from the Health Sciences Research Ethics Committee of the UFS to continue with the study (Annexure C). This permission was reliant on written approval by the Provincial Health Research and Ethics Committee of the Northern Cape to conduct the study in the province (Annexure D). On receipt of these required documents, the researcher was in a position to request public and private health facilities within the Sol Plaatje Municipality of the Northern Cape to participate in the study.

A meeting to discuss the purpose of the study and the data collection process was arranged and held with the respective management bodies of the public health facilities. The health area manager for the Sol Plaatje health district had received prior notification from the Northern Cape Department of Health of the researcher's intent and subsequent permission to carry out the study in the district. Permission was also requested in writing from each private health facility, namely, Kimberley Centre for Diabetes and Endocrinology, Wound Clinic, Mediclinic Gariep Hospital and the Occupational Health and Safety unit, prior to determining the data collection timetable. Written approval was received from each of these health facilities (Annexures E, F, and G).

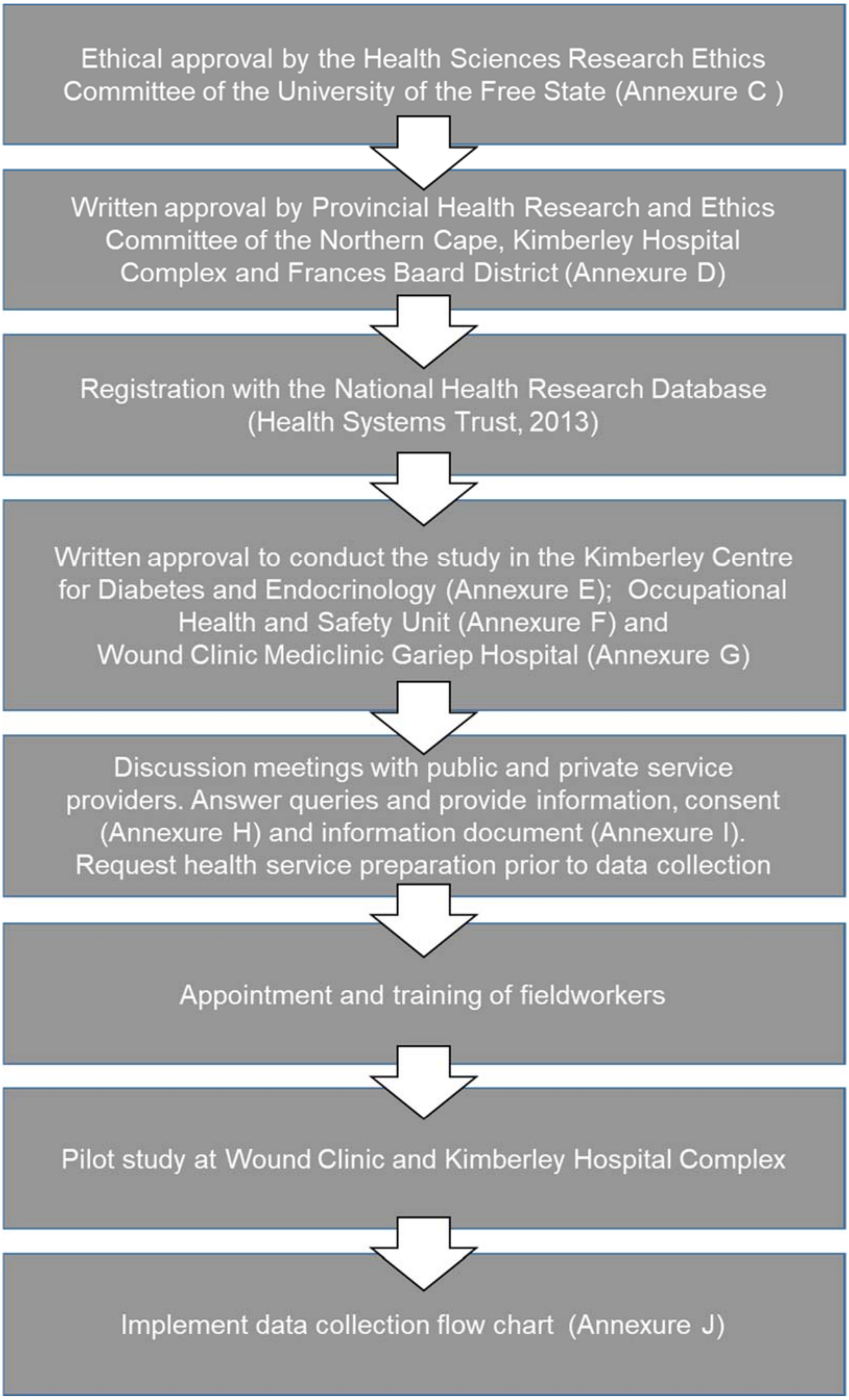

Figure 3.2: Data collection process of study

A data collection flow chart was provided to each fieldworker to ensure that the data collection ran smoothly at each health facility (Annexure J). The standardised procedure followed by the observers during the nurse-patient observations included the following detail.

The observations were conducted using an observational checklist and following the guidelines for completing the observational checklist (Annexures A, B). Prior to each observation, the researcher or fieldworker conducted a short interview to collect data reflecting the personal profile of the registered/enrolled nurse and patient. This very short interview was conducted with the nurse privately, in her office, prior to observing her in consultation with the patient. Interviews with patients were conducted privately with individual patients while they waited for their consultation sessions with specific nurses. The same interview process was repeated after the consultation, with nurses and patients being interviewed privately.

The researcher and fieldworker observed the consultation in private clothing to avoid intimidating either the patient or nurse. Consent was obtained from the registered or enrolled nurse and the patient prior to observing the consultation (Annexure H) and each participant received verbal and written information in either Afrikaans, English or Tswana (Annexure I). Each nurse-patient consultation was audio-recorded. The observational checklists and the audio recordings were numerically linked. On the day of data collection, the fieldworker or researcher was required to listen to the audio recordings of the observations conducted of that day, thereby minimising loss or misinterpretation of information.

The number of observational checklists completed was influenced mainly by a lack of nurse and patient participants (see Table 3.3). Prior to data collection, the researcher was provided with the number of nurses employed per facility. On the day of data collection, fewer nurses than expected were on duty, mainly as a result of staff shortages due to recent resignations and nurses being on holiday or sick leave. A number of facilities had specially requested and booked patients with diabetes to attend follow-up consultations on a specific day and time. This arrangement facilitated data collection. However, a number of health facilities did not follow these arrangements, which resulted in the researcher and fieldworkers spending lengthy periods at these health facilities, waiting for patients with diabetes to attend. In an attempt to overcome many of these challenges the researcher and fieldworkers were obliged to return to the health facilities on numerous occasions.

Table 3.4: Actual number of nurse-patient interactions observed per health facility in the study

Public health			
Facility	Nurses	Patients	Observations
Beaconsfield Clinic	1	1	1
Betty Gaetsewe Clinic	2	11	11
City Clinic	3	12	12
Dr Winston Torres Clinic	1	5	5
Florianville Clinic	2	6	6
Galeshewe Clinic	1	5	5
Greenpoint Clinic	1	2	2
Ma Doyle Clinic	1	1	1
Mapule Matsepane Clinic	2	13	13
Masakhane Clinic	2	10	10
Phutanang Clinic	2	8	8
Ritchie Clinic	1	1	1
Kimberley Hospital Complex	-	-	-
Specialised Clinic	1	5	5
TOTAL	**20**	**80**	**80**

Private health			
Facility	Nurses	Patients	Observations
Wound Clinic	1	5	5
Diabetes & Endocrinology Clinic	1	1	1
Occupational Health & Safety Unit	1	2	2
TOTAL	**3**	**8**	**8**

Data that had been gathered were stored in a safe environment prior to data capturing, which occurred twice, and onto two separate Excel spreadsheets. The raw data were checked by the researcher prior to data capture.

During the entire research process the important principles of validity, reliability and ethical principles of justice, respect for human dignity and beneficence had to apply.

3.5 VALIDITY

The validity of a study is directly measured by the confidence level displayed by the findings of the study. Validity responds to the following questions: Can these findings be generalised to the larger population? Will these findings be comparable should this study be replicated elsewhere? With these questions in mind, it is imperative that a researcher is aware of and takes action to prevent threats to the validity of a study (Brink *et al*., 2012:111; Polit & Beck, 2012:255).

Threats to the validity of a study may come from a number of sources, including participant, researcher, environment and instrumentation factors (Brink *et al*., 2012:164-165). The data collection flow chart (Annexure J) was developed by the researcher after careful consideration of the health facility environment, health service providers and patients with diabetes to be involved in the study. The pilot study and the training of fieldworkers provided the confidence that data collection would remain focused on the objectives of the study. Furthermore, fieldworkers were familiarised with the study information document (Annexure I) and the consent form (Annexure H). The observational checklist (Annexure A) and the guidelines for completion of the observational checklist (Annexure B) were covered in detail with each fieldworker to ensure clarity of understanding. Addressing possible instrumentation errors includes testing the instrument during a pilot study; however, the document must be prepared before testing.

Delport and Roestenburg (2011:173) refer to the concept of validity as incorporating two important aspects with relevance to this study. The first aspect refers to whether the instrument or test being applied actually measures the concept in question, and the second, whether the concept is measured accurately (Babbie 2016:148; Delport & Roestenburg, 2011:173). In other words, even if a concept is measured accurately; if an incorrect concept is applied, the data collection instrument cannot be accepted as validity-compliant. To ensure that the observational checklist (Annexure A) used during the study accomplished what it was intended to accomplish, the principles of face and content validity had to be upheld and had to guide the study.

3.5.1 Face validity

Face validity refers to the degree to which an instrument appears to be valid. In this instance, the question is whether the instrument to be used is well designed and appears to measure what it is supposed to measure (Koonin, 2014:256). According to Brink *et al*., (2012:166), face validity has greater relevance during the development phase of the instrument, as it can only address the instrument readability and clarity. The face validity of the study instrument, namely the observational checklist, which was designed with a structured layout, was enhanced by input received from the Evaluation Committee at the School of Nursing at the UFS.

3.5.2 Content validity

Content validity refers to whether an instrument is representative of and able to measure the specific content or constructs under measurement (Babbie, 2016:150; Koonin, 2014:256). The content of the observational checklist used during the study reflects the theoretical framework provided by the concept analysis, which clearly identified the elements of health dialogue (Reid, 2015). The content of the observational checklist of Reid and Joubert (2015), was guided by the health dialogue concept analysis (Reid, 2015). The researcher, therefore, concludes that the observational checklist provides an accurate reflection of the antecedent and empirical referent elements of the study objectives.

3.6 RELIABILITY

Instrument reliability can be explained as the ability of the instrument, when applied to different groups in different environments and under a variety of different circumstances, to produce the same results. In other words, the concept under investigation, measured in the same way every time, will produce consistent numerical results. It must, however, be noted that, should an instrument prove to be unreliable, it will not be acknowledged as valid, due to its inability to constantly measure what it is supposed to measure (Botma *et al*., 2010:177–178; Brink *et al.*, 2012:169, 171). Grove (2017: 370) explains that when an instrument with strong reliability is put to the test, there will be uniformity in the participant scores, thus, reducing measurement error. The reliability of the observational checklist for health dialogue elements (OCHDE) used in this study is currently being established (Reid & Joubert, 2015).

Prior to the main study, a pilot study was conducted with the observational checklist (Annexure A) to test the instrument thoroughly and make modifications, if the need arose. A total of 10 observational checklists were completed by the researcher and fieldworkers whilst they observed individual patients with diabetes consulting with nurses. During the study, the researcher was aware of the possibility of the so-called Hawthorne effect on participants being observed. The fieldworkers and researcher made a concerted effort to be as discreet as possible during the observation process. Since the health dialogue elements that were observed were unknown to the participants, possible influence on the reliability of results was considered to be minimal. This pilot study increased the reliability of the data that were collected, as the researcher and fieldworkers observed the same consultation at the same time. Both parties made use of the same guidelines for completing the observational checklist. Findings were compared and discussed after each observation had been completed. The similarity of observer findings noted for all 10 observations completed during the pilot study gave the researcher the confidence to continue with the main data collection phase. In addition, the use of audio recordings during the pilot study strengthened and enhanced the process by clarifying and making it possible to compare recorded, observed data against voice-recorded data collected. Entering coded data on Excel spreadsheets twice limited the possibility of data being captured inaccurately.

3.7 ETHICAL CONSIDERATIONS

Ethical principles as applied to research are a set of moral principles or ethical standards that guide all behaviour through rules that are to be followed throughout the entire research process (Brink et al., 2012:32-33; Strydom, 2011:114). Applying this definition during the execution of research in nursing requires that the researcher is skilled and diligent in the performance of the task at hand. The principles of integrity and honesty must be upheld throughout the process to ensure that valid research evidence is collected for practice (Gray, 2017:187; Grove et al., 2013:159).

Two historical documents, namely, the Nuremberg Code (1949) and the Declaration of Helsinki, adopted by the World Medical Association in 1964, serve, among other documents, as guiding ethical principles for the manner in which research in the human sciences is conducted worldwide and are applied in this study (Nuremberg Code, 1949; World Medical Association (WMA) General Assembly, 2008). The Belmont Report, which was published in 1979, highlights three critical principles to be upheld at all times when human participants are involved (Botma *et al.*, 2010:3; Gray, 2017:159, 161; National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research, 1979). Furthermore, the researcher took cognisance of ethical research guidelines and principles developed by the local DoH, as well as the guidelines for good ethical practice in research for the health care professions in South Africa (DoH, 2015:1-67; Health Professions Council of South Africa, 2008:1-11).

Prior to commencing the study, the researcher obtained written authorisation from the Health Sciences Research Ethics Committee of the UFS, the Northern Cape DoH, the Mediclinic Gariep Hospital, the Occupational Health and Safety Unit, and the Centre for Diabetes and Endocrinology in Kimberley, to conduct the research study.

The three fundamental ethical principles published in the Belmont Report, namely, respect for persons, beneficence, and justice, are all based on human rights (National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research, 1979). Other rights of human participants that need to be protected in research include the right to self-determination, privacy, anonymity, confidentiality and the protection from harm and discomfort through the provision of fair treatment (Brink *et al*., 2012:34; Gray, 2017:162).

3.7.1 Principle of respect for persons

The principle of respect for persons includes acknowledging that people have the right to self-determination. This implies that participants, as individuals, have the right to decide independently whether or not to participate in a study. The voluntary decision by each participant whether to participate or not to participate must be made within a supportive and non-threatening environment. The participant should also feel free to discontinue participation without the threat of retribution (Brink *et al*., 2012:35; National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research, 1979:1; Polit & Beck, 2012:172). Mindful of these principles and equipped with the data collection flowchart (Annexure J), the researcher and the trained fieldworkers followed a structured plan for collecting data in the following way.

In this study, participants, patients with diabetes and nurses were regarded as individuals who are competent and self-sufficient in making decisions on whether to participate or not to participate in the study. Each participant was provided with a written information document as well as verbal explanation thereof (Annexure I). This information provided participants with an understanding of the purpose of the research study and sufficient information on which to exercise the right to freedom of choice in the absence of undue influence. In this manner, the principle of respect was upheld.

3.7.2 Principle of beneficence

Beneficence, in principle, refers to the participants' right to be free of and protected from harm and discomfort. To secure the well-being of the participants, a researcher has to identify the possible physical, psychological, emotional, spiritual, economic, social and or legal risks that may arise during the course of a study and which may be detrimental to the participant. It is also imperative that good manners and integrity guide all interactions with the study participants, so as to avoid harm to them (Botma *et al.*, 2010:20, 22–23; Brink *et al*., 2012:35-36; National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research, 1979:1-2; Polit & Beck, 2012:171-172).

Botma *et al*. (2010:20-24) mention that the principle of beneficence should be expressed as a risk/benefit ratio calculation: In order to do no harm, the potential benefits of the study should always outweigh the risks. The application of this principle infers that the information provided to each participant in the information document and in the signed consent form must be adhered to strictly during data collection. In this study both these documents were included in the research protocol submitted for ethical approval. To the knowledge of the researcher and from feedback delivered by the fieldworkers it did not appear that any of the study participants became distressed or uncomfortable whilst being observed during the routine consultation; neither did the questions asked by the researcher and fieldworkers prior to and after each individual consultation appear to cause any emotional discomfort to the participants.

3.7.3 Principle of justice

Justice implies that each participant is to be treated fairly (Gray, 2017:161; Polit & Beck, 2012:172). Fair treatment involves strict adherence to the content of the information document during the study and as explained and provided to each participant (Botma *et al*., 2010:19–20; National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research, 1979:2). In addition, the principle of justice includes the right of each participant to be selected with fairness. The research problem and objectives guide the selection of participants. People must be selected for the contribution they will make to the research study, and not merely because they can be accessed easily (Brink *et al*., 2012:36).

