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Challenges faced by Gauteng nephrology nurses regarding implementing evidence based practice

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CHAPTER ONE

OVERVIEW OF THE STUDY

1.0 INTRODUCTION

According to Lusardi (2012) Evidence Based Practice (EBP) "is the integration of the best evidence with clinical expertise and patients' values to facilitate clinical decision making". Basically, EBP focuses on using research findings and integrating them with client values, culture, language and preferences as well as applying the clinical wisdom or expertise of practitioners to inform nursing practice (Buchanan, Lorenzo and Law, 2015). EBP has its origins from medicine and its founder is Archie Cochrane. This term was first documented in 1991 by an Epidemiologist called Sackett (1991) when he used the term to describe the way students in medical schools were taught to apply diagnostic technologies and clinical interventions. He aimed to address fragmentations in care that occurred in medical school. Barends and Briner (2014) add that the goal of EBP is to promote a methodical use of scientific evidence in the training, education and the integration of that education in clinical practice. They further assert that there was recognition that physicians prioritized traditional methods and personal experience, giving rise to differences in treatment quality. The term gained recognition and by 1993, Barends and Briner (2014) report that other professions saw its significance and adopted its use. The original and possibly the most quoted definition states that Evidence Based Medicine (EBM) is "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients". Further development of the concepts of EBM and EBP led to the recognition of the importance of including patient's values and the practitioner's clinical reasoning and knowledge in this process. These ideas were incorporated into a definition by Buchanan et al. (2015) which state that evidence based practice (EBP) requires that decisions about health care be based on the

best available, current, valid and relevant evidence. These decisions should be made by those receiving care, informed by the implied and clear expert knowledge of those providing care, within the context of available resources.

The Nursing discipline adopted the concept and aimed to integrate it into its practice. Nurses equally realized that most of the clinical decisions were based on expert knowledge of seasoned nurses, of how things have always been done; and so they also wanted to support clinical decisions with evidence from current research findings. Hadgu, Almaz and Tsehay (2015) assert that nurses realized that expert knowledge alone is mostly based on tradition and may be out dated and unsafe as it has not been tested. This knowledge may also be associated with prejudiced thinking that leads to errors. As a result of this gap, a call to integrate EBP as an accepted standard of modern day practice in nursing care was made, and it is now over two decades since its inception. The response amongst different countries varies. Australia, Canada, The United States and the United Kingdom took a leading role at the forefront of widespread implementation. Melnyk and Fineout-Overholt (2015) affirm that in Australia, EBP is accepted as a critical element of continuous quality improvement by authorization agencies. It is also included in the educational curriculum as well as being a matter of critical importance by the National Health and Medical Research Council.

Africa is also following suit, with Jordan, Bowers and Morton (2016) reporting that (EBP) is progressively being acknowledged in healthcare institutions as a fundamental component in patient care delivery in South Africa. However studies across the globe have reported that there are challenges to EBP implementation including in the developing countries. They report that currently decisions that are supported by scientific evidence are not always followed and that expert knowledge still guides practice (Hadgu et al., 2015; Lusardi, 2012; Majid et al., 2011; Malik, McKenna and Plummer, 2016; Melnyk and Fineout-Overholt 2014 and Patelarou et al. 2013). In Africa too, there is a dearth of literature reporting successful implementation of EBP

as researchers in this continent still report similar challenges to those experienced by the developed world. They report human related as well as organizational factors as hindering implementation of EBP, (Abdulwadud et al., 2017; Jordan et.al., 2016; Mohsen, Safaan, and Okby, 2016 and Mulenga and Naidoo, 2017) respectively.

1.1 BACKGROUND

Mohsen et al. (2016) assert that EBP is a framework that is used to address clinical questions by making an assessment and application of the best information related to patient care. The researchers describe five steps that include: asking questions that are answerable from clinical situations; finding current research evidence; appraising evidence from the literature; integrating evidence taking into consideration patient's preferences and values in clinical decision making and lastly the effectiveness of the process is evaluated. The quality of a research study is according to Mohsen et al. (2016) depended on the kind of question being answered, as a result the clinical question should be explicitly stated in order to be well answered. EBP calls for nurses to walk in the footprints of Florence Nightingale, who asked clinical questions that changed practice during the Crimean War. Decade's later nurses are called to emulate her ideology.

Lusardi (2012) is of the view that, although identifying a clinical problem may come easily and naturally to nurses, the procedure of expounding the problem and directing those ideas to formulate a constructive clinical question that will change practice can be daunting. Nonetheless, nurses are still required to implement the best evidence to support nursing practice and produce new knowledge that would be used in practice. With teamwork and empowering mentoring, the researcher affirms that although daunting, the process is attainable (Lusardi, 2012). However Wright (2013) observed differently, stating that in the study whereby nurses

were given release time as a form of support and were mentored, they still reported having encountered problems with access of the literature. They reported lack of time and work space that allowed them to assimilate information that would answer clinical questions as obstacles.

According to Rousseau and Gunia (2015) EBP requires integration of scientific as well as native evidence from the practitioner. These researchers assert that the presence of scientific evidence contributes to effective practice. They further explain that scientific evidence should be complemented with native information, patient concerns and values, and the clinicians' expert knowledge in order to make it complete evidence. Once scientific evidence is found, it still needs to be evaluated for its quality, something that is constantly reported by nurses to be a barrier. Menezes, Avelino and Costa (2017) indicate that unfortunately a large number of low quality researches proliferates publications without being verified for the level of their evidence. This also deters professionals from using EBP. The same assertion was verified by Estrella et al. (2013) when they reported that some physicians questioned the level of evidence in the Kidney Disease Outcome Quality Initiatives guidelines, and cited low quality as the reason for them not using EBP.

In order to integrate EBP, the nurses must possess the skill to search and appraise the literature in order to avoid selecting evidence of poor quality which can contribute to the implementation of unsuccessful practices. The nurses are therefore required to exercise decisions that are supported by scientific findings as those that are unscientific lacks evidence that affirms them. Native evidence should only provide the basis for evidence when scientific evidence is absent but with the acknowledgement that much remain unknown and whatever that is known may be incorrect and ineffective with the possibility of being harmful to the patients (Rousseau and Gunia, 2015).

The benefits of integration of EBP into the nursing practice have been discussed by many researchers. Jordan et al. (2016) explains that EBP use can lead to improved quality of patient care, recorded patient and family satisfaction, individual and professional development of clinicians, reduced costs, outstanding performances of employees in the organization and changed outcomes. Its utilization on international standards contributes to standardized quality of the practice of nursing and ensures provision of excellent care for patients. EBP is also important for the promotion of professional development and enhancement of capabilities of clinicians. Additionally, nurses who use EBP have been recorded as being able to make better decisions with raised confidence. Adopting and implementing EBP requires a positive mind set and a thoughtful approach. Farokhzadian, Khajouei and Ahmadian (2015) state that factors such as knowledge, attitude, motivation and willingness increase the integration of EBP. Interestingly nurses have been somewhat aware of the significance and benefits of EBP for the healthcare system, patients and the profession. However implementation is rather slow-moving in the nursing practice. There is still a wide gap between research evidence and the reality in practice. The situation is such that patients often do not receive care based on scientific evidence, and a significant number of others are receiving care that is possibly unsafe (Breimaier, Halfens and Lohrmann, 2011). This assertion is supported by Melnyk et al. (2014) who posit that despite of all the documented benefits EBP is still not applied consistently by clinicians globally. The researchers report that long delays continue to exist between the generation of scientific research findings and their integration in clinical practice to improve care.