The study population, namely, health facilities in the Sol Plaatje district, the nurses who render the service, and the patients with diabetes who attend these facilities for a health service, was identified. Two sampling methods were applied, namely, proportional random sampling for public and private health facilities, and convenience sampling for registered and enrolled nurses employed within each facility. Selection did not imply automatic participation. Each participant who met the inclusion criteria was entitled to receive full disclosure of what the study entailed (Annexure I). The decision to participate or not was made voluntarily. Signed and informed consent was required for participation in the study (Annexure H). Fair treatment also includes the right to privacy and the right to voluntary consent. Both these rights will now be elaborated on.

3.7.4 Privacy

A researcher must, at all times, treat participants with respect, be punctual and attentive to cultural values. Participants have the right to privacy and the right to expect that the information collected during the study will remain private and be kept confidential (Brink *et al*., 2012:37; Gray, 2017:168). In this study, the fieldworkers and the researcher were able to collect data during routine follow-up visits to the health facility by patients with diabetes. Except for the presence of the researcher and fieldworkers whilst the nurse and patient were interacting, no alterations were made to this routine. The participants gave voluntary consent that permitted the presence of the researcher and the fieldworkers during the follow-up visit. Each interview was audio-recorded. However, during the gathering of the personal and private participant information, namely, Questions 5-11 and 40-42 on the observational checklist, the audio recorder was switched off. The researcher and fieldworkers completed these questions on a one-on-one basis with each respective participant. Each participant was also encouraged to answer the questions, however, at no time were participants coerced into providing answers if they did not wish to do so.

Confidentiality was maintained by not naming the participant on the observational checklist or the audio-recording. Each observed interview was given a number and this number appeared on the observational checklist and was heard on the audio-recorded feedback. In addition, all documentation and audio records were stored in a locked safe accessible only to the researcher and, when data entered was onto the Excel spreadsheet, no participant names were entered – only numbers.

3.7.5 Informed consent

The informed consent process internalises the ethical aspects of voluntary participation and protecting participants from harm. A researcher needs to address three major principles involved in obtaining informed consent. Firstly, the type and purpose of information needed from the research participant must be explained to and understood by the participant as that being important for the study. Secondly, the researcher must assess a participant's degree of understanding of the information. The third principle involves ensuring that the participant is in a position to and has a choice whether to give consent (Brink *et al*., 2012: 37-38; Gray, 2017:178-179). With these principles in mind the researcher designed the information document to provide each participant with information about the study purpose and an explanation of the way data would be collected (Annexure I). Clarity was provided regarding the way the privacy of information provided would be protected, study benefits and, importantly, that participation was entirely voluntary and may be withdrawn at any stage. Both the information document and the consent document (Annexure H) were available in Afrikaans, English and Tswana, the languages understood by the participants.

3.8 DATA ANALYSIS

Data analysis in quantitative research is a process that enables the researcher to provide meaningful answers to the research question. This process involves the sorting and coding of data, the organisation of the processed data and the statistical analysis of the data obtained during the data collection phase. The ultimate aim is for the researcher to be in a favourable position to describe and record these findings using the summarised data (Babbie, 2016:430; Brink *et al*., 2012:177; Sutherland, 2017:56).

The researcher coded the observational checklists and appointed a registered nurse with experience in data capturing to enter all nurse and patient observations executed (n=88) onto an Excel document. The researcher checked the entered data and then forwarded the spreadsheet, with the research objectives, to the biostatistician. The data analysis was managed by the Department of Biostatistics at the UFS.

Descriptive statistics, namely, frequencies and percentages for categorical data and medians were calculated per group, comparing nurse and patient responses. For the purposes of this study, group refers to the registered and enrolled nurses as well as the patients observed during consultation sessions. The groups were compared by means of McNemar’s test or Bhapkar’s test (Bhapkar, 1966:228-235).

On completion of the data analysis process, the summarised and analysed data were discussed by the researcher and the biostatistician, in order to obtain more insight into the analysed data.

According to Brink *et al*. (2012:178) statistics is the most powerful tool available to a researcher doing quantitative research. Descriptive statistics were used in this study to enable the researcher to describe the presence of health dialogue elements used during consultation between a patient with diabetes and a nurse.

3.8.1 Descriptive statistics

Descriptive statistics are usually used to describe and summarise data (Babbie, 2016:525; Brink et al., 2012:180; Polit & Beck, 2014:268). Statistics, once organised and summarised, can be presented visually in the form of statistical graphs and diagrams, thereby enhancing clarity and ease of reading the research findings (Brink *et al*., 2012:179).

Frequency distribution refers to the arrangement of data from the lowest to the highest value of the count of each observation in a category (Babbie, 2016:527; Brink *et al*., 2012). In this study, frequency distribution refers to the actual count of the number of times the health dialogue element presented itself per group during all the observations (n=88).

Percentage refers to a statistic representing a proportion of a subgroup to the total group. A *percentage distribution* represents the proportion of the sample that falls within a specific range (Brink et al., 2012:215; Gray, Grove & Sutherland, 2017:686). In this study, percentages were used to describe the number of times each health dialogue element presented itself during observation of nurse and patient per interviews.

Median refers to the midpoint score or value in a group of data ranked that is from lowest to highest – in other words, half the scores are below and half the scores are above the median (Babbie, 2016:528; Brink *et al*., 2012:185). In this study, medians were applied to provide a midpoint for the ages of nurse and patient participants, as well as midpoints for the number of years nurses had been working with patients with diabetes. In addition, midpoint values provided a statistical description of the number of years that the patient participants with diabetes had been living with the disease condition.

3.9 CONCLUSION

This chapter discussed key aspects of the research methodology, namely the research design and the research methods. The quantitative non-experimental and descriptive research design that had been applied was elaborated on, and the various strengths and weaknesses of the positivist paradigm approach were explained. The design aspects covered included information on the study population, the sampling methods and the pilot study conducted. The main data collection instrument, the process, and plan were also described, together with the concepts of validity, reliability and important ethical issues of justice, beneficence and respect for people that enveloped the entire research process. The data analysis process used in the study concluded the chapter. The results of the data analysis will be discussed in the format of a prepared article and presented in the next chapter.

CHAPTER 4: ARTICLE – AFRICA JOURNAL OF NURSING AND MIDWIFERY

HEALTH DIALOGUE ELEMENTS PRESENT DURING HEALTH COMMUNICATION BETWEEN PATIENTS WITH DIABETES AND NURSES IN A NORTHERN CAPE LOCAL MUNICIPALITY

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ABSTRACT

Patients and nurses in health facilities communicate every day to improve health outcomes. However, the extent to which the elements of health dialogue, rooted within the participatory paradigm, are incorporated into each individual patient-nurse interaction, is unknown. A concept analysis of “health dialogue” laid the foundation for assessing the presence of the antecedent and empirical referent health dialogue elements during health communication between patients with diabetes and nurses in the Northern Cape. A quantitative, non-experimental, descriptive, cross-sectional research design was used. A structured observational checklist, aided by a guideline, was used to observe and question nurses (N=22) and patients with diabetes (N=88) in public and private health facilities (n=16). Each nurse was observed interacting with more than one patient. Descriptive statistics, namely, frequencies and percentages for categorical data and medians, were calculated per group, comparing the nurse and patient responses. Inconsistencies (48.8%) in the presentation of health dialogue antecedent elements of positive attitude and sensitivity and respect during nurse and patient interactions, were noted. The antecedent of training identified inadequate nurse training in diabetes (19.3%) and communication skills (30.6%) and patient training and information about diabetes (48.7%) and in communication skills (3.4%). In spite of inconsistencies in the presentation of the antecedents, patients and nurses appeared satisfied with the presence of the empirical referents of shared responsibility/decision-making, health plan of mutual benefit and use of context-sensitive communication strategies. Nurses and patients appear to be unprepared to incorporate health dialogue elements during interaction. Capacity building is recommended for both patients and nurses.

Keywords: health communication, health dialogue elements, nurses, patient-centred communication

INTRODUCTION

Patient-centred communication is vital to a patient-centred health care approach (Slatore, Hansen, Ganzini, Press, Osborne, Chestnutt, & Mularski, 2012:411). The recent conceptualisation of patient-centred communication by Street (2017:2133) recommends a focus on specific communication goals that are to be mutually accomplished by health care providers and patients. A fusion of a number of patient-centred communication approaches shifts the responsibility for the communication process and outcomes, namely, that responsibility is shared jointly by the health care provider and the patient, who both play an active role during communication (Street, 2017:2132-2133).

As a result of the shift in responsibility, it becomes evident that patient-centred communication goals will not be realised without mutual participation of both nurse and patient during health communication interactions. True participation during health communication involves interactive dialogue, which is a value-driven and educational communication process that encourages feedback, discussion, negotiation and the making of collective decisions (Govender, 2011:59-62). Dialogue, an influential and shaping concept within the works of Paulo Freire, laid the foundation for the participatory paradigm (Dyll-Myklebust, 2011:12–19; Freire, 2005).

The essential role that dialogue and health communication plays in improving health outcomes has particular relevance for patients living with a chronic disease and, in particular, diabetes. Patients with diabetes, a non-communicable disease, are faced with having to come to terms with the diagnosis, as well as the need to accept and adapt to lifestyle adjustments that are necessary for maintaining optimal glycaemic control to avoid microvascular and macrovascular complications. Many patients, however, find it difficult to integrate these lifestyle changes into their daily lives (Berenguera, Molo-Inesta, Mata-Cases, Franch-Nadal, Bolibar, Rubinat & Mauricio, 2016:2323).

CURRENT SITUATION

The South African Department of Health (DoH), in contributing to meeting the multifaceted service delivery needs of people living with non-communicable diseases, provides strategic guidance with regard to the management of chronic diseases. Effective therapeutic disease management is enveloped within patient-centred communication to achieve positive behavioural outcomes (DoH, 2013:43).

The Society for Endocrinology, Metabolism and Diabetes of South Africa (SEMDSA) Type 2 Diabetes Expert Committee guidelines provides recommendations for the management and delivery of health services to patients with diabetes (SEMDSA, 2017:S6). Whilst the availability and use of these guidelines is important, its correct application in practice within a patient-centred and participatory health environment that encourages health dialogue, is of equal importance. The biopsychosocial health benefits of integrating a patient-centred approach to the delivery of chronic health services, and in particular, diabetes, have been widely documented. The manifestation of health benefits appears to be directly linked to the creation of a positive and caring learning environment. The encouragement and inclusion of the patient's perspective and participation during interactions between health care provider and patient enhances the patient's knowledge and skills, enabling the incorporation of important life-changing health decisions into the patients' daily lives and increasing their confidence. Using health dialogue, creating a learning environment in the health facility develops into a reciprocal learning experience for the patient and the health care provider (Johansson, Osterberg, Leksell & Berglund, 2016:5-6).

The absence of information with regard to the presence of health dialogue during nurse-patient interactions in the local municipality's health facilities indicated that investigation was required. In addition, the participatory nature of health dialogue required that this study simultaneously assess the presence of health dialogue elements during interaction between patients with diabetes and nurses .

HEALTH DIALOGUE

A recent introduction into the concept of health dialogue developed by Reid (2015) provided the researcher with a dual opportunity. Firstly, the content of the concept analysis of health dialogue offered insight into health dialogue within a participatory paradigm (Figure 1) and, secondly, provided a foundation for assessing the presence of antecedent and empirical referent health dialogue elements during health communication between nurses and patients.

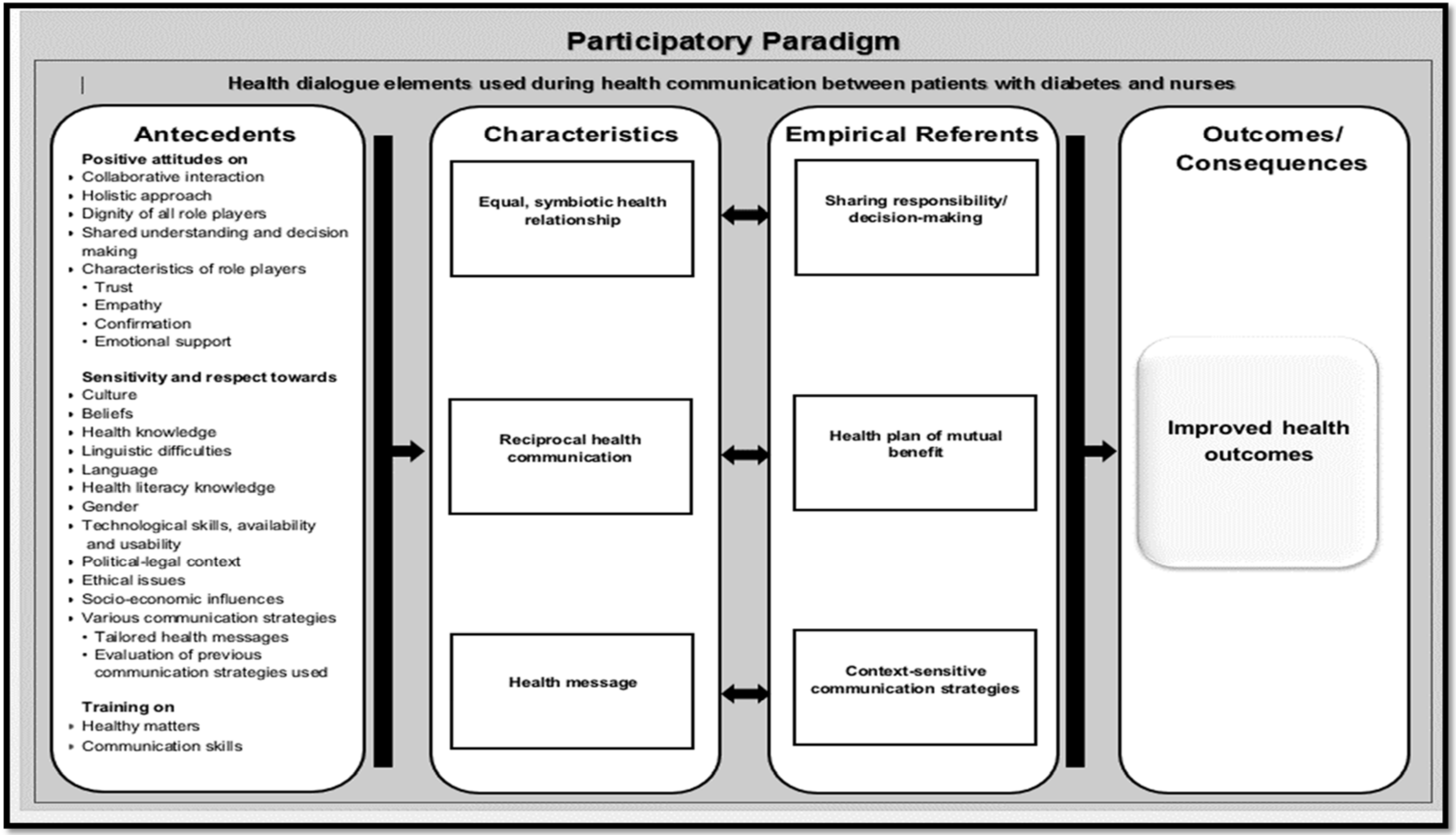


Figure 1: Elements identified through a concept analysis of Health Dialogue, adapted (Reid, 2015)

According to Reid (2015) the characteristics of health dialogue are the manifestation of a mutually cooperative health relationship and partnership that develops between the patient with a chronic health condition and the health care provider. This relationship is established through the occurrence of reciprocal and participatory health communication during the delivery of health messages with the aim of improving health outcomes. However, before the benefits of health dialogue can be realised, it is essential that health care providers and patients jointly demonstrate the antecedent behavioural values that underpin the concept of health dialogue. Figure 1 highlights, amongst others, two critical areas of this study, namely, antecedents and empirical referents. The antecedents, each with sub-elements, encompass the important point that, in reality, both health care providers and patients should present with positive attitudes about the inclusion of the mechanism of dialogue during health communication. Furthermore, they should display genuine sensitivity and respect towards each other, as people who each have unique belief systems, backgrounds and sociocultural influences, and should receive training, especially with regard to health matters and communication skills. The presence and establishment of these antecedents by both health care providers and patients will enable the realisation of improved health outcomes through dialogue. Empirical referents, in this instance, refers to the presence of a shared responsibility and decision-making between health care providers and patients, the determination of a mutually beneficial health plan, and the application of context-sensitive communication strategies during health communication. The presence of these empirical referents indicates that health dialogue has occurred and is compliant with the characteristics of the concept (Reid, 2015).

Using health dialogue as an empowering approach must be viewed from the context that patients with chronic illnesses should take responsibility and ownership of their own health care, whilst health care providers should offer needs-based knowledge and skills within a supportive service environment, which ultimately enable patients to make informed decisions (Fasulo, Zinken, & Zinken, 2016:917-918). The current study is firmly grounded in the concept analysis of health dialogue.