The challenges to successful EBP implementation have been reported widely and globally by many researchers, Lusardi (2012); Melnyk et al., (2014); Mohsen et al., (2016) and Mutisya, Karani and Kigondu (2015). These challenges range from perception problems by clinicians related to time, organizational cultures that do not support EBP, lack of educators and mentors,

inadequate EBP knowledge and skills, inadequate resources, and resistance by colleagues, managers or leaders, and physicians. Additionally lack of authority, lack of nurses' autonomy to change practice required to implement EBP and confusion of evidence were also reported (Abdulwadud et al., 2017 and Mulenga and Naidoo, 2017).

1.2 PROBLEM STATEMENT

EBP was introduced into the Curricula of the Post Basic Students in a Gauteng Nursing College in 2016. The idea was propelled by the need for change and to include current Nursing issues into the Nursing Dynamics Programme. This was enthusiastically embraced by students and should have yielded positive results in the clinical areas as these students exited the course with full knowledge of EBP and as a result they were expected to make changes in clinical settings. However in the three years that EBP was introduced, there was basically no observed change in practice and whilst doing follow ups, the nurses report that there are challenges to its implementation which first have to be removed if EBP is to be embraced. This triggered a quest of the researcher to explore and describe challenges that nurses are faced with which deter them from implementing EBP in practice. EBP has been found and reported to be a complex activity by researchers who has conducted studies in various countries. This complexity is compounded by factors that have made its integration in clinical practice difficult, (Boström et al., 2013; Farokhzadian et al., 2015; Melnyk et al., 2014; Majid et al., 2011 and Mutisya et al. 2015).

1.3 RESEARCH QUESTIONS

What are the challenges faced by Nephrology nurses in implementing evidenced based practice in Gauteng Nephrology settings?

What recommendations could be made to assist Nephrology nurses implement EBP in clinical practice?

1.4 THE PURPOSE OF THE STUDY

During facilitation of nephrology nurses in the units, the researcher noted that EBP was not applied in spite of the trained nurses having been exposed to it during specialty training. As a quest to establish the determinant of this behaviour the researcher conducted this study to explore and describe challenges faced by nephrology nurses in implementing the modern scientific approach of EBP. This was followed by formulation of recommendations that would assist nurses implement EBP in nephrology units in order to optimize patient care.

1.5 OBJECTIVES OF THE STUDY

To establish the expert nurses' perception on how implementation of EBP can affect nephrology nurses in clinical practice.

To explore and describe challenges faced by Nephrology nurses in implementing EBP in Gauteng renal settings.

To describe recommendations that would be drawn from the nephrology decision makers that are aimed at assisting nephrology nurses implement EBP in clinical practice.

1.6 SIGNIFICANCE OF THE STUDY

The knowledge that will be gained from this study will assist nurses in implementing interventions that are supported by evidence in renal settings. This study will build on the previous researches on EBP from all fields conducted in South Africa. The South African studies support and add to previous earlier findings that agree that nurses have a positive attitude towards EBP, but they are unable to implement it. This study will also make a contribution to the body of knowledge on the subject of EBP and in particular on the standard of care in the field of nephrology if it can reach its goal of identifying those challenges that hinder implementation. Knowledge of the challenges will assist in the formulation of strategies that can possibly be adopted to assist the nephrology nurses in bringing about the necessary change in their field. According to Stevens (2013) new knowledge must not be concealed but be converted into useful forms that can be translated to clinical practice.

1.7 PARADIGMATIC PERSPECTIVES

A paradigm is a world view, a general standpoint on the difficulties of the real world. Paradigms for human inquiry assist the inquirer to look at the world in more detail, encouraging intellectual interest. According to De Vos et al. (2012) “a paradigm is how the researcher views and interprets the material about reality and guides the consequent action to be taken. In a study, it reduces ambiguity and creates a clear view of the setting”.

1.7.1 Meta- theoretical Assumptions

Meta-theoretical assumptions are the opinions of the researcher which are considered to be true although they could not be tested (Polit and Beck, 2012). According to Brink, Van der Walt and Van Rensburg (2012) nursing is a discipline that falls under the sciences and it is composed of four main concepts, namely; the person, health, environment. This study is based on the researcher's meta-theoretical beliefs concerning these four concepts.

Person

The opinion of the researcher is that a person is as an all-inclusive being with a body, mind, and spirit. A person is more than the sum of individual parts that are interrelated. A person is part of a family, community and society unified and communicating with their health, environment and nursing. Additionally the person cannot be defined by any disease or illness. The complete person displays their distinct character and provides understandings into how to communicate with the world. They are in a way able to exercise their right to make own choices to establish their pathway in an open system and as part of that system. They co-exist in a system and thus are influenced and also influence it. According to Nash, Stock and Harper (1990) individual needs, motivations and feelings influence the behaviour of a person. Living together with others the person constructs and creates meaning of their existence in the world. The person referred to here is the nephrology nurse.

Environment

The internal and external environment of a person makes up their world. In their environment all people thrives to maintain symmetry between these two dimensions. The disagreement

between the two demonstrates itself as stress that distresses the harmony of a person to contribute in an expressive way towards existence with others. The internal environment of a person in this study refers to the way a person reacts and relates to conditions and situations in their immediate environment. This includes the way that the person master and harness the natural forces that are posed to them by the environment. The external environment is the nephrology setting. In this environment there are many complexities such as diseases, physical structure, technology and decisions which may not be fully understood by a patient. This environment constitutes of multidisciplinary team members all intending to restore the health of the person and bring stability to his/her internal environment, as well as the environment of the nurse that would facilitate delivery of safe and effective patient care.

Health

Health is explained by Nash et al. (1990) to be a transmissible trait and an important ingredient for health. The word health is also used in many ways and it implies the removal of biological, environmental, social, familial and personal obstacles to the achievement of human potential. The replacement of these obstacles should be substituted by the provision of means in which biological and personally chosen goals can be achieved. These include access to basic food, drink and shelter and having a reason and willpower to live. It also implies having access to information about factors that affect our lives; having skills and confidence to understand and use the information as well as making a decision of how to act in a relationship. Health means an awareness of the implications of our actions on the lives of others in our communities. When all these are achieved, the person's body, mind and spirit can be assumed to be in a state of homeostasis and good health.

Nursing

Nephrology nursing is a different area of specialised nursing practice that focuses on addressing the prevention, promotion and management of the health and well-being of persons with kidney disease. Nephrology nursing is rendered in primary, secondary and tertiary care settings. In these settings person's experiences, exposure or risks of development of acute or chronic kidney disease (CKD) are addressed. It is aimed at optimizing individual and family functioning throughout all phases of disease management and is directed at a patient and family centred approach. The practice of nephrology nursing incorporates the roles of direct caregivers to consumers of care in acute and chronic settings as well as kidney transplant units. It also includes coordination of activities by educators, coordinators of care, administrators, consultants and researchers.