RESEARCH OBJECTIVE

This study aimed to assess the presence of the following health dialogue elements, namely, antecedents, which are a positive attitude, sensitivity and respect, and training; and empirical referents, which comprise a shared responsibility and decision-making, a mutually beneficial health plan and the use of context-sensitive communication strategies, through the direct observation of patients and nurses during health communication.

DEFINITIONS OF KEYWORDS

Health communication is the sharing of ideas, information, opinions, emotions and beliefs through messages that are created during ongoing transactional and dialogical processes involving a sender and receiver in an equal relationship, with the aim of creating mutual understanding to improve health outcomes using negotiation (Rensburg & Krige, 2011:78).

Health dialogue elements, in this study, refer to health dialogue antecedent and empirical referent elements as presented within the concept analysis of health dialogue (Reid, 2015).

Nurses, in this study, are registered and enrolled nurses employed by health facilities that provide a health service to patients with diabetes.

Patient-centred communication refers to the application of specific communication goals that facilitate the delivery of patient-centred health care. These goals are to be accomplished together by the health care provider and the patient (Street, 2017:2133).

RESEARCH METHODOLOGY

Design

This study adopted a quantitative, non-experimental, descriptive, cross-sectional research design.

Research site

This study was conducted at public and private health facilities (n=16) in a local municipality that provides health services to patients with diabetes. The local municipality was located in one of the five health districts of the Northern Cape province, South Africa.

Study population

The accessible study population comprised all adult diabetic patients attending the public health facilities (n=15) and private health facilities (n=3) in one local municipality within the Northern Cape; and all nurses (N=86) working at these public health facilities, as well as all nurses (N=3) working at the private health facilities.

Sampling

Proportional sampling of public and private health facilities (n=18) resulted in the inclusion of 16 health facilities. This process was followed by convenience sampling of registered and enrolled nurses (N=89) and resulted in including 30 nurses from the 16 health facilities who met the inclusion criteria. Each nurse was to individually consult five adult patients with diabetes (n=150).

Description of the instrument tool

The observational checklist of health dialogue elements (OCHDE), aided by the guidelines for implementation, consisted of four parts and 43 questions answered by means of a 3-point Likert rating scale, and is presented in Annexure A (Reid & Joubert, 2015). The OCHDE comprises four parts: Part 1: Nurse and patient profile, Part 2: Antecedents, Part 3: Empirical referents, and Part 4: Interviewer question. Table 1 presents the observational checklist depicting the antecedents and empirical referents.

Table 1: Observational checklist depicting antecedents and empirical referents

Health dialogue elements		Observation number on checklist
Antecedents	Positive attitude	13-26
	Sensitivity and respect	27-38
	Training received	9-10
Empirical referents	Shared responsibility	40
	Health plan of mutual benefit	41
	Context-sensitive communication strategies	42

Demographic data, language of the interview and length of the interview was also captured, as depicted in Annexure A. On completion of the interview, the fieldworkers and the reseacher who had observed the interview, rated the health messages provided to the patient using the scale provided.

The validity of the study instrument was enhanced by the contributions of the Evaluation Committee at the School of Nursing, University of the Free State (UFS). The observational checklist provided an accurate reflection of the antecedent and empirical referent elements identified in the concept analysis of health dialogue by Reid (2015), and is aligned to the study objectives.

Data collection

The pilot study was conducted in one public and one private health facility prior to the implementation of data collection. The manner in which the pilot study process was conducted enabled comparison and discussion of findings by the researcher and the trained fieldworkers, and enhanced the reliability of the study data. The pilot did not indicate the necessity to make amendments to the OCHDE or its guidelines for implementation; therefore, the researcher incorporated the pilot study data into the main data.

The study data were collected by means of the OCHDE (Reid & Joubert, 2015) from February to April 2017. Each nurse was observed interacting with more than one patient. The antecedent data were obtained through direct observation of the patient and nurse during interaction by the researcher and the trained fieldworkers. Empirically referent data were gathered from questions posed to both patients and nurses on completion of the interaction.

Data analysis

The data analysis was managed by the Department of Biostatistics at the UFS. Descriptive statistics, namely frequencies and percentages for categorical data and medians were calculated per group, compared the nurse and patient responses. The groups were compared by means of McNemar’s test or Bhapkar’s test (Bhapkar, 1966:228-235).

ETHICAL CONSIDERATIONS

The researcher obtained written authorisation to conduct the study from the Health Sciences Research Ethics Committee of the UFS and the Provincial Health Research and Ethics Committee of the Northern Cape. The Northern Cape Department of Health and three private health facilities all approved the execution of the study at the respective health facilities. Informed consent was obtained from participants. The responsibilities of researchers, as indicated in the Singapore Statement on Research Integrity, were upheld (Singapore statement on research integrity, 2010).

STUDY FINDINGS

Study findings are discussed by way of nurse and patient demographic data, the interaction and the antecedent and empirical referent findings.

Demographic data

Patients

The median patient participant age was 59 years (range 32.0-97.0). Most patients (67%) were women and most (65.9%) had been diagnosed with Type 2 diabetes. The median duration of diabetes as a diagnosed illness was 7 years (range 1.0-30.0). Almost half (52.3%) of the participants spoke Tswana at home, with a further 39.8% recorded as using Afrikaans as home language. Most participants (70.5%) had no formal education or had left school before completing Grade 10. Less than half the patients (48.7%) had received diabetes information, and few (3.4%) patients had received communication-based information.

Nurses

The median nurse age was 45 years (range 31.0-60.0). Most (94.3%) nurses were women. Less than half (42%) the interactions were conducted by nurses using the Tswana language, whilst nurses who used Afrikaans as a home language, conducted 46.6% of the interactions. Nurses with English as a home language, conducted few (11.4%) of the interactions. The median number of years the nurses had spent consulting patients with diabetes was 12 years (range 0.16-30.0). Few (27.3%) of the nurses were in possession of degrees – most (67%) had diplomas and 5.7% had certificates. Regarding diabetes training, few of the nurses (19.3%) had received training, and some (30.6%) had received training in communication skills.

Interaction

The median interaction duration was 6 minutes (range 1.0-20.0) with most interactions (57.9%) taking place in Afrikaans. A language other than the patient's home language was used in just over half (58.1%) the interactions. Privacy during interactions was noted in only 46.2% of the interactions. Tailored health messages for each OCHDE were rated by the researcher and the fieldworkers. A third (37.5%) of the patients' needs were not addressed during interactions.

Antecedents

The antecedents, namely, positive attitude, sensitivity and respect, and training taking place, were observed, recorded and summarised for both nurses and patients. See Table 2.

Table 2: Antecedents observed during nurse-patient communication (n=88)

ELEMENTS and sub-elements	NURSE OBSERVATIONS			PATIENT OBSERVATIONS			Statistical test	P value
	Not observed	Not consis-tent	Consis-tent	Not observed	Not consis-tent	Consis-tent		
	%	%	%	%	%	%		
POSITIVE ATTITUDE								
Collaborative interaction	9,1	34,1	56,8	25	26,1	48,9	Bhapkar	<0.01
Holistic approach - response to illness								
Physical	27,3	30,7	42	35,2	31,8	33	Bhapkar	<0.01
Emotional	15,9	47,7	36,4	34,1	33	32,9	Bhapkar	<0.01
Spiritual	67,1	19,3	13,6	75	11,4	13,6	Bhapkar	0,07
Social	23,9	44,3	31,8	36,3	41	22,7	Bhapkar	<0.01
Shared understanding and decision-making								
Planned outcome	6,8	36,4	56,8	13,6	37,5	48,9	Bhapkar	<0.01
Responsibilities clarified	5,7	28,4	65,9	10,2	46,6	43,2	Bhapkar	<0.01
Characteristics								
Trust	6,8	34,1	59,1	11,4	31,8	56,8	Bhapkar	0,22
Empathy	9,1	42	48,9	20,4	39,8	39,8	Bhapkar	<0.01
Confirmation	6,8	39,8	53,4	20,4	46,6	33	Bhapkar	<0.01
Emotional support	17,1	36,4	46,6	23,9	39,8	36,4	Bhapkar	0,01
RESPECT AND SENSITIVITY								
Language								
Terminology clarified	5,7	21,6	73,7	18,2	46,6	35,3	Bhapkar	<0.01
Culture and beliefs								
Health beliefs	35,2	33	31,8	40,9	33	26,1	Bhapkar	0,05
Health knowledge								
Validated understanding	6,8	52,3	40,9	18,2	59,1	22,7	Bhapkar	<0.01
Health literacy								
Ability to read	15,9	35,2	48,9	19,3	56,8	23,9	Bhapkar	<0.01
Ability to understand	6,8	42,1	51,1	13,6	59,1	27,3	Bhapkar	<0.01
Technology								
Electronic devices	68,2	17	14,8	70,4	21,6	8	Bhapkar	0,14
Political/legal context								
Consult within legal frame	5,7	35,2	59,1	8	38,6	53,4	Bhapkar	0,29
Ethical Issues								
Discussion of sensitive issues	64,8	22,7	12,5	70,5	15,9	13,6	Bhapkar	0,09
Socio-economic issues								
Influence on treatment	25	43,2	31,8	27,3	46,6	26,1	Bhapkar	0 .13
Communication strategies								
Strategies used	32,2	26,4	41,4	37,5	29,5	33	Bhapkar	0,03

ELEMENT and sub-elements	NURSE		PATIENT		Statistical test	P value
	Yes	No	Yes	No		
	%	%	%	%		
POSITIVE ATTITUDE						
Friendly manner	59,1	40,9	75	25	McNemar	<0.01
Shared understanding and decision-making						
Reason for visit	88,6	11,4	86,4	13,6	McNemar	0,32
Problem identification	76,1	23,9	72,7	27,3	McNemar	0,18
RESPECT AND SENSITIVITY						
Gender	1,1	98,9	1,1	98,9	McNemar	1
Health knowledge						
Recognition	82,8	17,2	80,5	19,5	McNemar	0,16

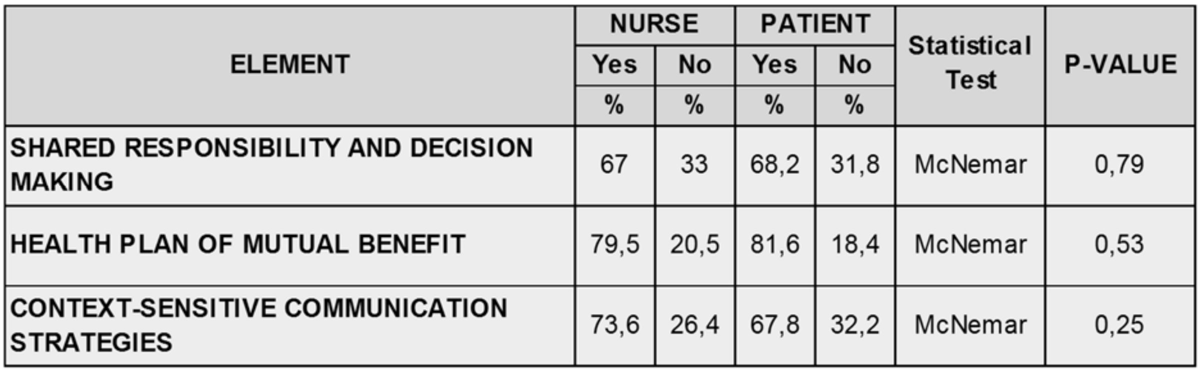
(Measurement of observer agreement for categorical data was described by McNemar's or Bhapkar's tests **<0.05 has statistical significance)**

Table 2 depicts 9 of the 14 (64.2%) positive attitude sub-elements that were found to be statistically significant. For the antecedent element of respect and sensitivity, 4 of the 12 (33.3%) sub-elements were statistically significant.

Empirical referents

Empirical referents were questions posed individually to each nurse and patient in private after the observation of the antecedent elements. Responses were recorded for the yes and no sections of each question, as depicted in Table 3.

Table 3: Empirical referents observed during nurse-patient communication (n=88)



ELEMENT	NURSE		PATIENT		Statistical Test	P-VALUE
	Yes	No	Yes	No		
	%	%	%	%		
SHARED RESPONSIBILITY AND DECISION MAKING	67	33	68,2	31,8	McNemar	0,79
HEALTH PLAN OF MUTUAL BENEFIT	79,5	20,5	81,6	18,4	McNemar	0,53
CONTEXT-SENSITIVE COMMUNICATION STRATEGIES	73,6	26,4	67,8	32,2	McNemar	0,25

(Measurement of observer agreement for categorical data was described by McNemar's test **<0.05 has statistical significance)**

Empirical referents show no significant difference between nurse and patient responses, even though conflicting motivations were provided. Table 4 displays the motivation provided by nurses and patients for each empirical referent element.

Table 4: Motivations provided by nurses and patients for each empirical referent element, with observations depicted as yes and no responses

ELEMENT	MOTIVATION OF ELEMENT	NURSE		PATIENT	
		N=22	(%)	N=88	(%)
Shared responsibility					
YES	Co-responsibility	13	22.8	10	20
	Self-care	14	24.6	8	16
	Discussion of problems	10	17.5	10	20
	Acceptance of instructions	20	35.1	22	44
NO	Lack of self-care	5	65.5	0	0
	Communication barrier	3	37.5	3	100
Health plan of mutual benefit					
YES	Task completed	29	43.2	25	37.3
	Positive feedback	22	32.8	23	34.3
	Self-care	8	11.9	13	19.4
	Knowledge shared	8	11.9	6	9
NO	Communication barrier	3	100	2	100
Context-sensitive communication strategies					
YES	Self-care management	31	49.2	33	62.3
	Socio-economic impact	32	50.8	20	37.7
NO	Communication barrier	2	100	5	100

In motivations expressed relating to the element of shared responsibility and decision-making, neither nurses nor patients referred a sense of co-responsibility, self-care and discussion of problems. Aligned to traditional nurse-patient interactions, nurses (35.1%) expressed giving instructions and patients (44%) receiving the instructions.

Both nurses (43.2%) and patients (37.3%) stated that the presence of a health plan of mutual benefit was sensed by the task completed during interaction. A sense of positive feedback, self-care and sharing of knowledge was mentioned less often.

Nurses (49.2%) and patients (62.3%) indicated their motivation regarding the presence of context-sensitive communication as involving a sense of self-care management.

DISCUSSION OF RESEARCH RESULTS

Demographically, this study replicates the multilingual and multicultural South African society within which the study took place. In a discussion of intercultural communication in South Africa, Ntuli (2012:20, 29), draws attention to the potential for misunderstanding and conflict during interaction involving people from diverse languages and cultures. Ntuli proposes that, to avoid misunderstandings, interaction should take place in a situation characterised by mutual respect and understanding, and that should be facilitated within an interactive learning environment.

Training and information on communication skills and disease-related matters are essential components of the participatory communication process. However, in this study, the majority of nurses and patients had received minimal or no training and information covering these two important aspects. Murphy, Mash and Malan (2016:249) also report that South African health care providers are poorly prepared to facilitate the shift to a patient-centred care approach, mainly due to a lack of appropriate knowledge and skills.

In this study, privacy was not adhered to during nurse-patient interactions. A recent study found that patient satisfaction with health services improved when privacy was respected (Nunu & Munyewende, 2017:2071).

The mean length of nurse-patient interactions reported in this study was a mere 6 minutes. Participatory communication embraces interaction that is packed with discussion, feedback, compromise and shared decision-making (Govender, 2011:60) and, thus, this short duration is a source of concern to the researchers. The SEMDSA recommendations include a structured and standardised outline for a diabetes consultation in health facilities (SEMDSA, 2017:S20-S21). The interaction duration of 6 minutes as reported by this study, appears inadequate to fulfil the requirements of the SEMDSA recommendations.

In this study tailored health messages were not used consistently to address the individual health needs of patients. When patients believed that their needs had not been taken into account by the health care providers, that they did not understand the information provided, or that the information did not address their immediate needs, patients were reluctant to participate in interaction (Vermund, Mallalieu, Van Lith & Struthers, 2017:S1).

In the current study, the antecedent element, positive attitude, and the identified sub-elements were inconsistently presented by nurses and patients during interaction. Attempts to build genuine and empowering health partnerships between nurses and patients in this study were hampered by study participants' divergent approaches to health dialogue. Studies by Murphy, Chuma, Matthews, Steyn and Levitt (2015:4) and Tobiano, Marshall, Bucknall and Chaboyer (2016:367-368) show similar results to this study. These studies found that health care providers and patients enter the interactional environment with the need and desire to participate, yet they are overwhelmed by earlier experiences. As a result, health care providers and patients succumb to a normative and non-participatory approach.

The antecedent, respect and sensitivity, and its related sub-elements in the reported study, were not consistently observed during nurse and patient interaction. The sub-element inconsistencies included, language, culture and beliefs and health literacy. Awareness of and sensitivity to the process and boundaries of intercultural communication between people of different cultures are required if participatory interactions are to be enhanced (Ntuli, 2012:29). Mutual participation, focussed on the needs of patients, has the ability to not only improve health literacy, but simultaneously impove participatory communication (Schiavo, 2014:74).

The antecedent health dialogue elements identfied by Reid (2015) must be present to establish a participatory communication environment during nurse-patient interaction before the empirical referents and characteristics of health dialogue can materialise. However, this was not noted in this study, even though both nurses and patients expressed general satisfaction with the presence of the empirical referents, a shared responsibility/decision-making, a health plan of mutual benefit and the use of context-sensitive communication strategies during the interactions.

In contrast to this study's findings, Tobiano et al. (2016:368) noted that patient participation and a sense of shared responsiblity during nurse-patient interaction were adversely influenced by nurses' need to maintain control over the manner in which patients planned and implemented health plans. Coulter, Roberts and Dixon (2013:7) found that, in the absence the sharing of health care provider and patient expertise during interaction, the health care plans developed would pose challenges during patient implementation. Schiavo (2014:357), in relation to context-sensitive communication messages, states that messages can only be meaningfully delivered once the biophyscosocial context within which the health care goals are to be addressed, is understood.

CONCLUSION

In this study, antecedent health dialogue elements and sub-elements of positive attitude and respect and sensitivity, were inconsistently incorporated by nurses and patients during interaction with one another. Nevertheless, both nurses and patients expressed a general satisfaction with the presence of shared responsibility/decision-making, a health plan of mutual benefit and the use of context-sensitive communication strategies.

Both nurses and patients appear to be unprepared in the application of participatory communication at health facilities. It could be concluded that nurses and patients are unaware of and inadequately equipped to implement participatory health dialogue to its full potential.

RECOMMENDATIONS

Capacity building of patients and nurses is required, so that they can enhance participatory communication interactions, patient-centred communication and a patient-centred health care service approach.

LIMITATIONS OF THE STUDY

Generalisation to the target population should be done cautiously. Further similar observational descriptive research is needed to compare the findings of this study, enhance generalisation and contribute to the development of a health dialogue model for application in nursing practice.

The concept analysis of health dialogue (Reid, 2015) provided the theoretical foundation upon which the current study was based. The authors regret that this study could not refer to the reliability results of the OCHDE (although promising), because the work is yet to be published.

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CHAPTER 5: SUMMARY OF RESEARCH FINDINGS, RECOMMENDATIONS, LIMITATIONS, VALUE AND CONCLUSION OF STUDY

5.1 INTRODUCTION

Health communication is an integral component of patient-centred healthcare and, if it is executed effectively, it holds immense value for the life-enhancing health outcomes patients and nurses strive for. Health dialogue, a participatory communication paradigm method, is an essential component of meaningful health communication. The current study was carried out to assess the presence of health dialogue antecedent and empirical referent elements, as analysed conceptually, during nurse-patient interactions in health facilities.

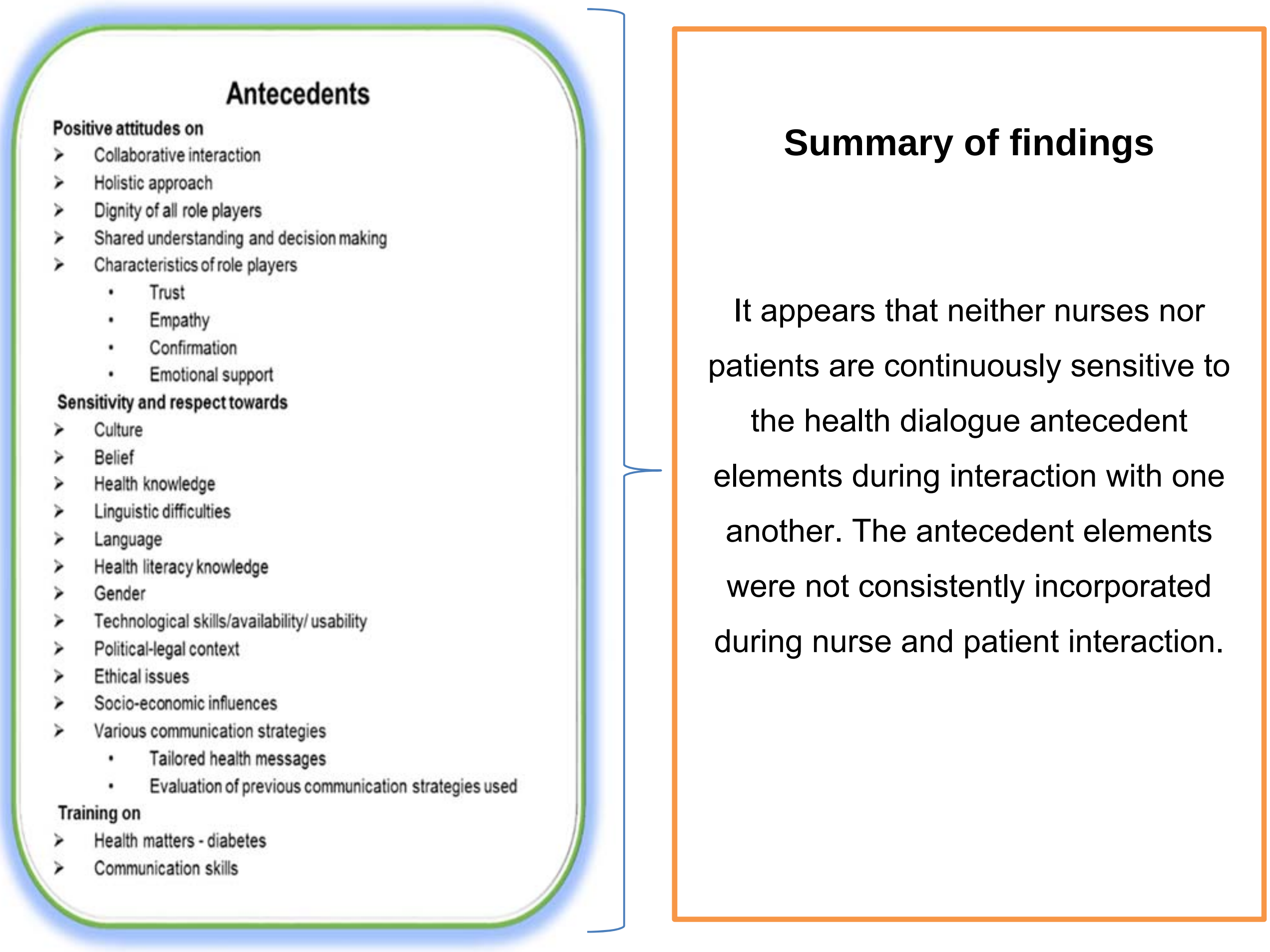
This chapter concludes the study by providing a summary of the findings, as addressed in Chapter 4, and a discussion of the recommendations based on the findings of the study. The limitations and value of the study are followed by personal reflection by the researcher; lastly, a conclusion closes this chapter.

5.2 SUMMARY OF RESEARCH RESULTS

A summary of antecedent and empirical referent element findings is provided in Paragraphs 5.2.1 and 5.2.2.

5.2.1 Antecedents

Health dialogue antecedent elements and the summary of findings are depicted in Figure 5.1.



Antecedents

Positive attitudes on

- Collaborative interaction
- Holistic approach
- Dignity of all role players
- Shared understanding and decision making
- Characteristics of role players
  - Trust
  - Empathy
  - Confirmation
  - Emotional support

Sensitivity and respect towards

- Culture
- Belief
- Health knowledge
- Linguistic difficulties
- Language
- Health literacy knowledge
- Gender
- Technological skills/availability/ usability
- Political-legal context
- Ethical issues
- Socio-economic influences
- Various communication strategies
  - Tailored health messages
  - Evaluation of previous communication strategies used

Training on

- Health matters - diabetes
- Communication skills

Summary of findings

It appears that neither nurses nor patients are continuously sensitive to the health dialogue antecedent elements during interaction with one another. The antecedent elements were not consistently incorporated during nurse and patient interaction.

Figure 5.1: Health dialogue antecedents and summary of findings

5.2.2 Empirical referents

Health dialogue referent elements and the summary of findings are depicted in Figure 5.2.

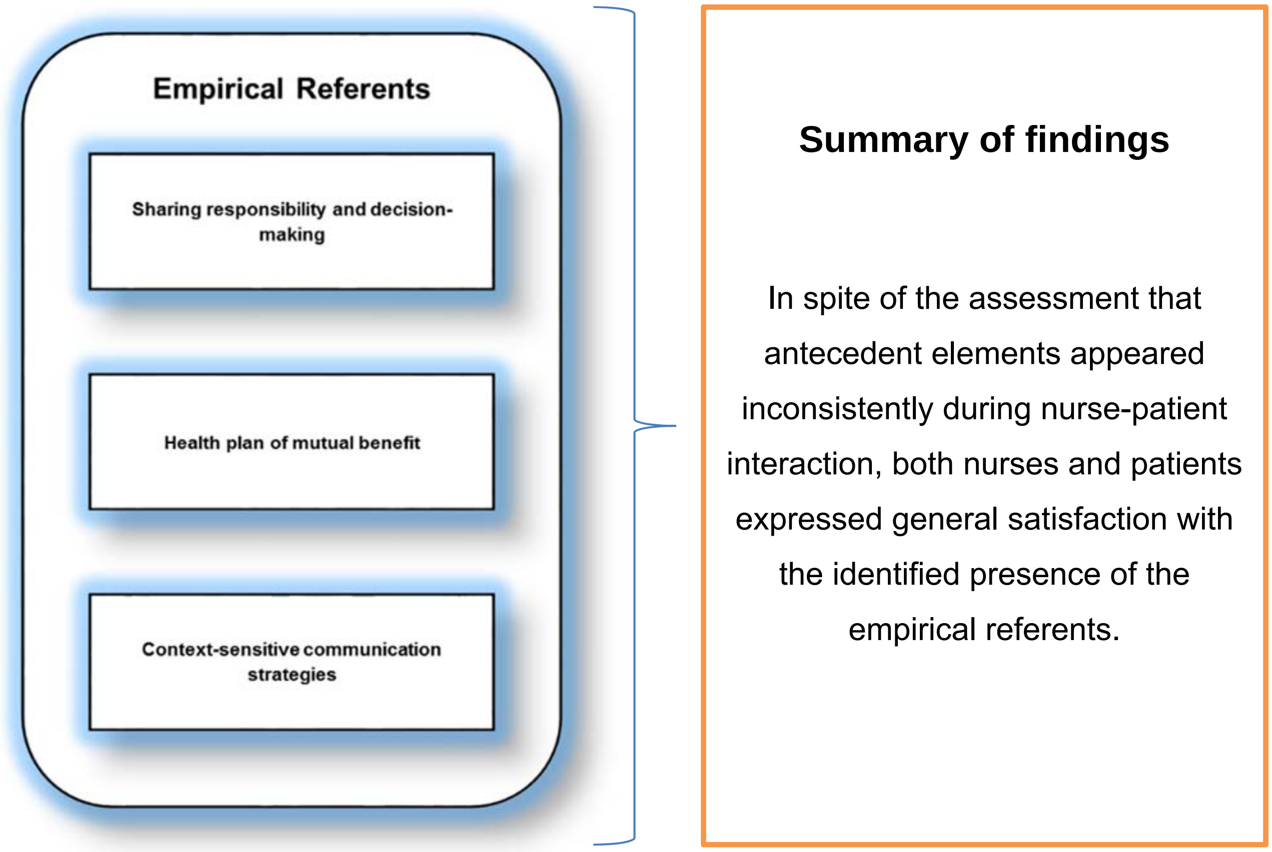


Figure 5.2: Health dialogue empirical referents and summary of findings

5.3 RECOMMENDATIONS

Recommendations that address antecedent and empirical referent health dialogue element findings are depicted in Table 5.1. The recommendations are based on the following rationale. The health dialogue concept appears to:

- in its totality and in the operationalisation of the elements, provide purposeful guidance and clarity for the implementation of health dialogue and participatory health communication in practice;
- be meaningfully located and embedded within patient-centred health care and patient-centred health communication;
- offer and encourage clarification and acknowledgement of the respective roles and responsibilities of nurses and patients during the building of a reciprocal health relationship; and

- promote patient-centred health care and provide support for patients and nurses needing assistance to transition from a biophysical health care approach to a holistic patient-centred health care approach.

Table 5.1: Recommendations related to findings

Recommendations for specific role-players	Overall association for health dialogue concept - antecedent and empirical referent elements
Provincial Department of Health	
Present interactive workshops to provide nursing managers of each health facility with information regarding health dialogue, patient-centred health care and patient-centred communication. Encourage comparative analysis between evidence provided and current nurse-patient interactions in health facilities.	Commitment to implementation of health dialogue during nurse-patient interactions in health facilities.
Task health facility nurse managers with the implementation of capacity-building programmes, using the provided learning material. The purpose of these programmes is to encourage the behavioural change needed to align health facilities with SEMDSA recommendations, namely, a patient-centred health care service approach.	Creation of a positive environment that will encourage health dialogue implementation during nurse-patient interactions in health facilities.
Identify, together with nurse managers, and acknowledge barriers and enablers to change, and meaningfully assist the managers with appropriate implementation plans to reduce possible obstacles to the implementation of participatory communication.	Continued support and assistance with problem-solving and decision-making will enhance the success of health dialogue implementation in practice. Building meaningful collaborative working relationships with nurse managers using interactive dialogue, will serve to reinforce the antecedent and empirical referents in practice.
Request quarterly feedback with regard to participatory communication and health dialogue implementation in health facilities.	

Recommendations for specific role-players	**Overall association for health dialogue concept - antecedent and empirical referent elements**
Health facility nurse managers	
Health facility nurse managers, supported by a diabetes educator, should present short (<hour) interactive group discussions with nurses in health facilities to address patient-centred health care approach compliance, patient-centered communication and health dialogue.	Orientation to the health dialogue concept and the antecedent and empirical referent elements will create the foundation on which to build capacity as well as provide insight into current health dialogue knowledge and practices in the health facilities. Introduction to the concept and element content will promote the establishment of a purposeful commitment to health dialogue that both nurses and patients must display during participatory interaction in health facilities.
List mutually agreed upon learning needs identified during group discussions. These needs are to be addressed during additional capacity-building educational sessions.	Information on each of the antecedent and empirical referent elements should be dealt with in more detail to ensure that nurses have sufficient knowledge and skills to implement and promote health dialogue in the health facilities.
Monitor and support progress by nurses and patients during weekly feedback sessions. Nurse accompaniment during interactions with patients, and patient education sessions, may provide meaningful insight into the incorporation of health dialogue and participatory health communication into health services.	Demonstration of support through active involvement to ensure that health dialogue becomes an integrated practice within each health facility.

Recommendations for specific role-players	Overall association for health dialogue concept - antecedent and empirical referent elements
Nurses	
Nurses to implement and or continue with a patient-centred health approach to service delivery using participatory health communication and health dialogue elements as discussed and in line with learning material provided.	It is vital to create a supportive and enabling environment in health facilities to ensure that interactive health dialogue materialises. Guided by the health dialogue concept and patients' needs, build meaningful health relationships and develop mutual health plans through interactive dialogue.
Activate health dialogue and promote a supportive learning environment during nurse-patient interactions.	Relationship building between nurses and patients is a process that occurs over time and with the commitment of both nurse and patient.
Provide feedback during weekly clinic meetings regarding progress made with the implementation of health dialogue elements and participatory communication.	Reflection on and interaction with colleagues is needed to build and support the implementation of health dialogue in the health facility

Recommendations for specific role-players	Overall association for health dialogue concept - antecedent and empirical referent elements
Patients	
To attend ongoing monthly interactive information and health education sessions at all health facilities, lasting 30-60 minutes each, specifically targeting development of participatory communication skills and diabetes self-management care, which include: • the principles, purpose and promotion of active patient participation during interaction with a healthcare provider; • the decision-making process; • determination of health goals and development of action plans to address these goals; • problem-solving skills; • • healthy lifestyle choices; and • • prevention of diabetes complications.	Training and information on diabetes and communication skills is required to provide patients with the knowledge and skills to activate participatory involvement during health dialogue. In order to promote an equal and reciprocal health relationship, both patients and nurses must understand the expertise each brings to the health dialogue interaction. Encouraging interactive dialogue by building patient self-esteem through ongoing education and support covering all elements and sub-elements of health dialogue.
Each visit and information session at the health facility attended by the patient must be recorded. Should the patient not make use of the recommended interactive patient group information sessions, the attending nurse is to assist with more detailed individual diabetes and communication information sessions.	Continued non-judgemental support to promote reciprocal health relationships between nurses and patients.

5.4 LIMITATIONS

Generalisability to the target population should be done cautiously. Although the sample selection of this study represented the target population located in one geographical district of the Northern Cape as selected through proportional sampling of public and private health facilities, convenience sampling of patients with diabetes and nurses was carried out. Unavailability of registered and enrolled nurses' during data collection resulted in a reduced number of patient and nurse observations being carried out. Due to the geographical vastness of the Northern Cape additional districts could not be included in this study to enhance generalisability; doing so would have placed severe financial and time constraints on the researcher.