1.7.2 Theoretical Basis

The conceptual model identified as appropriate for this study is the Academic Centre for Evidence-Based Practice (ACE) Star Model of Knowledge Transformation, (Stevens, 2013) and it is complemented by the theory of Birken (2012). This model was established by Kathleen Stevens together with her colleagues at the University of Texas Health Science Centre in San Antonio. It was developed to provide a framework for understanding the cycles, nature, and features of knowledge that is used in the process of EBP. The model also provides a framework that comprehensively addresses the EBP practice and methods in order to translate evidence into clinical decision-making. It explains in detail how steps of knowledge transformation can summarize scientific literature to provide forms of knowledge that can be assimilated in clinical decision-making. It is however ideal for use by nephrology nurses and therefore will be complemented by the theory of Birken (2012) which focuses on the middle manager's role in

implementing innovation. The theory was identified and selected to address challenges that are identified in the literature as inhibiting EBP implementation such as lack of knowledge, lack of time, lack of autonomy to change practice and lack of resources and the others. Birken's framework is tailor made to fit the structure and setting of the nephrology unit.

The stages of ACE Star model are as follows:

i. New knowledge is found through traditional research. This knowledge is generated from different research methods.
ii. Knowledge is synthesized into a single integrative review and it is presented in a meaningful statement of knowledge.
iii. Translation of research evidence is converted to clinical practice recommendations. At this stage of transformation, the knowledge reflects best practice based on best research evidence.
iv. Integration is accomplished through clinical decision-making that leads to a change of practice.
v. Evaluation is done according to patient outcomes, provider/patient satisfaction, and efficiency. This stage is crucial to verify the success of EBP. It is important to include patient, health care provider, and system outcomes in evaluation.

Birken's theory (2012).

i. The first stage is the innovation-diffusion of information.
ii. The next step is information synthesis
iii. Mediating between strategy and day-to-day activities
iv. Selling the implementation of change

Birken (2012) theorizes that managers express their commitment first by diffusing information about the change to the operational level. The nurses at the operational level identify a clinical problem and formulate an EBP question that requires an intervention. They communicate this area of need to the middle manager who acts in between the nurses and top management. The next step is information synthesis. In this case resources are provided and nurses begin to appraise the literature for the current evidence in support of the potential change. Tasks are shared and roles are clarified between the team so that they can all take ownership of the change. The manager assumes her leadership role and provides support and motivation throughout the process. The manager facilitates mediations between strategy and day-to-day activities. This she does by addressing concerns raised by nurses and enabling them to fulfil their implementation-related responsibilities. The manager overcome challenges and provide resources in order to hold nurses accountable for their actions. Continued coaching and support is also given. The last step is selling the implementation of change. Before implementation can happen, all stakeholders should be engaged as their buy-in is crucial. Patients are consulted and their preferences and values are catered for as per EBP resolutions. Dialogues are held and consensus is reached. The middle manager continues to fill the structural gap by being a link between the executive management and the team. Thereafter implementation may take off followed by evaluation of whether the goal was achieved or not.

1.7.3 Definition of terms

This section seeks to define and describe the key concepts that were used in this study and for the purpose of this study the key concepts used are defined below.

Nephrology nurse

"A professional nurse that is responsible for the direct care and decision making of patients suffering from kidney disease and they possess a certification in Nephrology nursing. These nurses use the nursing process to care for patients of all ages who are experiencing, or are at risk for, kidney disease" (American Nephrology Nursing Association).

Nephrology Nursing

Nephrology Nursing is defined by the South African Nursing Council (SANC) as a different area of specialised nursing practice that addresses the prevention, promotion and management of the health and wellbeing of people with kidney disease in primary, secondary and tertiary care settings (SANC: Nephrology Competencies, 2013)

Nurse specialist

According to SANC a nurse specialist requires in-depth knowledge and expertise in a specific practice area such as paediatric nursing. To become a nurse specialist one would require a post-graduate diploma (PGD) in the specific specialisation such as nephrology nursing. This qualification will yield a professional registration with the Council as a nurse specialist e.g. nephrology nurse.

Clinical Nurse Specialist (CNS)

Clinical Nurse Specialist is defined by ICN as a person having a qualification in the area of specializing, in-depth knowledge and expertise that enables them to focus on facility care and work closely with medical officers on a consultative basis.

Nephrology Nurse Leaders

According to ICN and EBPG Nephrology Nurse Leaders are “experienced practitioners who have achieved additional postgraduate qualifications in management, leadership or other related subjects”. At a clinical level these nurses are responsible for workforce planning, managing and working within budgets, creating policy and standards, ensuring resources for delivering education, training and development, performance management of staff, forecasting and planning for service development and growth.

Unit Manager

Unit Manager is also known as a first line Nurse Manager responsible for overseeing first-level nursing services such as delegating work to the subordinates with the co-liability for the results of the delegated work (Muller and Bester, 2016).This person usually holds a nephrology specialty qualification.

Shift leader

A shift leader is a clinical leader and a registered nurse who possesses clinical expertise in a specialty practice area and who uses interpersonal skills to influence nurses, patients, families and other health care providers to deliver quality patient care, (AL-Dossary, 2017).

Evidence based practice

“This is the use of the best scientific evidence integrated with clinical experience and incorporating patient values and preferences in the practice of professional nursing care”, Houser (2011).

Challenge

Challenge is a demanding situation with a combination of circumstances at a given time (Collins Thesaurus of the English Language, 2002). A challenge therefore relates to those limitations and complications that Nephrology nurses encounter as hindrances to the integration of EBP in their units.

Barrier

For the purpose of this study the concept barrier is used as "an obstacle that prevents or blocks movement from one place to another such as the lack of authority to change the methods and patterns of care" (Bahadori, 2016). The terms barrier and challenges are used interchangeably throughout the literature to define multilevel obstacles or hindrances that impede implementation of EBP.

Expert nurse

"An expert nurse develops skills and understanding of patient care over time through a sound educational base as well as a multitude of experiences", (Benner, 1984). For the purpose of this study, the expert nurse is defined as Nephology nurses with fifteen years post training experience and above.

Evidence based guidelines

These are "rigorous, explicit clinical guidelines developed on the basis of the best research evidence available such as findings from systematic reviews, meta analyses, mixed method systematic reviews, meta-syntheses and extensive clinical trials; supported by consensus from recognized national experts and affirmed by the outcomes obtained by clinicians" (Grove et al. 2013).

Nephrology decision makers

These are the nurse leaders in nephrology units that follows the decision making process to achieve the organizational goals and objectives within a given time and budget.

1.7.4 Methodological Assumptions

Methodological assumptions are the conventions that are made by the person undertaking research to guide the methods used in the process of qualitative research (Creswell, 2013). The procedures used by the researcher follows an inductive approach and are based on the researchers own experience in collecting and analysing data. The methodological assumptions guiding this study are in line with the scientific method of inquiry and follow a qualitative approach.

1.8 OVERVIEW OF THE RESEARCH DESIGN AND METHODS

The research methodology "refers to the blueprint that guides the study to have control over factors that could interfere with the desired outcome" (Grove et al. 2013). A synopsis of the research methodology used in the study is provided but the details will be discussed in greater detail in chapter three.