Health dialogue is a new concept, even though the term dialogue has been used, without clarification, in many communication studies. Using the concept analysis of health dialogue (Reid, 2015) created the foundation of the current study. It is, therefore, unfortunate that the reliability results of the OCHDE (that seem to be very promising) could not be referred to in the study, because the work has not been published yet.

5.5 VALUE OF THE STUDY

The conceptualisation of health dialogue provided a significant foundation for building participatory health communication between nurses and patients in health facilities. This study, guided by the conceptual map of health dialogue, assessed the presence of antecedent and empirical referent elements during nurse-patient interactions in health facilities. The study findings note that neither nurses nor patients consistently incorporated antecedent health dialogue elements during interaction with one another. Even in the presence of inconsistent incorporation of antecedent elements, both nurses and patients expressed satisfaction that the empirical referents were present. The findings appear to suggest that nurses and patients are unprepared for the meaningfully implementation of health dialogue within a participatory health paradigm in health facilities.

Capacity building of both nurses and patients is recommended to provide them with the necessary knowledge, skills and attitudes to enable the application of health dialogue during nurse-patient interaction in health facilities.

5.6 REFLECTIONS ON CONCLUSION OF STUDY

A personal aspiration has become a reality. After many years of contemplation, am I pleased that I undertook to commit to the research study? Yes, I am.

On reflection, the sometimes arduous research journey required perseverance, self-discipline and humility. Whilst this may sound ominous, I recall that I experienced a sense of personal delight in discovering new information. The constant unravelling of new knowledge sustained me as I watched the study grow, chapter by chapter.

Not only has the completion of this study provided me with an introductory understanding of research methodology, the topic I researched provided me with invaluable insight into wound care management – my nursing practice. The opportunity to integrate theory and practice not only enriched the research experience, but has provoked many honest and open collaborative interactions between myself and patients.

The consequence of this study is that it has provided me with a firm belief that knowledgeable nurses and patients will be able to implement health dialogue meaningfully during interaction in health facilities.

5.7 CONCLUSION

The aim of this study, in answer to the research question, was to describe the presence of health dialogue elements during health communication between patients with diabetes and nurses in a Northern Cape local municipality. The literature study provided an understanding of the research subject matter to include health dialogue and the health dialogue elements, health communication, patients with diabetes and nurses and the health setting where the research problem was sourced. The research methodology was addressed to provide insight into research process conducted to answer the research question. The article provided a study synopsis, the study findings and a discussion of these findings for which recommendations were made in chapter 5.

COMMUNICATION IS A SKILL THAT YOU CAN LEARN. IT’S LIKE RIDING A BICYCLE OR TYPING. IF YOU’RE WILLING TO WORK AT IT, YOU CAN RAPIDLY IMPROVE THE QUALITY OF EVERY PART OF YOUR LIFE.

BRIAN TRACY.

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ANNEXURE A

OBSERVATIONAL CHECKLIST OF HEALTH DIALOGUE ELEMENTS

Checklist number

Diabetes

Only observe patients who:
- ☐ have signed the consent form
- ☐ are older than 18 years
- ☐ have been diagnosed with diabetes and returning for follow-up and able to speak Afrikaans, English or Tswana during observation

Only observe nurses who:
- ☐ have signed the consent form
- ☐ are in consultation with a diabetic patient
- ☐ are employed in identified facility
- ☐ are registered or enrolled nurses
- ☐ are able to speak Afrikaans, English or Tswana

Instructions – indicate the appropriate answer (☒), or write your answer in the space provided.

1. **Name of facility**

____

2. **Type of diabetes with which patient has been diagnosed:**

☐ Type I ☐ Type II

☐ Other____

3. **Language in which interview was conducted**

☐ Afrikaans ☐ English ☐ Tswana

4. **Date questionnaire is completed** …../……/……. (dd / mm / yy)

Field notes:

....

....

....

....

....

....

....

....

PART 1: NURSE AND PATIENT PROFILE

Demographic information

	Nurse	Patient
5.	Gender ☐ Male ☐ Female	Gender ☐ Male ☐ Female
6.	How old are you in years ………. years	How old are you in years ………. years
7.	What is your home language? Please specify_________________________	What is your home language? Please specify_________________________
8.	What is your highest level of education? ☐ Certificate ☐ Diploma ☐ Degree	What is your highest level of education? ☐ No schooling ☐ Some primary schooling ☐ Completed primary school ☐ Some secondary school ☐ Completed secondary school ☐ Diploma ☐ Degree
9.	Have you received any diabetes related training in your professional capacity during the past 12 months? If Yes, state content covered _________________________ _________________________ _________________________	Have you been told anything about diabetes in the last 12 months? If Yes, state content covered _________________________ _________________________ _________________________
10.	Have you received any training on communication skills in the last 12 months? If Yes, state content covered _________________________ _________________________ _________________________	Have you received any information on how to communicate/talk to others in the last 12 months? If Yes, state content covered _________________________ _________________________ _________________________
11.	How long have you been consulting patients with diabetes in your professional capacity? ………. Years	How long ago were you diagnosed with diabetes? ………. Years

12. Time interview started:

H H : M M

Note: Start recording interview

To complete Part 2 and 3 on antecedents and empirical referents, the nurse and patient should be observed simultaneously.

Use the following scale when rating elements

1	Element not observed
2	Element observed , but not consistently displayed/responded to
3	Element consistently displayed/responded to

OR

Yes/*No* when indicated

PART 2: ANTECEDENTS

PART 2.1: POSITIVE ATTITUDE

During diabetes related health dialogue, the following elements have been observed/ responded to:

	Nurse	Patient
Collaborative interaction		
13.	Collaborative two-way interaction 1 2 3	13. Collaborative two-way interaction 1 2 3
Holistic approach		
	Response to illness:	Response to illness:
14.	Physically 1 2 3	Physically 1 2 3
15.	Emotionally 1 2 3	Emotionally 1 2 3
16.	Spiritually 1 2 3	Spiritually 1 2 3
17.	Socially 1 2 3	Socially 1 2 3
Dignity		
18.	Introduced themselves in a friendly manner ☐…Yes ☐…No	Introduced themselves in a friendly manner ☐…Yes ☐…No
19.	Ensured privacy throughout 1 2 3	

Shared understanding/decision making

20a.	Identified reason for visit: ☐…Yes ☐…No	Identified problem/reason for visit: ☐…Yes ☐…No
20b.	Identified problem ☐…Yes ☐…No	Identified problem ☐…Yes ☐…No
21.	Agreed on planned outcome: 1 2 3	Agreed on planned outcome: 1 2 3
22.	Clarified responsibilities/actions in order to reach outcome: 1 2 3	Understands responsibilities/actions in order to reach outcome: 1 2 3

Characteristics of role players

	Characteristic		Characteristic	
23.	Trust	1 2 3	Trust	1 2 3
24.	Empathy	1 2 3	Responsive to empathy	1 2 3
25.	Verification of meaning	1 2 3	Verification of meaning	1 2 3
26.	Emotional support	1 2 3	Responsive to emotional support	1 2 3

PART 2.2: SENSITIVITY/RESPECT

	Nurse	Patient
	Gender sensitivity	
27.	Stereotyping of gender observed ☐…Yes ☐…No	Stereotyping of gender observed ☐…Yes ☐…No

Language/linguistic difficulties

28.	Clarified terminology used	Showed understanding of terminology used
	1 2 3	1 2 3

Culture/beliefs

29.	Sensitivity regarding health beliefs	Responded to sensitivity shown towards health beliefs
	1 2 3	1 2 3

Sensitivity towards health knowledge

30.	Recognised existing health knowledge	Responded to recognition of health knowledge
	☐…Yes ☐…No	☐…Yes ☐…No
31.	Validated understanding of health knowledge	Responded to validation of health knowledge
	1 2 3	1 2 3

Health literacy

32.	Sensitive towards patient's ability to read health information	Responded to sensitivity towards ability to read health information
	1 2 3	1 2 3
33.	Sensitive towards patient's ability to understand health information	Responded to sensitivity towards ability to understand health information
	1 2 3	1 2 3

Technology

34.	Sensitive towards electronic devices used by patient	Responded to sensitivity towards devices used
	1 2 3	1 2 3

Political-legal context

35.	Consultation held within a legal framework	Showed respect for consultation within legal framework
	1 2 3	1 2 3

Ethical issues

36.	Requested whether sensitive information could be discussed 1 2 3	Agreed that sensitive information could be discussed 1 2 3

Socio-economic influences

37.	Sensitive towards socio-economic influences on treatment 1 2 3	Responded to sensitivity towards socio-economic influences on treatment 1 2 3
38.	Evaluation of previous strategies used to reach identified goal 1 2 3	Responded to evaluation of previous strategies used to reach identified goal 1 2 3

39. Time interview ended:

H H : M M

To complete Part 3, interview nurse and patient individually

PART 3: EMPIRICAL REFERENTS

PART 3.1: SHARED RESPONSIBILITY/DECISION-MAKING

	Nurse	Patient
40.	Have you experienced a sense of shared responsibility during this consultation? Please motivate	Have you experienced a sense of shared responsibility during this consultation? Please motivate
	☐ Yes ☐ No	☐ Yes ☐ No

41.	Did you benefit from this consultation? Please motivate ☐ Yes ☐ No ______________________________ ______________________________ ______________________________	Did you benefit from this consultation? Please motivate ☐ Yes ☐ No ______________________________ ______________________________ ______________________________
42.	Where you able to consider the patient’s circumstances during the consultation? Please motivate ☐ Yes ☐ No ______________________________ ______________________________ ______________________________	Did you experience that the nurse considered your circumstances during this consultation? Please motivate ☐ Yes ☐ No ______________________________ ______________________________ ______________________________

PART 4: INTERVIEWER QUESTION

43 On a scale of 1–4, to what extent did the nurse convey a tailored health message?

☐ 1 ☐ 2 ☐ 3 ☐

ANNEXURE B

GUIDELINES FOR COMPLETION OF THE OBSERVATIONAL CHECKLIST

Familiarize yourself with the content of this guideline prior to observation of consultation
Only interview/observe patients and nurses who meet all the inclusion criteria, namely:

Patients:

☐ who have signed the consent form

☐ who are older than 18 years

☐ who have been diagnosed with diabetes and returning for a follow up visit

☐ who are able to speak Afrikaans, English or Tswana during observation

Nurses:

☐ who have signed the consent form

☐ who are in consultation with diabetic patients

☐ who are employed at an identified facility.

☐ who are registered or enrolled nurses

☐ who are able to speak Afrikaans, English or Tswana

Use the following instructions as a guideline when completing the observation checklist:

- Provide checklist with a number in the dedicated block. Start numbering as 01.
- Questions 1–11: Complete with the identified patient and nurse *prior* to them entering a consultation. These interviews need to be conducted individually and in private.
- Question 12: Note the time the consultation starts. When at question 12, start audio recording the consultation. NOTE: *Immediately audio record the number of the consultation*. Stop recording at question 38.
- Questions 13–38: Need to be completed whilst the consultation is in progress.
- Questions 40-42: Need to be completed with the identified patient and nurse *after* the consultation. These interviews need to be conducted individually and in private.
- Field notes can be made throughout interview.

Questions 1–11
Indicate the appropriate answer (☒), or write the answer in the space provided on the checklist

1 Write down name of facility where the interview is conducted.
2 Indicate with which type of diabetes the patient has been diagnosed.
3 Indicate language in which interview was conducted.
4 Write down date questionnaire is completed, in order of day, month, and year.
5 Indicate gender.
6. Indicate age in years – write down the current age of the person.
7. Indicate person’s home language – indicate the language most often spoken at home.
8. Indicate highest level of education completed.

	Nurse	***Patient***
9	Have you received any diabetes-related training in your professional capacity during the past 12 months? If yes, state content covered.	Have you received any information about diabetes during the past 12 months? If yes, state content covered.
	If answer is ***no***: Write down No training/no information If answer is ***yes***: Write down the content covered during the training for nurses. Information for patients may have been received via the radio/family members. • Answers could be: symptoms, treatment or prevention of diabetes.	
10	Have you received any communication skills training in your professional capacity during the past 12 months? If yes, state content covered.	Have you received any information on how to talk to others during the past 12 months? If yes, state content covered.
	If answer is ***no***: Write down No training/no information If answer is ***yes***: Write down the content covered during the communication skills training for nurses and for patients, information obtained via the radio/family members. • Answers could be: listening skills, reflection or validation.	
11	How long have you been consulting patients with diabetes in your professional capacity?	How long ago were you diagnosed with diabetes?
	When asking the question, it does not include only consultation at the facility where the nurse is currently working, but rather throughout his/her career.	Write down the time period as indicated by the patient Answers could be: 4 weeks or 15 years.

NOTE: *Start recording of interview after having recorded the checklist number*.

12	Time interview started:	
	Write time in 24-hour format, e.g. 13:10.	

Make use of the following rating scale to record what is or has been observed during the interview.

1	Element not observed
2	Element observed , but not consistently displayed/responded to
3	Element consistently displayed/responded to

OR

Yes/ No when indicated.

Questions 13–38 involves the observation of both the patient and nurse whilst the consultation is in progress. Number 3 on the rating scale equals the golden standard to a health dialogue element – refer to standard set in guideline box.

NOTE:
On completion of the data collection day, each fieldworker will once again listen to the recorded consultations to verify and confirm individual ratings of elements on the observation checklists.

13	Collaborative two-way interaction	Collaborative two-way interaction
	Collaborative (shared) interaction between nurse and patient throughout consultation.	
14	Response to illness: physically	Response to illness: physically
	Physical response to illness throughout consultation whenever appropriate e.g. touching of hands or using non-verbal gestures.	
15	Response to illness: emotionally	Response to illness: emotionally
	Emotional response to illness throughout consultation whenever appropriate e.g. giving a tissue if crying.	
16	Response to illness: spiritually	Response to illness spiritually
	Spiritual response to illness throughout consultation whenever appropriate e.g. reference to Higher Being/God.	
17	Response to illness socially	Response to illness socially
	Social response to illness throughout consultation whenever appropriate e.g. type of transport services used to visit facility or maintained eye contact throughout.	
18	Introduced themselves in a friendly manner	Introduced themselves in a friendly manner
	It is possible that the introductions might have taken place prior to the recording of the consultation, e.g. in waiting room. Note your observation in this regard, irrespective of when the introduction/greeting took place.	
19	Ensure privacy throughout	
	This question is only applicable to the nurse. Privacy is ensured throughout the consultation, e.g. consultation behind a closed door.	
20a	Identified reason for visit	Identified reason for visit
	Main reason for visit established.	
20b	Identified problem	Identified problem
	Any health problem(s) identified.	
21	Agreement on planned outcome	Agreement on planned outcome
	Nurse specifically states a *measureable* goal/end result in order to address the problem/client specific outcomes.	Patient verbally or non-verbally agreed to/acknowledged the stated *measurable* goal/end result in order to address the problem/ client specific outcomes.

22	Clarifies responsibilities/actions in order to reach outcome	Understands responsibilities/actions in order to reach outcomes.
	Nurse makes it clear during the consultation what she/he would do to address the problem.	Patient verbally or non-verbally indicates understanding of own responsibilities/actions needed.
23	Characteristic: Trust	Characteristic: Trust
	Expression/establishment of trust in a verbal or non-verbal manner e.g. expression of trust in nurse/patient adhering to expected responsibilities/actions.	
24	Characteristic: Empathy	Characteristic: Empathy
	Display empathy throughout consultation whenever appropriate e.g. reflection on patient’s emotions/sharing understanding.	
25	Verification of meaning	Verification of meaning
	Verify meaning of words/gestures throughout consultation whenever appropriate e.g. possible inconsistency between verbal or non-verbal responses.	
26	Emotional support	Emotional support
	Display emotional support throughout consultation whenever appropriate e.g. acting compassionately.	
27	Stereotyping of gender observed	Stereotyping of gender observed
	No stereotyping of gender observed e.g. male patients not being able to stick to diet regulations due to them having to eat what their wives cook.	
28	Clarifies terminology used	Shows understanding of terminology used
	Clarifies terminology used throughout consultation whenever appropriate e.g. asking the patient whether he/she understood a specific word with the patient responding to such an explanation. The patient could also ask the nurse to clarify terminology.	
29	Sensitivity regarding health beliefs	Responds to sensitivity shown towards health beliefs
	Act sensitively regarding health beliefs e.g. the patient saying that the eating of cold *pap* is healthier than eating warm *pap,* and the nurse not saying that it is a harmful/wrong belief, but rather guiding the patient by incorporating this belief.	
30	Recognises existing health knowledge	Responds to identified existing health knowledge
	Act sensitively regarding existing health knowledge e.g. asking about health knowledge such as “exercise”, then using the answer to build the rest of the conversation.	