The research process will discover challenges that hinder implementation of evidence based practice and as a result it will generate awareness and built on knowledge that is already in place regarding EBP. Such knowledge will be applied in practice in order to improve patient outcomes.

1.8.1 Research Design

A research design is a plan and procedure that incorporates the decisions that are made in the research from broad conventions to comprehensive methods that includes data collection and analysis. According to Grove et al. (2013) it is defined as the researcher‘s overall plan that guides the research process”. The researcher used a qualitative, exploratory descriptive and contextual design. This research was greatly influenced by the context in which data was collected.

Qualitative research “is a form of inquiry in which researchers make an interpretation of what they see, hear and understand. The researchers’ interpretation cannot be separated from their own background, history, context and prior understandings” (Creswell, 2014). This approach aim to understand the meaning that is attached to everyday life and it is holistic in its nature. According to Grove et al. (2013) the purpose of qualitative research is to gain insight and understanding through discovery of meaning. A qualitative approach was followed that is aimed at providing answers to questions about the what, how or why of the nephrology nurses in nephrology nursing units. Qualitative research is also “a systematic approach used to describe experiences and situations from the perspective of the person in the situation and then give them meaning” (Grove et al. 2013). Qualitative data collection techniques that were used in this study include in-depth interviews and focus group discussions.

Exploratory research is conducted “to gain insight and discover new meaning especially where little is known about the phenomenon being studied. The researcher therefore selected this method to have a better understanding of the existing problem. Polit and Beck (2012) asserts that researchers that uses this method need to apply creative minds and be flexible as new information gained during data collection requires an investigative and analytical reasoning.

An exploratory design was chosen for this study because of the lack of knowledge available about the topic under study in renal settings of South Africa.

Descriptive research involves detailed representations of the participant's experiences, their feelings and meaning of their actions". The data and the context of the study enable descriptions to develop. A descriptive design was chosen for this study as the researcher intends to describe the challenges experienced by nephrology nurse from implementing EBP as they unfolded during the study.

Babbie and Mouton (2010) informs us that, "the aim of contextual research is to describe and understand events occurring within the natural setting". Qualitative researchers emphasize the use of a natural and social context in order to comprehend the participant's worldview. The study is contextual as the researcher intends to explore the direction of proceedings that are related to the implementation of EBP as they occur in the natural settings of the three tertiary public hospitals in Gauteng province providing dialysis services to the renal patients. These settings are natural and uncontrolled.

1.8.2 Research Setting

This study was mainly conducted in three tertiary hospitals in Gauteng province providing dialysis services to the renal patients. Settings which are natural and uncontrolled were chosen. This includes hospital A which provides all forms of renal treatment modalities including (acute and chronic dialysis and transplantation) Hospital B which provides both acute and chronic haemodialysis and peritoneal dialysis modalities but not transplant and Hospital C providing acute and chronic dialysis treatment (haemodialysis and peritoneal dialysis) as well as care of readmitted post-transplant patients due to some minor complications. The names of

the hospitals were withheld in order to protect their identity. All these hospitals had a number of trained nephrology nurses who according to the literature should have the ability to identify clinical problems and have input in decisions affecting patient care.

1.8.3 Population

A population is a specific type of an individual or element who makes up the focus of the study and meeting some criteria for inclusion in the study (Grove et al, 2013).

- **Phase one population**

The population of this study was all nephrology nurses who have acquired a diploma or advance diploma in nephrology nursing science. The total population at the time of study was 97 nephrology nurses who were registered and appeared on the SANC's register. The accessible population "is the portion of the target population to which the researcher has reasonable access to" (Polit and Beck, 2012). In this study the accessible population was the Nephrology nurses who were practicing at the three tertiary public hospitals in Gauteng. The population was increased with additions of two nephrology expert nurses from the private sector healthcare when the desired sample could not be reached.

1.8.4 Sample and methods

A sample is "a subset of population element and (Polit and Beck, 2012) assert that sampling is the process of selecting a portion of the population to represent the entire population so that inferences about the population can be made" (Polit and Beck, 2012). Three different sample types were drawn from the population of nephrology nurses and were utilized in the following three phases as below.

- **Phase one sample and sampling method.**

A sample of six expert nephrology nurses (n=6) with fifteen years' experience post training and above were used to provide data for the first phase. This sample was recruited as it was assumed by the researcher that they are experts in their field because of the amount of experience that they gained in practice.

Snowball sampling method was used to select this group. Grove et al. (2013) assert that this method assist with locating samples that are difficult or impossible to obtain. This method was selected based on the difficulty of the researcher to access the population that matched the selection criteria for this phase with ease.

- **Phase two sample and sampling method**

In the second phase four groups of nephrology trained nurses with a minimum of one year post training experience and above were recruited to participate in the focus group discussions. Focus groups are group interviews, carefully planned discussions that are carried out in non-threatening environments. They are commonly used in qualitative research to provide a clearer understanding of how people feel or think as a group about an issue or service (De Vos et al. 2012).

Purposive sampling method was used to select these groups. This sampling method was selected by the researcher based on the fact that the participants in this phase were recruited to answer the main research question of, what are the challenges faced by the nephrology nurses in implementing EBP? According to De Vos (2012), purposive sampling is used when the sample is composed of elements that contain the most characteristics that represent the population that serve the purpose of the study.

- **Phase three sample and sampling method**

The third phase included three groups of decision makers in nephrology units. These groups were recruited to answer the second research question which is, what recommendations could be formulated to assist Nephrology nurses implement EBP in clinical practice? Two of the three third phase focus groups were the shift leaders consisting of a total of thirteen nurses and one group of five managers were recruited. This number included a clinical facilitator and an educator.

A convenience sampling method was used in this phase. De Vos (2012) maintains that convenience sampling method is used to target the participants who are nearest and readily available. In this case all participants who happened to cross the researcher's path and meeting the inclusion criteria set for the study were included in a convenience sample. Obtained results might not be generalizable to the entire population with the use of this sampling method. The reason for selecting this method was because the shift leaders and operational managers could not commit to focus groups discussion times, as their work schedules determined their availability at particular times.

1.8.5 Data collection

Grove et al (2013) describe data collection as a precise and systematic gathering of information that is relevant to the research purpose or the objectives of the study. This information should also be able to answer the research question.

- **Phase one data collection**

The data collection method used to obtain information from the participants in this phase was individual in-depth interviews and it is described by De Vos et al. (2012) as conversation with

purpose. It is a method selected because of its advantage of being focused and expansive allowing the researcher and the participants to explore the issue that is being discussed deeply. These interviews were conducted in pre-arranged settings as per agreement of both the interviewer and the participants. The venues ranged from participant's workplace to a home. All venues were decent places which facilitated a free flow of interviews without interruptions. The researcher collected all the data herself in order to comply with the requirement for full immersion of a researcher in the study for qualitative research.

- **Phase two data collection (nephrology nurse focus groups)**

Data for the second group which consisted of nephrology trained nurses was collected using the focus groups. Focus groups are designed to obtain the participant's perceptions in a setting that is permissive and non-threatening. They are done to understand the experiences of people who are involved in the area of focus (Grove et al, 2013).