31	Validates understanding of health knowledge	Respond to validation of health knowledge
	Validates understanding of health knowledge e.g. asking the other party how he/she understood the conversation.	
32	Sensitive towards patient's ability to read health information	Responds to sensitivity towards ability to read health information
	Act sensitively towards patient's ability to read health information e.g. asking the patient whether he/she would be able to read a health pamphlet/poster and patient accepting such a concern shown by the nurse.	
33	Sensitive towards patient's ability to understand health information	Responds to sensitivity towards ability to understand health information
	Act sensitively towards patient's ability to understand health information e.g. asking patient whether he/she understand discussion related to disease.	
34	Sensitive towards electronic devices used by patients	Responds to sensitivity towards devices used by patient
	Act sensitively towards electronic devices used by patients e.g. asking the patient whether he/she has access to a cell phone/can read an SMS, and patient affirming this.	
35	Consultation held within a legal framework	Shows respect for consultation within legal framework
	Act within a legal framework throughout consultation e.g. referring patient according to policies/scope of practice and patient accepting such referral.	
36	Requests whether sensitive information could be discussed	Agrees that sensitive information could be discussed
	Manage sensitive information throughout the consultation in a manner acceptable to both parties e.g. sexual orientation and patient being comfortable with such request	
37	Sensitive towards socio-economic influences on treatment	Responds to sensitivity towards socio-economic influences on treatment
	Act sensitive towards socio-economic influences on treatment e.g. not necessarily expecting all patients to eat a balanced meal daily and patient accepting this.	
38	Evaluation of previous strategies used to reach identified goal	Responds towards evaluation of previous strategies used to reach identified goal
	Evaluation of previous strategies used to reach identified goal e.g. asking whether previously given health pamphlet was of any use/taking of medication.	

	Time interview ended	
39	Write time in 24-hour format, e.g. 13:30 NOTE: *Stop interview recording*	
	To complete Part 3, interview nurse and patient individually	
40	Have you experienced a sense of shared responsibility during this consultation? Please motivate	Have you experienced a sense of shared responsibility during this consultation? Please motivate
	If answer is *no*: Write down No shared responsibility experienced If answer is *yes*: Write down the response e.g. “I felt that we both agreed on the treatment/we jointly decided what to do next.”	
41	Did you benefit from this consultation? Please motivate	Did you benefit from this consultation? Please motivate
	If answer is *no*: Write down No benefit from consultation If answer is *yes*: Write down the response e.g. “No, not sure; I had just finished with another patient/Yes, I received my medication.”	
42	Were you able to consider the patient’s circumstances during the consultation? Please motivate	Did you experience that the nurse considered your circumstances in this consultation? Please motivate
	If answer is *no*: Write down Not able to consider patients consultation If answer is *yes*: Write down the response e.g. “Yes, she is poor, but I could not really help her/Yes, she said she does not have fruit and vegetables to eat every day “	

	Fieldworker to complete question 43 directly after completion of the questionnaire	
43	On a scale of 1-4, to which extent did the nurse convey a tailored health message? 1= very poor 2= poor 3= good 4= very good	
	‘Tailored health message’ means that the health messages/nursing actions met the particular patient’s needs. Write down a number between 1 and 4.	

ANNEXURE C

UNIVERSITY OF THE
FREE STATE
UNIVERSITEIT VAN DIE
VRYSTAAT
YUNIVESITHI YA
FREISTATA
UFS·UV
HEALTH SCIENCES
GESONDHEIDSWETENSKAPPE

IRB nr 00006240
REC Reference nr 230408-011
IORG0005187
FWA00012784

16 March 2016

MRS LJ TALBOT
C/O DR M REID
SCHOOL OF NURSING
IDALIA LOOTS BUILDING
UFS

Dear Ms Talbot

HSREC 22/2016
PROJECT TITLE: HEALTH DIALOGUE ELEMENTS PRESENT DURING HEALTH COMMUNICATION BETWEEN NURSES AND PATIENTS WITH DIABETES IN A NORTHERN CAPE LOCAL MUNICIPALITY

1. You are hereby kindly informed that, at the meeting held on 15 March 20216, the Health Sciences Research Ethics Committee (HSREC) approved the above project after all conditions were met.
2. The Committee must be informed of any serious adverse event and/or termination of the study.
3. Any amendment, extension or other modifications to the protocol must be submitted to the HSREC for approval.
4. A progress report should be submitted within one year of approval and annually for long term studies.
5. A final report should be submitted at the completion of the study.
6. Kindly use the **HSREC NR** as reference in correspondence to the HSREC Secretariat.

The HSREC functions in compliance with, but not limited to, the following documents and guidelines: The SA National Health Act. No. 61 of 2003; Ethics in Health Research: Principles, Structures and Processes (2015); SA GCP(2006); Declaration of Helsinki; The Belmont Report; The US Office of Human Research Protections 45 CFR 461 (for non-exempt research with human participants conducted or supported by the US Department of Health and Human Services- (HHS), 21 CFR 50, 21 CFR 56; CIOMS; ICH-GCP-E6 Sections 1-4; The International Conference on Harmonization and Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH Tripartite), Guidelines of the SA Medicines Control Council as well as Laws and Regulations

Yours faithfully

DR SM LE GRANGE
CHAIR: HEALTH SCIENCES RESEARCH ETHICS COMMITTEE

Health Sciences Research Ethics Committee
Office of the Dean: Health Sciences
T: +27 (0)51 401 7795/7794 | F: +27 (0)51 444 4359 | E: ethicsfhs@ufs.ac.za
Block D, Dean's Division, Room D104 | P.O. Box/Posbus 339 (Internal Post Box G40) | Bloemfontein 9300 | South Africa
www.ufs.ac.za

TITLE CHANGE

From: Marisia Minnaar
Sent: Wednesday, 02 May 2018 9:24 AM
To: Marianne Reid <ReidM@ufs.ac.za>
Subject: Registration of title student LJ Talbot

Dear Dr Marianne Reid

Please see below for the decision by the Faculty Board on 14 February 2017 concerning student Talbot.

(iii) School of Nursing

(a) Candidate: **LJ Talbot**
Student number: 2006069112

Degree: MSocSci (Nursing) NVRT8900 (Article format)

Title: HEALTH DIALOGUE ELEMENTS PRESENT DURING HEALTH COMMUNICATION BETWEEN PATIENTS WITH DIABETES AND NURSES IN A NORTHERN CAPE LOCAL MUNICIPALITY

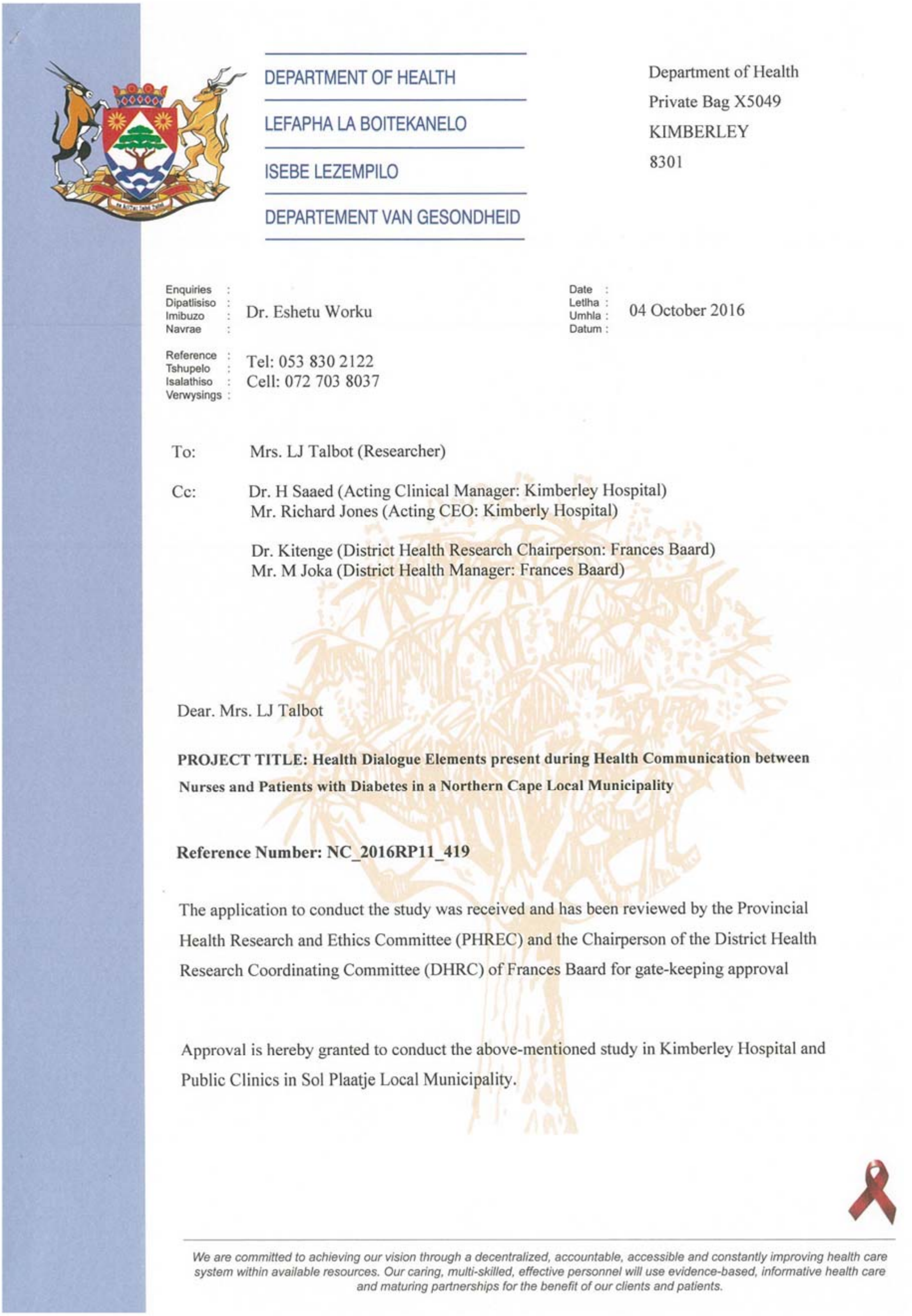
Internal supervisor: Dr M Reid

DECISION: **The registration of the title and the appointment of the supervisor were approved**.

Kind regards
Marisia Minnaar

Marisia Minnaar
Senior Assistant Officer: Administration Faculty of Health Sciences
Faculty: Health Sciences
PO Box 339, Bloemfontein 9300, Republic of South Africa
051 401 7817
MinnaarMR@ufs.ac.za

ANNEXURE D



DEPARTMENT OF HEALTH
LEFAPHA LA BOITEKANELO
ISEBE LEZEMPILO
DEPARTEMENT VAN GESONDHEID

Department of Health
Private Bag X5049
KIMBERLEY
8301

Enquiries / Dipatlisiso / Imibuzo / Navrae : Dr. Eshetu Worku

Date / Letlha / Umhla / Datum : 04 October 2016

Reference / Tshupelo / Isalathiso / Verwysings : Tel: 053 830 2122
Cell: 072 703 8037

To: Mrs. LJ Talbot (Researcher)

Cc: Dr. H Saaed (Acting Clinical Manager: Kimberley Hospital)
Mr. Richard Jones (Acting CEO: Kimberly Hospital)

Dr. Kitenge (District Health Research Chairperson: Frances Baard)
Mr. M Joka (District Health Manager: Frances Baard)

Dear. Mrs. LJ Talbot

PROJECT TITLE: Health Dialogue Elements present during Health Communication between Nurses and Patients with Diabetes in a Northern Cape Local Municipality

Reference Number: NC_2016RP11_419

The application to conduct the study was received and has been reviewed by the Provincial Health Research and Ethics Committee (PHREC) and the Chairperson of the District Health Research Coordinating Committee (DHRC) of Frances Baard for gate-keeping approval

Approval is hereby granted to conduct the above-mentioned study in Kimberley Hospital and Public Clinics in Sol Plaatje Local Municipality.

We are committed to achieving our vision through a decentralized, accountable, accessible and constantly improving health care system within available resources. Our caring, multi-skilled, effective personnel will use evidence-based, informative health care and maturing partnerships for the benefit of our clients and patients.

Please note the following:

1. ***This approval is valid for one year from the date of approval***
2. ***The researcher is hereby requested to make arrangement with the each Facility Manager on when she will be visiting the each Facility***

Please note the conditions below:

1. This project shall be conducted at no cost to the Northern Cape Department of Health
2. This approval is limited to the research proposal as submitted in the application
3. No variation or modification on the research project
4. PHREC may monitor the project at any time
5. At the completion of your study, a copy of your final report must be submitted to the Research and Development Directorate
6. The Northern Cape Department of Health Senior Management Committee shall be briefed on the outcome of the study prior to publishing

The committee wishes you success on your research study

Yours Faithfully

Dr. Eshetu Worku
Chairperson: PHREC
E-mail: eworku@ncpg.gov.za
Tel: 053 830 2122
Cell: 072 703 8037

04|10|2016
Date

ANNEXURE E

3 Mark Street
Kestelhof
Kimberley.
8301.

16 February 2016.

Dr J Mynhardt

Centre for Diabetes and Endocrinology

Mediclinic Gariep

Room 105

112 McDougal Street

Kimberley

8301.

Dear Dr Mynhardt

PERMISSION TO CONDUCT RESEARCH WITHIN THE CENTRE FOR DIABETES AND ENDOCRINOLOGY

RESEARCH TITLE: HEALTH DIALOGUE ELEMENTS PRESENT DURING HEALTH COMMUNICATION BETWEEN PATIENTS WITH DIABETES AND NURSES IN A NORTHERN CAPE LOCAL MUNICIPALITY

This research study I have chosen forms part of a complex and phased research intervention undertaken by researchers at the School of Nursing, Free State University with the aim of developing and testing a health dialogue model for patients with diabetes.

The rapid increase in the number of people affected by diabetes is a world-wide phenomenon. According to the International Diabetes Federation in 2013, it is projected that sub-Saharan Africa will experience a 109% growth in patients with diabetes from 2013-2035. The consequence of this is an estimated 41.4 million people living with the non-communicable disease. South Africa together with the remainder of the sub-Saharan countries will be confronted with multiple socio-economic challenges unless concerted attempts are made to address this issue.

The National Department of Health has published a number of strategic documents over the past years to reach determined health goals. In 2011 the Strategic Plan for the prevention and control of non-communicable diseases 2013-2017 was published. This document not only addresses the management of diabetes among other health conditions but in their application, aims to accomplish “A long and healthy life for all South Africans”. The National Health Promotion Policy and

Strategy 2015-2019 document refers to concepts such as health promotion, communication and dialogue as a means to reach set health targets by encouraging people to take control of their own health through the development of the necessary skills.

This study will hopefully offer insight into communication and dialogue as it occurs on a daily basis between the nurse and patient with diabetes. Both public and private health institutions within the Sol Plaatje Local Municipality are to be involved in the 10 day data collection phase planned to commence in 2016. Data are to be collected by myself and a fieldworker whilst observing the nurse and patient interaction.

These observations will only proceed after written permission is received from both nurse and patient participants. An observational checklist developed following a concept analysis of the term health dialogue is to be applied. The findings will hopefully contribute in a meaningful manner towards the development of a health dialogue model which will benefit both nurse and patient.

It will be a privilege to continue with this study and an honour to have your support and that of Mediclinic as this study progresses. Without the available health facilities and the personnel in the field, this study will not be possible.

I will be happy to answer any queries regarding this study you may have and look forward to a positive response.

Thank you.

Yours truly,

LTalbot.

Lesley Janette Talbot (Mrs)

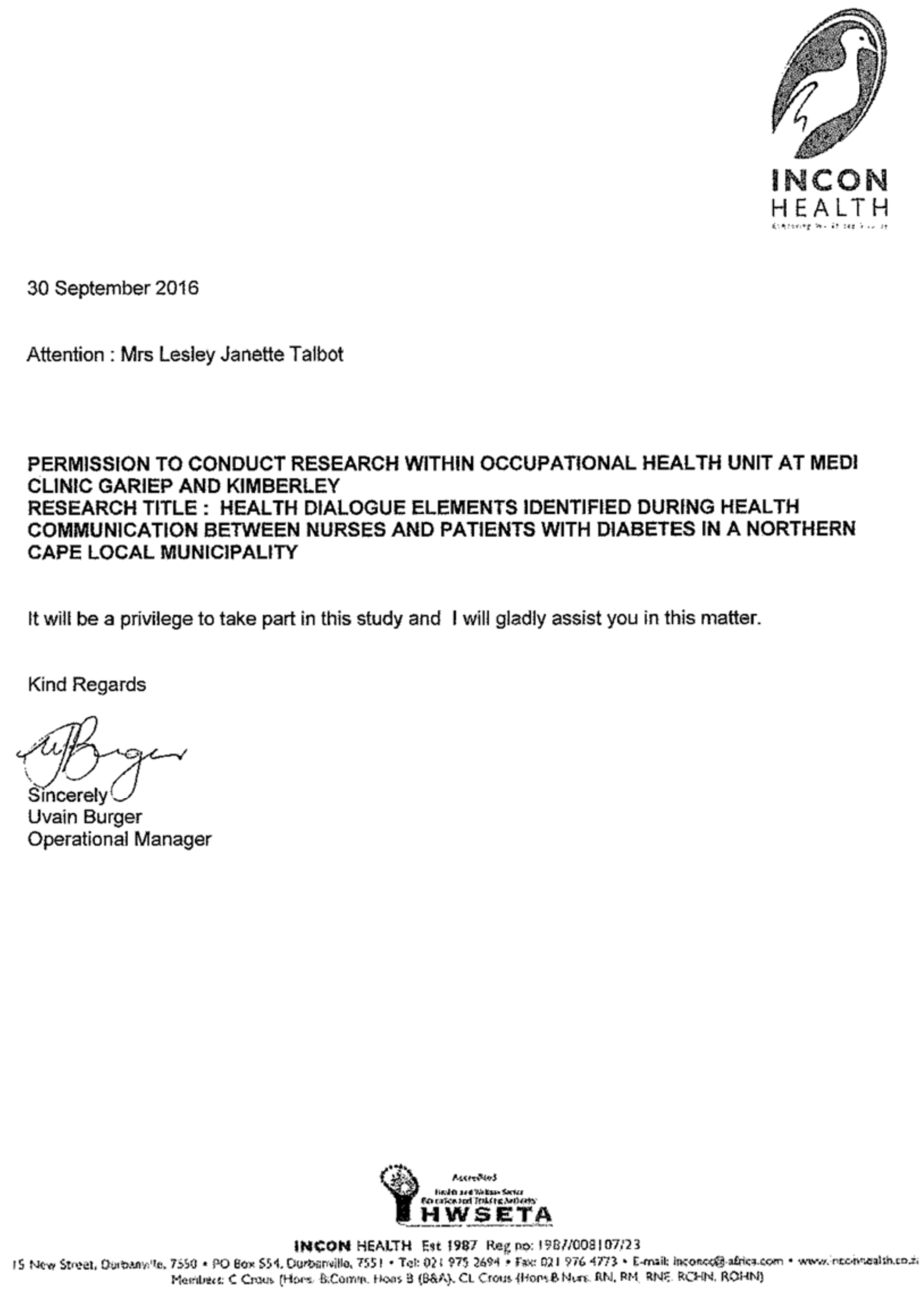
Cell: 072 176 7962
Email: lesley.talbot9@gmail.com

Enclosed: Approval – Health Sciences Research Ethics Committee

8/2/17

No objections as long as you obtain individual consent from each patient.

ANNEXURE F



INCON
HEALTH

30 September 2016

Attention : Mrs Lesley Janette Talbot

PERMISSION TO CONDUCT RESEARCH WITHIN OCCUPATIONAL HEALTH UNIT AT MEDI CLINIC GARIEP AND KIMBERLEY
RESEARCH TITLE : HEALTH DIALOGUE ELEMENTS IDENTIFIED DURING HEALTH COMMUNICATION BETWEEN NURSES AND PATIENTS WITH DIABETES IN A NORTHERN CAPE LOCAL MUNICIPALITY

It will be a privilege to take part in this study and I will gladly assist you in this matter.

Kind Regards

Sincerely
Uvain Burger
Operational Manager

Accredited
Health and Welfare Sector
Education and Training Authority
HWSETA

INCON HEALTH Est 1987 Reg no: 1987/008107/23
15 New Street, Durbanville, 7550 • PO Box 554, Durbanville, 7551 • Tel: 021 975 2694 • Fax: 021 976 4773 • E-mail: inconoc@iafrica.com • www.inconhealth.co.za
Members: C Crous (Hons. B.Comm. Hons B (B&A), CL Crous (Hons B Nurs. RN, RM, RNE, RCHN, ROHN)

ANNEXURE G

MEDICLINIC

MEDICLINIC OFFICES
STRAND ROAD
STELLENBOSCH
7600

PO BOX 456
STELLENBOSCH
[illegible]

T +27 21 809 6500
F +27 21 809 6756
ETHICS LINE [illegible]

[illegible]

23 November 2016

Ms LJ Talbot
3 Mark Street
Kestelhof
KIMBERLEY
830'

Dear Lesley

PERMISSION TO CONDUCT RESEARCH AT MEDICLINIC GARIEP

Your research proposal entitled *"Health dialogue elements identified during health communication between nurses and patients with diabetes in a Northern Cape Local Municipality"* refers.

It is in order for you to conduct your research at Mediclinic Gariep, and I wish you success with this project.

Yours sincerely

Estelle Coustas
DR ESTELLE COUSTAS
Nursing Executive

MEDICLINIC (PTY) LTD
REG. NO. [illegible]

ANNEXURE H

CONSENT TO PARTICIPATE IN RESEARCH

RESEARCH TITLE: HEALTH DIALOGUE ELEMENTS PRESENT DURING HEALTH COMMUNICATION BETWEEN PATIENTS WITH DIABETES AND NURSES IN A NORTHERN CAPE LOCAL MUNICIPALITY

You have been asked to participate in your capacity as the patient or the nurse in this research study. You have been informed about the study by ……………………………………………. You may contact ……………………….at any time on ………………………should you have questions about the research study. You may also contact the Secretariat of the Health Sciences Research at the University of the Free State on telephone number (051) 401 7794/5 if you have any questions about your rights as a research participant.

Your participation in this research is voluntary, and you will not be penalized or lose benefits if you refuse to participate or decide to terminate participation.

Your consent to participate includes that you give permission for the use of an audio recorder during the consultation. This information is for the exclusive use of the researcher and the fieldworker who will make use of the recording to review and verify written data collected.

Both instruments used during the interview namely, the audio-recording and the observational checklist will be coded. No participant name will appear on these observational checklists making identification to whom the responses belong to impossible.

The research study, including the above information, has been verbally explained to me. I understand what my involvement in the study means and I voluntarily agree to participate.

_____________________________ _________________________

Signature of participant ***Date***

_____________________________ _________________________

Signature of witness **Date**

(Where applicable)

TOESTEMMING VIR DEELNAME AAN NAVORSING

NAVORSINGSTITEL: GESONDHEIDS DIALOOG ELEMENTE WAT PRESËENTEER TYDENS DIE GESONDHEID KOMMUNIKASIE TUSSEN PASIËNTE MET DIABETES EN VERPLEEGKUNDIGES IN ‘N NOORD KAAPSE PLAASLIKE MUNISIPALITEIT

As pasiënt met diabetes of die verpleegkundige, word u gevra om deel te neem aan ‘n navorsings studie.

U is in kennis gestel van die studie deur …………………………………………………………………….
U kan ………………….. enige tyd kontak by ………………… indien u vrae oor die navorsing het.

U kan die Sekretariaat van die Etiekkomitee van die Fakulteit Gesondheidswetenskappe, Universiteit Vrystaat by telefoonnommer (051) 40401 7794/5 kontak indien u enige vrae het oor u regte as deelnemer van die navorsing.

U deelname aan hierdie navorsing is vrywillig. U sal nie gepenaliseer word of voordele verbeur as u weier om deel te neem of besluit om deelname te staak nie.

U deelname sluit ook toestemming in vir die gebruik van ‘n klank opnemer gedurende die konsultasie. Die klankopname is vir die uitsluitlike gebruik van die navorser en die veldwerker vir die hersienning van gebeure tydens die konsultasie en om te verseker dat die data wat versamel is, korrek is. Die data versamel deur die observasie kontrolelys en die klank opnemer sal nie direk met die deelnemer verbind word nie.

Die navorsingstudie, insluitend die bogenoemde inligting is verbaal aan my beskryf. Ek begryp wat my betrokkenheid by die studie beteken en ek stem vrywillig in om deel te neem.

Handtekening van deelnemer **Datum**

Handtekening van getuie **Datum**
(Waar van toepassing)

TUMELELO YA GO TSAYA KAROLO MO PATLISISONG

SETLHOGO SA PATLISISO: PUISANO MAGARENG GA BABUBODI LE BAOKI BA BOTLHOKO BA SUKIRI MO MAMASEPALENG WA SELEGAE WA KAPA BOKONE

Wena, e leng molwetse kgotsa mooki yo o nang le bolwetse jwa sukiri, o kopilwe go tsaya karolo mo thuto-patlisisong.

O boleletswe ka patlisiso eno ke____

Go tsaya karolo ga gago mo patlisisong eno ke ga boithaopo, e bile ga o kitla o otlhaiwa kgotsa o latlhegelwa ke melemo mengwe fa o gana go tsaya karolo kgotsa o swetsa ka gore o emise go tsaya karolo.

Tumelelo ya gago ya go tsaya karolo e akaretsa go letla ga gago gore go dirisiwe segatiswa-mantswe ka nako ya puisano ya gago le mooki. Tshedimosetso eno ke e e tlileng go dirisiwa fela ke mmatlisisi le mokgobokanya-tshedimosetso gore go kgonege go sekaseka gore go ne ga direga eng le go tlhomamisa gore a dintlha tse di kokoantsweng di nepagetse., Ga go na tshedimosetso epe ya motsayakarolo e e tla dirisediwang go senola gore go dirisitswe didirisiwa dife tsa go kokoanya dintlha, e leng lenaane-tlhatlhobo la go bogela le segatisa-mantswe. Dilo tseno ka bobedi di tla newa dinomore tsa khouto fela. Seno se direlwa go tlhomamisa gore tshedimosetso ya motsayakarolo e tswelela e le khupamarama.

O ka nna wa ikgolaganya le Lesley Talbot mo **072 176 7962** ka nako epe fela fa o na le dipotso ka patlisiso.

O ka nna wa ikgolaganya le Mokwaledi wa Patlisiso ya Disaense Tsa Pholo kwa Yunibesiting ya Foreisetata ka nomore ya mogala ya **051 401 7794/5** fa o na le dipotso ka ditshwanelo tsa gago jaaka motsayakarolo mo patlisisong.

Fa o dumela go tsaya karolo, o tla newa khopi e e saenilweng ya tokomane eno mmogo le pampitshana ya tshedimosetso ya motsayakarolo, e leng tshobokanyo e e kwadilweng ya patlisiso.

Ke tlhaloseditswe thutopatlisiso, go akaretsa le tshedimosetso e e fa godimo, ka molomo. Ke a tlhaloganya gore ke eng se se tlileng go direga fa ke tsaya karolo mo patlisisong e bile ke ithaopela go tsaya karolo.

_____________________________ ___________________

Mosaeno wa motsayakarolo **Letlha**

____________________ ___________________

Mosaeno wa motoloki **Letlha**

(Fa a le teng)

ANNEXURE I

INFORMATION DOCUMENT

RESEARCH TITLE: HEALTH DIALOGUE ELEMENTS IDENTIFIED DURING HEALTH COMMUNICATION BETWEEN PATIENTS WITH DIABETES AND NURSES IN A NORTHERN CAPE MUNICIPALITY

Good day

We, Lesley Janette Talbot (researcher) and _______________ (fieldworker), are doing **research on health communication**. Research is a process that is followed to help provide an answer to a question. In this study we want to learn more about the way in which patients with diabetes and nurses communicate with one another. We are inviting you to participate in this study.

What is involved in the study?

This study entails a researcher being present in the room during a routine follow up appointment of a patient diagnosed with diabetes and the nurse who provides the service. Before the appointment begins, both the patient and the nurse will be asked six questions by the researcher. This will take place in private. The researcher will take notes regarding the communication aspects observed during the appointment. An audio recording of the interview will be made. The reason for the audio recording is to ensure that the researcher has recorded all the relevant information. This will be done by listening to the recorded information after the interview and comparing it to the written information. This will ensure that the information gathered is correct and complete. The identity of the patient and the nurse will never be revealed. After completion of the routine appointment, the researcher will again ask the patient and the nurse three questions regarding their experience of the interview. These questions will be asked and answered in private. The questions should not take longer than 5 minutes of your time. Answering these questions ends your participation in the research study. The nurse participant in the study will be observed interacting with five patients each.

You will not receive any **remuneration** for participating in the study neither will you need to pay for your participation in the study.

You will not **benefit** directly from the study, but your participation may assist in enhancing health communication between patients diagnosed with diabetes and the nurses who provide the services. The findings of this study may be published with this purpose in mind. Should you wish to receive information about the findings of the study after completion, this will be made available to you on request.

Please note that **participation is voluntary** and should you not feel comfortable participating you may without any penalty or punishment decline or discontinue participating in the study. Participation or non-participation in this research will not affect the normal routine and service delivery of the health service you are accustomed to.

Every effort will be made to keep **personal information confidential**. Absolute confidentiality however cannot be guaranteed as personal information may be disclosed if required by law.

Contact details of researcher should additional information be required you may contact the researcher, Lesley Talbot, (University of the Free State student number 2006069112) on **O72** 176 7962**.**

Contact details of the Health Sciences Ethics Committee, Faculty of Health Sciences**,** University of the Free State on 051 401 7794/5 should you wish to report problems or make a complaint.

INLIGTINGSDOKUMENT

NAVORSINGSTITEL: GESONDHEIDSDIALOOG ELEMENTE WAT GEIDENTIFISEER WORD TYDENS GESONDHEIDKOMMUNIKASIE TUSSEN PASIËNTE MET DIABETES EN VERPLEEGKUNDIGES IN ‘N NOORD KAAPSE PLAASLIKE MUNISIPALITEIT

Goeie dag

Ons, Lesley Janette Talbot (navorser) en __________________ (veldwerker), is besig om **navorsing oor gesondheidkommunikasie** te doen. Navorsing is slegs die proses waardeur die antwoord op ‘n vraagstuk verkry word. In hierdie studie wil ons leer oor gesondheidskommuniksasie wat plaasvind tussen pasiënte wat met diabetes gediagnoseer is en verpleegkundiges. Ons **nooi u uit** om aan ‘n navorsingstudie deel te neem.

Wat behels die studie?

Die studie behels dat ’n navorser tydens die roetine opvolg afspraak wat die pasiënt gediagnoseer met diabetes met die verpleegkundige by die kliniek het, insit en notas op n vorm aanbring oor gesondheidskommunikasie aspekte wat sy waarneem tydens die afspraak. Beide die pasiënt en die verpleegkundige sal elkeen ses vrae deur die navorser gevra word, voor die afspraak. Die gesprek tussen die pasiënt en die verpleegkundige sal opgeneem word. Die rede vir die klank opname is om te verseker dat die navorser alle inligting opteken en ook die inligting korrek interpreteer. Op geen stadium sal die naam van die pasiënt of verpleegkundige bekend gemaak word nie. Nadat die verpleegkundige klaar die pasiënt se roetine afspraak voltooi het, sal die navorser aan die pasiënt en verpleegkundige, apart van mekaar, drie kort vrae vra oor hul onderskeie ervarings tydens die afspraak. Die drie vrae sal nie langer as 5 minute neem om te beantwoord nie. Sodra die vrae klaar beantwoord is, is u deelname aan die studie ook afgehandel. U as verpleegkundige, sal met vyf verskillende pasiënte aan die studie deelneem.

U sal **geen betaling** ontvang vir u deelname aan die studie nie. Daar sal ook geen onkostes aan u deelname wees nie. Hoewel u **geen direkte voordeel** uit die studie sal trek nie, sal die studie pasiënte en verpleegkunidges in die toekoms van hulp kan wees om gesondheidskommunikasie tussen hulle te verbeter. Die bevindinge van die studie mag gepubliseer word met die oorspronklike doel in gedgagte. Sou u belangstel in die resultate van die studie, sal dit tot u beskikking wees op aanvraag.

Deelname is vrywillig, en weiering om deel te neem sal geen nadelige gevolge of verlies van voordele vir u as deelnemer inhou nie. U mag ook enige tyd onttrek sonder verlies van enige voordele. Daar sal gepoog word om persoonlike **inligting vertroulik** te hou. Volkome vertroulikheid kan nie gewaarborg word nie. Persoonlike inligting kan bekend gemaak word as die wet dit vereis.

Kontakbesonderhede van navorser – Vir verdere inligting kan u die navorser, Lesley Talbot (Universiteit van die Vrystaat studente nommer 2006069112) kontak by 072 176 7962

Kontakbesonderhede van die Sekretariaat en Voorsitter: **Etiekkomitee van die Fakulteit Gesondheidswetenskappe**, Universiteit van die Vrystaat – vir rapportering van klagtes/probleme: Telefoonnommer (051) 401 7794/5

TOKOMANE YA TSHEDIMOSETSO

SETLHOGO SA PATLISISO: PUISANO MAGARENG GA BABUBODI LE BAOKI BA BOTLHOKO BA SUKIRI MO MAMASEPALENG WA SELEGAE WA KAPA BOKONE

Dumela

Rona, Lesley Janette Talbot (mobatlise), le _________________ (motlatsi was dibatlisiso) re dira *patlisiso ka puisano*. Patlisiso ke mokgwa o o latelwang o o thusang go batla karabo ya potso nngwe. Mo patlisisong eno re batla go ithuta go le gontsi ka tsela e balwetse le baoki ba ba nang le bolwetse jwa sukiri ba buisanang ka gone. Go lo reetsa le go lo bogela kwantle ga go lo tsena ganong fa lo buisana go tla re bontsha se re se batlang gore potso e kgone go arabiwa. Re rulaganyeditse go *bogela* palogotlhe ya balwetsi le baoki ka nako ya fa balwetse ba ba nang le bolwetse jwa sukiri ba buisana le baoki mo ditheong tse di farologaneng tsa pholo mo teng ga mmasepala wa selegae wa Kapa Bokone mo lobakeng lwa malatsi a le 10.