- **Phase three data collection (decision makers focus groups)**

The data for the third phase was collected using focus groups. These groups consisted of decision makers which were the shift leaders and the operational managers. The clinical facilitator and an educator were included as part of decision makers from the clinical teaching department and college. A total of four focus discussions were held to collect information rich data.

1.8.6 Data collection process

Data was collected only after ethics clearance and permissions to conduct the study from the three hospitals were obtained. The researcher made a visit to the proposed hospitals to invite nephrology nurses to participate in the study. An overview of the study outlining the topic,

purpose, significance of the study, research question and objectives were explained. The participants were informed of the process of the data collection including the proposed duration of the interviews and focus groups, dates, venue and times of meetings were also communicated. Different shifts were covered in all the three institutions. The participants were then left with the information sheet and the copy of the consent form and consent to use a tape recorder. A week before interviews were held, the expert nurses were called telephonically to finalize the venue and the times. Two weeks before the focus group meetings, the researcher reminded the participants of the meetings telephonically. On the day of the interviews and focus group discussions, a last follow up phone call that served as a reminder was made in the morning to every participant. This process was followed in the three institutions until data collection was concluded.

1.8.7 Data Analysis

Data collected for the three phases was analysed following Hsieh and Shannon (2005) qualitative conventional content analysis method. This is one of the research methods used to analyse text data. According to Hsieh and Shannon, a researcher using qualitative content analysis focuses on the characteristics of language as communication with consideration to the content or contextual significance of the text.

The researcher selected the conventional content analysis because it is generally used with a study design whose aim is to give description of a phenomenon. This type of design is usually appropriate when existing theory or research literature on a phenomenon is limited. The researcher is of the opinion that not much is known about the factors that challenges nephrology nurses and therefore hinders them in implementing EBP, although sufficient research has been documented about challenges in other disciplines.

1.9 RESEARCH RIGOUR

The trustworthiness of qualitative analysis is often presented by using terms such as credibility, dependability, transferability and conformability (Elo et al. 2014). Acoording to Lincoln & Guba (1985) trustworthiness in a qualitative study is crucial to support the argument that the investigation's findings are worth paying attention to. The alternatives that are supplied in order to assess the trustworthiness of this study are credibility (truth value), dependability (consistency), transferability (applicability) and conformability (neutrality).

In order to ensure credibility of the study the researcher identified different samples that participated in the study and described them truthfully. This was followed by the verification that participants who were included indeed met the selection criteria. The researcher also expended more time being physically involved with data collection and transcribed that data personally. Information shared by the participants was reflected as authentic data and was transcribed in its original form.

Dependability in qualitative research implies the degree of stability of data over time and under different situations (Lincoln and Guba, 1985). This triggers the question of whether the findings of the study may be repeated if the study were to be replicated with the same participants and in the similar context. The involvement of three different institutions with similar participants and the same context yielded the same results.

Transferability refers to the extent to which the findings of the study can be transferred to other settings or groups (Polit and Beck, 2012). This criteria calls for the objectivity of the researcher with reported results. Therefore the findings reported should be of high quality and should bracket the researcher's knowledge about the problem or context but merely present findings as they came from the participants. Elo et al. (2014) are emphasizing that with transferability trustworthiness is increased if the results are presented in such a way that they allow alternative

interpretation by someone who is reading the results. As a result the culture, context, the selection and the characteristics of the participants are crucial in this criterion.

Confirmability refers to the objectivity or neutrality of data in order to eliminate bias of the researcher's motivations or perspectives (Lincoln and Guba, 1985). According to Polit and Beck (2012) confirmability refers to objectivity of the researcher and implies that data accurately represent the information that were provided by the participants and that the interpretation of that data is not modified by the researcher.

1.10 ETHICAL CONSIDERATIONS

The researcher presented a proposal to the department of Nursing Education for peer review before submitting it to the Assessors committee and the Human Research Ethics Committee (Medical) of the University of Witwatersrand Ethics committee. Clearance was issued on the 12th of February 2018 with a clearance number M170937 allocated to the proposed study. See Appendix A. Permission from the Hospital managers (chief executive officers) of the three public hospitals that were selected to participate in the study was obtained. See Appendices B, C and D. Once the clearance and permissions were granted participants were then recruited. Participants for all the three phases were recruited at the same time and they were required to give written consent indicating their willingness and availability to participate in the study. The informed consent outlined the research problem, purpose of the research and the nature of participants required in accordance to (Creswell, 2014). Additionally they were left with the information sheets so that they could go through it at their own time in order to assist them in making a decision of whether to participate or not in the study. This information sheet document explained the significance of the study as well as information that participation is

voluntary and any information given will be used anonymously and the participants could withdraw at any time.

The ethical procedures that directed this study is discussed in more detail in Chapter 3.

1.11 OUTLINE OF THE DISSERTATION

The chapters of this study will follow the following sequence:

Chapter 1: Orientation of the study.

Chapter 2: literature review.

Chapter 3: Research methods

Chapter 4: Research findings

Chapter 5: Discussion, recommendations and conclusion.

1.12 SUMMARY

This chapter presented an overview of the study, the background to the study, problem statement, research purpose and questions were described. The researcher's assumptions were discussed and the operational terms described. An overview of the research methodology, research rigours and ethical considerations were also described.

In the next chapter, the literature review will be discussed in more detail.

CHAPTER TWO

LITERATURE REVIEW

2.0 OVERVIEW OF THE CHAPTER

EBP is comprehensively addressed in this chapter. The following will be explained: The origin and definition of EBP, the EBP process, the importance of using EBP and the benefits for patients. The advantages of using evidence based protocols and guidelines in the nephrology units. The role of nurse leaders in making EBP practical and realizable in the clinical area. Progress made with EBP implementation in selected countries and challenges to EBP implementation as identified internationally. The researcher concludes this chapter with a summary.

The literature review will be directed by the following approach.

2.1 DISCUSSION OF LITERATURE

2.1.1 What is EBP?

"EBP is a systematic process of reviewing the best available research evidence and then incorporating clinical experience and patient preferences into the mix" (Houser, 2011). It is assumed to be associated with improved patient outcomes, ensures patient safety while also containing costs (Houser, 2011; Malcolm, 2016; Spruce, 2015 and Thorsteinsson and Sveinsdottir, 2014). It is avowed by these researchers to be a rational method that opposes the traditional way of performing activities, "the way we have always done it" or rules of thumb. As a result it opposes intuitions, common sense and untested theories that most nurses have used to base their clinical judgment on.

EBP first draws on the utmost quality of clinically proven research findings. Secondly it focuses on the clinical expertise, which describes the health professional's ability through utilization of psychomotor skills and practical experience to recognize and treat each patient's individual situation and needs. Thirdly it addresses patient's anxieties, expectations, cultural and religious convictions, values and characteristics of individuals during the patient's clinical visit. The patient values also require a nurse clinician to communicate adequately in the patient's language and also understand their culture in order to avoid misinterpretations of conversations between themselves, the patient and family. The integration of these three elements are said to increase the potential for positive health outcomes. Studies of Lusardi (2012) and Houser (2011) inform us that Florence Nightingale utilized evidence-based information to ask critical clinical questions that subsequently led to a decrease in mortality rates During the Crimean War.

When explaining EBP, Houser (2011) makes an analogy of a three-legged stool. She explains that a balance needs to be maintained of the triad of clinical experience, patient preferences and rigorous evidence in order to achieve clinical practices that are scientifically supported and ethically acceptable to the patients. This doesn't mean nurse clinicians have not used research supported activities when attending to patient needs. Contrarily they only mean that if activities are not supported by current evidence, their status is unknown and therefore they may be out dated, constructed from low quality evidence or even harmful to the patients. According to Rousseau and Gunia (2015) such activities should not be labelled as ineffective but be viewed to be lacking evidence to affirm them. Native evidence should only provide the basis for evidence when scientific evidence is absent but with the acknowledgement that whatever is known may be ineffective with the possibility of being harmful to the patients (Rousseau and Gunia, 2015).

According to Houser (2012) evidence can come from randomized clinical trials combined with many different types of studies. She further posits that EBP is not a clinical problem solving method but rather an instrument used for resolving clinical problems and making decisions about interventions that are related to patient care. It is different from the traditional problem-solving approach. EBP is also different from the conventional decision making approach which relies more on opinions of expert nurses. The danger of this knowledge is that it is sometimes achieved by reaching a consensus with others and rarely through research evidence. The highlight of EBP is on the use of clinical guidelines as tools that guide the nurse practitioner's interventions as they are based on the best and current evidence. The guidelines are referral systems used purely to guide decision making and should not be rigidly followed as patient factors are different and may require modification of the guidelines. Therefore the practitioner is required to apply their clinician expertise to conclude on care decisions and should not practice following one approach. In fact, scientific research evidence on its own has proven not to be satisfactorily enough to make a clinical decision about a specific problem (Rousseau and Gunia, 2015).

2.1.2 Origins of EBP

According to Houser (2011) the term EBP was documented less than two decades ago. EBP has its origins from medicine and its founder is Archie Cochrane. The Epidemiologist called Sackett, (1991) first documented the use of the term in 1991 to describe the way education and training of medical students occurred. It arose after the investigator identified that physicians prioritized traditional methods and their experiences over scientific evidence when deciding on care interventions for patients. This led to fragmentations from application of different unscientific experiences. The need to base decisions on evidence was supported and till today

the concept gained popularity. Cochrane's goal with EBP in particular was to promote a methodical and effective system that was supported by research evidence to select patient interventions (Barends and Briner, 2014). Further development of this concept led to the significance of including patients' preferences and values as well as the practitioner's clinical judgment and knowledge into the process.

These ideas were incorporated into a definition by Buchanan, Lorenzo and Law (2015) when they advocated that (EBP) decisions about patients and their situations should be based on the current, ethical, and proven research evidence. Patients as the consumers of care should be involved in decision making, directed by the expert knowledge of practitioners within the available resources. There are multiple sources of evidence such as case studies, clinical trials, and descriptive studies, correlational and qualitative studies and expert opinion. Specht (2013) clarifies that evidence from different sources is not rated on the same level and it ranges from poor to highest quality of evidence.

EBP is no longer limited to medicine and has now being adopted by various health departments and disciplines in many fields including nursing (Melnyk et al. 2012), conservation, psycho-therapy and management (Rousseau and Gunia, 2012). It has also gained recognition not only in the healthcare industry but other institutions such as the banking and automobile industries as well. Recently Stevens (2013) proclaimed that EBP is no longer focusing on the individual practitioner but has interests in the functioning and practices of the diverse organizations and professions. What evidence-based practice requires is to simply assist clinicians to be able to independently translate the research findings into clinical practice. Practitioners should be able to scrutinize, appraise and select the best evidence in order to make appropriate decisions. The proliferation of EBP has awarded it an international standard but with implementation challenges in some areas in health organizations.

2.1.3 The EBP process

To facilitate the use of evidence in practice, Sackett advocated the use of the five steps in the EBP process, namely:

i. Firstly one need to identify the clinical problem that will facilitate conversion of information needs into answerable questions. The recognizable mnemonic of PICO is followed in order to effectively come to a solution to the problem. This mnemonic stands for: P = Patient, population and setting, I= Intervention, C= Comparison and O= Outcome.
ii. Searching for best evidence that will answer the clinical question.
iii. Critically appraise the evidence that has been obtained from the literature.
iv. Integrate the evidence in clinical practice whilst incorporating patient's values and preferences
v. Evaluate practice or the effectiveness of the intervention, (De Vos et al. 2012)

2.1.4 The importance of using EBP and the benefits for patients.

Decisions that are taken by nurses at the patient's bedside can impact patient's health outcome negatively or positively. As a result of these decisions the application of evidence based practice is imperative to provide the following benefits. Its use keeps nursing practice current. This idea is facilitated by the fact that nurses who use and apply evidence based practice are kept abreast of developments. They are encouraged to read nursing research material that will enable them to keep their practice current. Evidence based practice helps the nurse to provide the greatest standard of quality care by application of the latest evidence, based on research findings and knowledge.

According to authors Cullen and Adams, (2010); Prior, Wilkinson and Neville (2010) and Saba and McCormick (2011) positive health outcomes may be achieved successfully through application of EBP. Its use increases nurse's confidence and allow them to defend the decisions that they have taken with regard to patient care. The use of evidence based practice also improves and sharpens the nurse practitioners' skills. Nurse practitioners who are consistent in the application of EBP persistently appraise several researches that are supportive of their activities related to nursing care, as a result critical thinking and decision making skills are enhanced. As opposed to trial and error, EBP increases the nurse's efficiency and facilitate synthesis of nurse practitioners who are research inclined. The benefits of this are attributed to satisfaction of patients, practitioners and the organizations. According to Saba and McCormick (2011) where EBP is followed there's increased teamwork and better group cohesion and therefore harmony and productivity prevails. The outcome is increased job satisfaction, well developed and assertive practitioners with the ability to influence job retention in health care. The use of EBP also results in reduction of healthcare costs and minimizes litigations. It fosters practitioners to revise out dated policies and practices and be abreast of developments in the nursing fraternity.

When compared to traditional practice, EBP is said to be standardizing care. This results in reduced inconsistencies that may arise because of the use of unsupported and unscientific decisions affecting patient care. Consistent application of EBP can help alleviate uncertainties and preserve the dignity and reputation of the nursing profession. Another importance of EBP as reported by Spruce (2015) is its capability to provide the best value care. The principle of value for money as explained by the Batho Pele Principles (People first) is a quality initiative principle pursued in health care and it is realized when EBP is applied. Application of this principle will ensure that the value of the care that is given is translated into outputs that satisfy the consumers of healthcare. Spruce (2015) warns that practitioners who ignore to implement

activities which are EBP supported are deprived of the knowledge of what is current compared to what is out-dated. The researcher emphasizes that it is imperative to avoid marginalizing patients, and this can be done by providing standardized care based on what yields the best results and what is cost effective for both organizations and the patients. Researchers Houser (2012); and Melnyk et al. (2012); Saba and McComick (2011) and Spruce (2015) are in agreement that best outcomes can only be obtained in the findings of research and complimented by the practitioner's expert knowledge and patient involvement.