Re go *laletsa go tsaya karolo* mo patlisisong eno. Tsweetswee ela tlhoko gore go tsaya karolo ke ga boithaopo mme fa o ka ikutlwa o sa phuthologa go tsaya karolo, o ka kgona go gana kgotsa go emisa go tsaya Karolo mo patlisisong kwantle ga tuediso-kotlhao epe kgotsa go otlhaelwa seo. Go tsaya karolo kgotsa go se tseye karolo mo patlisisong eno ga go kitla go ama thulaganyo ya gago ya ka gale le go direlwa ditirelo tsa pholo tse o tlwaetseng go di direlwa.

Go ka lebelelwa eng fa o ka dumela go tsaya karolo mo patlisisong?

- O tla tlhoka go saena *foromo ya go dira tumelelo* , mo go rayang gore o a tlhaloganya gore thutopatlisiso ke ka ga eng le gore o ntsha tetla *ka kgololesego* ya go tsaya karolo. Gape o tla newa foromo e e saenilweng ya go dira tumelelo.
- Mmatlisisi le/kgotsa mokgobokanya-tshedimosetso o tla go naya *pampitshana ya tshedimosetso*, e o tla e bolokang mo go wena. Pampitshana eno e na le dinomore tsa founo tsa fa o ka ikutlwa gore o ka rata go bega ditiragalo dingwe tse di amanang le patlisiso tsa fa o ka tswa o gobetse ka tsela nngwe.
- *Tirelo ya pholo* e e dirilweng kgotsa e o e diretsweng ga e kitla e kgoreletsega ka gope ka nako ya go kokoanngwa ga tshedimosetso.
- Fa o le molwetse yo o nang le bolwetse jwa sukiri, mmatlisisi kgotsa mokgobokanya-tshedimosetso o tla tsamaya le wena go ya kwa phaposing ya go tshwara puisano le mooki e mooki yo o tsayang karolo a tla go direlang tirelo ya pholo kwa go yone. Puisano eno fa gare ga balwetsi le baoki e tla tshwarelwa mo *sephiring.*
- *Mmatlisisi/mokgobokanya-tshedimosetso o tla bo a na le lona mo phaposing e le nngwe* mme ga a kitla a tsaya karolo mo motlotlong jaaka go tle go direge gantsi. Batsayakarolo ka bobedi ba tla tswelela fela jaaka e kete mmatlisisi/mokgobokanya-tshedimosetso ga ba yo foo. Seno se tla thusa gore go bogelwa ga puisano fa gare ga batsayakarolo e nne 'ya ka gale' kgotsa 'e e tlwaelegileng fela' ka moo go ka kgonegang ka gone gore potso ya patlisiso e kgone go arabiwa.
- Gape o tla *bodiwa dipotso* kwa bokhutlong jwa puisano fa gare ga gago le mooki , dipotso ka ga gago tse di tla tladiwang mo lenaane-tlhatlhobong la go bogela ga mmatlisisi/mokgobokanya-tshedimosetso. Seno se tla direlwa mo sephiring le motsayakarolo mongwe le mongwe mme ga se kitla se tsaya lobaka lo lo fetang lwa ka gale lo o lo fetsang o le kwa setheong sa pholo lo lo okeditsweng ka metsotso e le 5 (tlhano).
- Fa dipotso di sena go tladiwa, puisano fa gare ga gago le mooki le go tsaya karolo ga gago jaaka molwetse yo o nang le bolwetse jwa sukiri mo patlisisong e tla bo e *fedile*.
- Fa o le *mooki yo o tsayang karolo*, o ka nna wa nna le seabe mo metlotlong e e fetang o le

mongwe fa gare ga gago balwetsi le baoki yo o nang jwa sukiri kwa setheong sa pholo ka lobaka lwa patlisiso kwa setheong sa pholo se o dirang kwa go sone.

O tla itsisiwe ka diphitlhelelo fa go tlhokega

Go a tlhokega go *gatisa mantswe* ka nako ya puisano fa gare ga batsayakarolo; le fa go ntse jalo, tshedimosetso eno e tla fitlhelelwa fela ke mmatlisisi le mokgobokanya-tshedimosetso go tlhomamisa gore tshedimosetso e e kwadilweng le e e rekotilweng ka nako ya puisano e nepagetse.

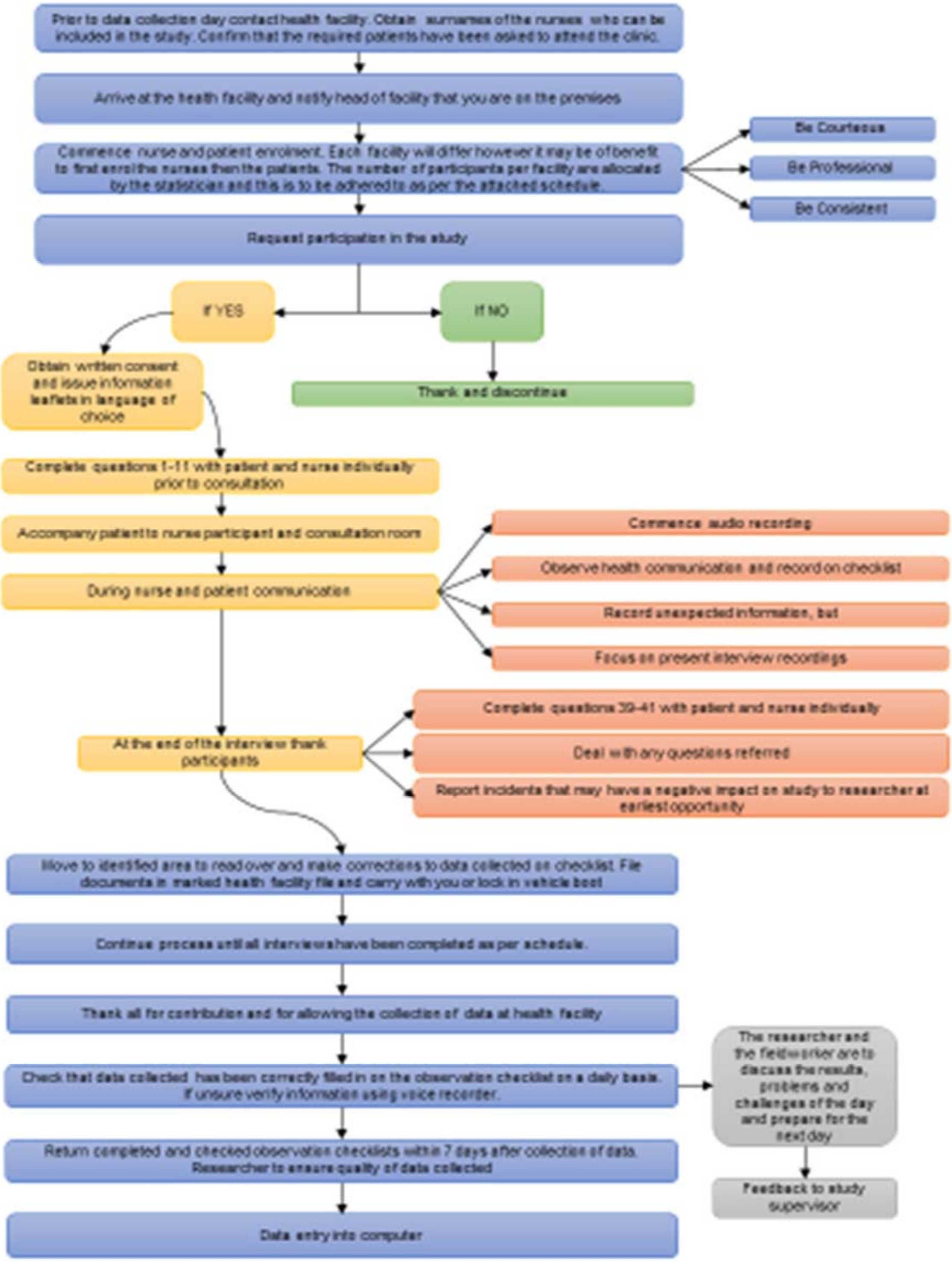
Re leka ka natla go sireletsa tshwanelo ya motsayakarolo mongwe le mongwe malebana le *go nna khupamarama* ga dintlha tsotlhe tse di kokoantsweng. Seno se akaretsa go kwala dikhouto mo lenaane-tlhatlhobong la go bogela le tshedimosetso e e gatisitsweng ka segatisa-mantswe ka go se kwale leina la motsaya-karolo mo dintlheng tse di kokoantsweng. Ga go na ope yo o tla kgonang go bona gore puisano e ne e le fa gare ga mooki le mang. Dintlha tsotlhe tse di kokoantsweng di tla bolokwa mo seifeng e e notletsweng. Mmatlisisi ke ene fela yo o tla fitlhelelang dintlha tseno tse di bolokilweng.

O *lebogwa* fela thata ka ntlha ya go tsaya karolo mo patlisisong eno e bile go solofelwa gore diphitlhelelo tsa yone di tla thusa ka thulaganyo ya go tlhama sekai sa puisano e e tlhaloganyesegang sentle ka pholo le go e lekeletsa e e ka dirisiwang ke balwetsi le baoki ba ba nang le bolwetse jwa sukiri gore go fitlhelelwe dipholo tse di siameng tsa pholo.

Dinomore tsa go ikgolaganya le mmatlisisi	072 176 7962
Dinomoro tsa pholo botaki le lekgotla la molao tsamaiso	051 401 7794/5

ANNEXURE J

DATA COLLECTION FLOW CHART



ANNEXURE K

AFRICA JOURNAL OF
NURSING
AND
MIDWIFERY
ISSN 1682 5055

AUTHOR GUIDELINES

INSTRUCTIONS TO AUTHORS

Please adhere strictly to these instructions to facilitate the publication process of articles. Each article submitted must contain:

- The exact appropriate title – use as few words as possible
- The surname and initials of the author/s in the correct sequence.
- Highest academic qualification of every author
- The department and institution/university to which the work should be attributed
- Telephone, fax numbers and email address of the corresponding author (to whom galley proofs should be sent)
- Declaration signed by the corresponding author

GENERAL REQUIREMENTS

An **abstract** not exceeding 250 words should be on a separate page, covering the purpose of the research article, research methodology, major findings and recommendations.
This should be followed by 4-6 keywords in alphabetical order.
The total length of the article should not exceed **5000 words** from the first word in the title to the last word in the list of references. Avoid/limit the use of abbreviations.

The abbreviated Harvard system of referencing should be used in the text. Cite the author's surname, followed by a comma, then the year of publication and page number (Jones, 2007:231). More than one reference per year per author must be distinguished by using alphabetic letters (Jones, 2007a, and 2007b). Preferably no more than 25 references should be included in the list of references; in alphabetic order (according to the surname of the first author).

Only System International (SI) units should be used. English spelling should conform to that of the Concise Oxford Dictionary.

Complete and correct titles of books and journals must be supplied and written in italics. For books the **city** (not the country nor the state) of publication and the name of the publisher must be supplied (Evian, L. 2003. *Primary Aids care*. 2nd Edition. Johannesburg: Jalana). Journals' titles may **not** be abbreviated.

Tables (maximum of 3) should be **single spaced in the correct position in the text** (table 1; table 2), with the heading on top of the table. All abbreviations used should be defined in a note immediately below the table. **Figures** (maximum of 2) should be **presented in the correct places in the text and must be in black and white only,** and the title of the figure must be below the figure.

Acknowledgements should be brief and recognise sources of financial and logistical support and permission to reproduce materials from other sources. Enclose a copy of documentation granting such permission. Adherence to copyright rules remains each author's sole responsibility.

All manuscripts must be submitted in MSWORD format via email to ajnm@unisa.ac.za or to mavuntr@unisa.ac.za No hard copies should be posted. Referees will only review articles adhering to the author guidelines; their recommendations will be communicated to the corresponding author. Galley proofs must be returned to the editor within 3 days otherwise the article may be printed in a later edition. Only typographical errors and other essential changes may be made at this stage.

Authorship credit implies that listed authors should meet the criteria contributing to the conception, design, analysis, interpretation of data, drafting and revising the manuscript, and approving the final version. Participation in the acquisition of funding and/or data collection does not merit authorship credit. The corresponding author will normally be the first author.

Publication Fees will be charged at R200.00 (two hundred Rand) per published page during 2014. An account will be rendered to the corresponding author who will be held responsible for payment.

Please adhere to the following outline when writing your manuscript:

Title: BOLD CAPITALS TYPED IN VERDANA SIZE 14
Authors' initials, surname, highest qualifications and affiliations typed in Aerial
Narrow 11: for example: T.P. Meyers, PhD
University of South Africa
Department of Health Studies

Abstract typed in Verdana 10 not exceeding 250 words – single spacing. Refer to background, significance of study, research methods used, most important findings and recommendations.

Keywords: 4-6 in alphabetical order typed in Verdana 10.

The actual article must be typed in Aerial Narrow 11 using single line spacing, and must include the following sections:

INTRODUCTION AND BACKGROUND INFORMATION: Discuss the importance of the study and include a brief literature review, using only sources published since 2007.

STATEMENT OF THE RESEARCH PROBLEM should be done clearly and concisely. The significance of the problem/issue should also be specified.
PURPOSE OF THE STUDY, OBJECTIVES, ASSUMPTIONS, RESEARCH QUESTIONS depending on the nature of the study.

Definitions of keywords/concepts. These must be supplied in alphabetical order and must include every term mentioned under ‘keywords’. Please use full sentences with the key term in bold, for example: An **adolescent mother** is any woman aged 19 or younger who has given birth to an infant, irrespective of the pregnancy outcome and irrespective of her marital status.

RESEARCH METHODOLOGY should address the design, research site, study population and sample and sampling techniques, size of sample.

Under the research instrument the development, structure, reliability, validity (or trustworthiness) and the pre-test need to be addressed.

The data collection procedure needs to be discussed in sufficient detail **and the exact dates of data collection must be specified.** Data analysis procedures must be explained.

Ethical considerations must specify how permission was obtained to conduct the study and how participants/respondents were protected from exploitation. Confidentiality and anonymity should be addressed and adhered to. No identification tags should indicate potential respondents’ verbatim quotations. Names of hospitals and healthcare institutions should preferably not be used.

ANALYSIS commences with the demographic information of the participants/respondents. Thereafter the results should be presented according to the research questions. In this section ONLY present the current study’s findings.

DISCUSSION OF RESEARCH RESULTS
Discuss the results in the same sequence as the analysis, compare and contrast the study’s findings with those of other studies.

CONCLUSIONS must be based on the research results.

RECOMMENDATIONS follow from the conclusions. Recommendations that are irrelevant to the current study should be avoided.

LIMITATIONS OF THE STUDY must be specified so that the readers can interpret the significance of the findings and recommendations within the context of the limitations.

ACKNOWLEDGEMENTS: MUST BE BRIEF AND TO THE POINT.

REFERENCES: these must be typed in single spacing in Verdana 10. Leave one space open between successive references. This list must be in alphabetical order according to the surname of the first author. Abbreviations such as WHO should be used in the text but in the list of references the full name World Health Organization must be written out. In case of Internet references, the date on which the information was accessed should be indicated in brackets. Check every Internet reference, if it is correct and shown in blue, and if one double-clicks on this reference, one should automatically be linked to the document/article/site concerned.

STYLE: no numbers should be used in headings or in lists; avoid using bullets – they take up too much space to print – try to use semi-colons instead. **Please use the past tense and plural nouns wherever possible** – most authors commit fewer errors this way. Editing of the article is the responsibility of the authors. Articles that require editing will be returned to authors for editing before being sent to reviewers.

TYPES OF ARTICLES PUBLISHED: The AJNM strives to provide worthwhile information to the nurses and midwives of Africa, not necessarily nursing academics. Consequently articles should address healthcare issues faced by nurses and midwives throughout Africa.

Empirical research articles are preferred. Articles based on theory only might be inappropriate. As the AJNM is an accredited academic journal, it needs to adhere to the minimum requirements of the Department of Higher Education and Training of South Africa. This means that mostly empirical peer reviewed research articles should be published, but a limited number of pages can contain book reviews or reports of conferences. In exceptional cases one article per issue might address research issues per se. The decisions of the reviewers and the editors are final.

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