EBP also assist the practitioner in eliminating practices that are unnecessary and ineffective. Rousseau and Gunia (2015) report that if care is not supported by evidence, some practices may even be unintentionally harmful to the patients. As a result they cannot be continually carried out as this will constitute an unethical practice. The availability of evidence lessens inaccuracies, increases communication and accelerates the decision making process (Spruce, 2015). It also strengthens relationships that see collaboration being upheld in areas where it is applied. Because of strengthened communication, professionals become aware of each other's role and this brings the synergy that becomes productive for a positive practice environment.

Spruce (2015) is of the opinion that EBP assist professionals to validate why they practice in a certain way when they engage patients in their care. As a result of this engagement patients benefit from knowing that the care that they receive is based on what works best rather than past experiences. As a result, patient education is promoted and they become more empowered and involved in care decisions. This is the power enforced by the third leg of EBP, which includes the patient in care decisions through consideration of their preferences and values. EBP is important to the professional development, accountability, and proficiencies of nurses, and it has become an important subject in nursing. Researchers globally, (Hadgu et al., 2015; Houser, 2012; Majid et al., 2011; Melnyk and Fineout-Overholt, 2012; Rousseau and Gunia 2015; Saba and McComick 2011 and Spruce 2015) advocate that it should be integrated into

daily nursing practice. Contrary to this call for its application and despite of all the documented advantages and benefits to the patients, professionals and the organizations, EBP still remain largely unused in healthcare systems internationally (Melnyk and Fineout-Overholt, 2012).

2.1.5 The use of Evidence Based Protocols and Guidelines in the Nephrology Units.

According to Leach and Segal (2010) clinical practice guidelines across all disciplines are progressively adopted in the management of chronic diseases globally. Protocols are mostly informed by practice guidelines. Protocols are defined by Leach and Segal (2010) as "detailed written sets of instructions that are aimed to guide the care of patients or to assist the practitioner in the performance of a procedure". This definition is expanded by Kredo et al. (2016) who allege that in health, protocols give direction or instructions about how to do a particular process clearly and without overt mistakes. This mean that if they are literally followed the practitioner may be exempted from making any mistake when carrying a procedure. These guidelines therefore should be supported by evidence in order to be valid.

Kredo et al. (2016) explicate that evidence-based clinical guidance documents are diverse, and authors use words interchangeably to describe 'guidelines', 'protocol', 'practice parameter', 'pathway', 'standard', and therefore their definitions are dependent on guideline developers. Guidelines can be tailored to meet each patient's needs whilst protocols define a management plan that has to be followed. Guidelines can be adapted to a large variety of settings and protocols cannot be adjusted as they reflect a particular region or institution. Guidelines should be viewed exactly like that, as providing guidance, but the final decision rests with the practitioner. For an example, in practising evidence based nursing following a guideline on calculating a patient's ultrafiltration goal, nurses have to decide whether the prescribed evidence is relevant for an individual patient. The clinical expertise applied is always balanced

with the threats and advantages of a decision taken for individual patients, and should consider the patient's distinct clinical situation as well as comorbid conditions and preferences.

In the renal setting, for patients receiving haemodialysis, two patients may have gained the same amount of fluid but their ultrafiltration goal may differ based on individuality and differing clinical presentations. One patient may be anuric and another may be oliguric. The amount of fluid to be removed from each patient will be determined by the fluid gained, haemodynamic status, presence of comorbid diseases as well as the tolerance of the body to handle fluid removal. Therefore the ultimate care decision will be influenced by all the above factors and the clinician's expertise and patient's contribution, especially if the patient is chronic and conversant with their treatment and condition.

Kredo et al. (2016) confirm that traditionally and throughout the nursing history, CPGs were built mostly on the clinician's expert opinions and they seldom referred to the research findings. However today it is a requirement to base activities on evidence obtained from reliable scientific sources. The researchers further reinforce that the current institutional protocols and guidelines should be informed by evidence. They should be approached with the integration of expert opinion and patient values and preferences in mind. However studies report that not all nurses follow guidelines and protocols when delivering patient care. This assertion is consistent with the findings of Majid et al. (2011) who found that in their setting, care of the patients was influenced by the practices and beliefs of those involved in providing treatment and not guided by any protocols.

The existence of guidelines developed by the National Kidney Foundation (NKF), Kidney Disease Outcomes Quality Initiatives (KDOQI), Kidney Disease Improving Global Outcomes (KDIGO), guidelines by the South African Renal Society (SARS) and the Renal Care Society of South Africa (RCSSA) forms part of evidence based guidelines directing kidney disease

care and management. The implementation of guidelines requires not only knowledge of guidelines content but also practitioners with the ability to deliver care that is current and in line with CPGs. As they are just guidelines, institutional protocols can be developed based on these guidelines and tailor made to suit individual settings. They therefore have to be continuously monitored and updated as and when necessary.

With all the positives of practice guidelines and protocols described, they were found not to be consistently used in most areas by several researchers. In a survey conducted by Estrella et al. (2013) on perceptions and use of KDOQI guidelines, the researchers reported that guidelines were not universally adopted even by the physicians in nephrology settings. Problems cited by staff members were that they are cumbersome, not easy to use and confusing. They were also found to be too detailed and as a result did not provide immediate answers to an immediate question. Despite of them having been in existence for over decades, some physicians claimed not to be aware of them. Although they were formulated to guide all nephrology health care providers, they were rather more specific to provide medical care guidance than nursing care. Similar findings were reported by Stacey et al. (2015) when they discovered that, even when widely available, protocols were inconsistently used in Oncology units. Nurses reported the following challenges to their use; the length of the protocol, the amount of information and complexity of information as well as narrowly constructed protocols that failed to address multiple symptoms. Some nurses also alleged not to have been aware of protocols. The facilitators that were observed by these researchers included that they needed to be comprehensive, well organized, evidence based, relevant to current practice and having tick boxes to expedite documentation.

According to Kredo et al. (2016) guidelines and protocols have multiple purposes that are intended to improve effectiveness and quality of care. They decrease costly and preventable mistakes, they decrease discrepancies by ensuring standardized treatment. They decrease

litigation liabilities by minimizing adverse events, and therefore they should be consistently used in practice.

With the reported challenges to guidelines use, the South African Renal Society (SARS) provided a solution to the resistance that is reported by developing user friendly guidelines that accommodate all practitioners. The SARS guidelines help to validate that quality driven practices are upheld and that some consistency and impartiality with regard to treatment is sustained. They were also developed to ensure that patients are not unreasonably disadvantaged on the basis of limited resources. Of importance their implementation ought to improve the standard of individual patient care given. These guidelines were developed to be implemented in dialysis units both in the public sector hospitals and private sector. They guide nurses with their duties pertaining to adequacy of dialysis, selection of membranes, blood chemistry interpretation, management of vascular access and many other care decisions.

All guidelines and protocols should be current and revised at agreed intervals or as new knowledge emerges. However practically, they are reported not to be frequently revised in general. This is reported by Alonso-Coello (2011) who observed that the updating of guidelines is often irregularly scheduled in organizations. She highlights that the problem of them not being revised is because there is no fixed lifespan for a guideline but an update every three to five years is generally recommended. To make guidelines inclusive, SARS and RCSSA sought input from all health care practitioners involved in renal care such as nephrologists, renal technologists and nurses when they were planning to revise their guidelines. They then circulated them to all participants for comment and therefore they were inclusive of all. Within the guidelines the developers extensively used the European Best Practice Guidelines (EBPG) and the KDOQI guidelines in finalizing the revised document. The developers of these guidelines assured the readers that evidence-based recommendations were used wherever possible and suggested these guidelines be reviewed every 2 years.

2.1.6 The role of nurse leaders in making EBP practical and realizable

Nurses at the operational level are reported by researchers Mohsen et al. (2016) and Hadgu et al. (2015) to appreciate EBP and support its application but are said to be lacking the necessary authority to implement change. Birken (2012) assert that nurses are not confident enough and feel they lack autonomy to change practice without a supportive organizational culture and visionary leadership. The researcher highlights that change is well received when it is directed by organizational leadership. Both clinicians and management need to understand internal and external influences that may hinder successful implementation of any project, and they should develop a supportive infrastructure that will counter that.

Management need to decentralize some authority to empower nurses at a ward level so that they are able to prompt changes whilst receiving satisfactory support. In this way nurses will work hand in hand with the leadership to identify areas in need of change. In order to overcome challenges to change, Melnyk and Fineout-Overholt (2012) assert that there must be "champions" and support mechanisms in health facilities. They further explain that senior nurses should act as mentors for junior nurses as they have adequate experience and are available to transfer information about existing evidence.

Additionally, the organization should have capacity and show willingness to change. They should provide an EBP responsive infrastructure and a shared vision that encompasses it. This should be embroiled in the organizational strategic plans so that it can be operationalized at unit levels (Melnyk et al. 2012). These authors explain that successful implementation requires visionary and supportive leaders who demonstrate willingness to be part of the process. Therefore leaders should believe in themselves and trust the contributions that are made by the

subordinates. The researchers are of the opinion that support of the nurses at the operation level serve as a strong motivator and boost their confidence.

The qualities of the leader are important to drive EBP effectively. The identified leader should be enthusiastic to drive change and be willing to tackle tasks that others may dismiss as possible. This leader should be committed to excellence as EBP is related to continuous quality improvement. According to Arroliga et al. (2012) leadership in the 21st century requires someone who is self-confident, who is willing to make decisions even when these are unpopular. EBP also requires team effort, so the ideal manager to drive this process should be open to new ideas and realize they do not have all the answers themselves. Muller and Bester (2016) assert that leaders and followers interact together in a social context. The follower, being the nurse at the operational level assists with the transformation of the leader's 'vision and brings it to action. This nurse therefore is an integral part of leadership.

Marquis and Huston (2015) assert that absence of visionary leadership in healthcare is related to limited improvement and a lack of creative solutions needed to solve complex health problems in the units. As part of leadership, educators and clinical facilitators should also play a crucial role in taking the nurses through the process and explaining the rationale why nurses need to use evidence supported activities at all times.

2.1.7 Progress made with EBP implementation in selected countries.

Australia, Canada and the United Kingdom are countries that adopted and led EBP implementation. Australians embraced EBP and included it in continuous quality improvement initiative by accreditation agencies. It is also a requirement by the National Health and Medical Research Council for inclusion in the graduate educational curriculum (Melnyk and Fineout-

Overholt, 2012). Robust measures are in place to support nurses to embark on research in order to make the practice of nursing authentic and reliable. However challenges associated with limitations of time, confidence to commence the projects and motivation factors are always present.

Nephrology consultants, senior nurses and allied health professionals meet biannually in a consortium to set out guidelines for "caring for Australians with renal impairment". All groups are represented and consensus is reached at that forum for inclusion and revision of current evidence needed for practice. The senior nurses lead their teams at unit levels in developing policies and procedures guided by the guidelines that are agreed upon at the consortium. This is followed by the education of junior nurses on how to integrate these protocols into clinical practice in order to effectively meet the needs of the client (Melnyk and Fineout-Overholt, 2012). The researchers posit that this exercise though tiresome but it is a worthy process due to the need to update these policies and procedures regularly as new information becomes available. They also acknowledge the commitment and discipline demonstrated by the Australians in trying to keep abreast of developments in as far as EBP is concerned. Canada and the United Kingdom although they were the first to adopt EBP, are reported to be experiencing implementation challenges similar to the other countries (Melnyk and Fineout-Overholt, 2012).

According to Weng et al. (2013) healthcare professionals were supported with material that promoted EBP by the National Health Research Institutes (NHRI) in Taiwan. Despite the extensive efforts of the NHRI's to motivate clinicians on the implementation of EBP, the researchers report that there were challenges with its uptake and slow progress in some of the regional hospitals. Meanwhile Majid et al. (2011) reported earlier that majority of the nurses working in public hospitals in Singapore had a positive attitude toward EBP which did not transform equally to implementation. This pattern was consistent with other studies of Hadju

et al. (2015) in Ethiopia, Stevens (2013) in America, and Stokke et al. (2014) in Norway. During 2008, Suwanraj (2010) reported that less was known about the use of EBP in Thailand as it was a fairly new concept then. Difficulties of implementing EBP that were compounded by the English language barrier were however reported. This resulted in minimal research utilization which was subjugated by intense support that was provided in the country. Two years later Suwanraj (2010) proclaimed that the uptake of EBP was steadily growing. Two organizations were strongly behind EBP use and as a result most hospitals started with the implementation process. It is evident that with support of the leaders the whole country can be steered in the direction that will see EBP being adopted globally. Credit is also directed to the organizations that introduced and persistently tried to make an awareness of EBP and these are; the Thai Cochrane Network (TCN) and the Thai Center for Evidence Based Nursing and Midwifery (TCEBNM). According to Suwanraj (2010), the TCEBNM provided educational and training programs related to EBP use by nurses, students and all health faculties in the country. This centre is also reported to have developed numerous evidence-based practice guidelines and interpreted practice information into the Thai language. This information was reported by the Joanna Briggs Institute and the TCEBNM.

2.1.8 African Perspective of EBP

Hadju et al. (2015) reported that Africa is not left behind as EBP is being encouraged for nurses and its importance is also greatly stressed. Resource challenges, migrations to developed countries and poor research utilization by nurses' however retard the progress. In Zambia and Malawi researchers reported that nurses are keen to provide care that is supported by evidence and in fact in some institutions EBP implementation exist (Abdulwadud et al. 2017 and Mulenga and Naidoo, 2017). Whist many countries are struggling with implementation

challenges, in Nigeria, Adamu and Naidoo (2015) reported positive results of nurses' perceptions of EBP. The level of knowledge of evidence-based practice, good understanding of EBP use and the utilization of research among nurses were reported. There were positive reports that nurses are gradually embracing EBP when implementing nursing care. In Egypt and South Africa, Mohsen et al. (2016) and Jordan et al. (2016) report that EBP is progressively being accepted in health organizations as central to the delivery of patient care. They also assert that many institutions are trying to integrate it, but with observed and recorded challenges.

2.1.9 Challenges to EBP implementation as identified internationally.

Regardless of the call by researchers for nursing practice to be based on evidence, nurses still encounter extensive challenges to achieving and applying EBP (Stevens, 2013). Findings of Hadju et al. (2014) Majid et al. (2011) and Spruce (2015) indicate that implementing EBP is a problem and that there are multiple factors that hinder utilization of research in clinical practice. These researchers assert that such factors should be acknowledged if EBP is truly to be considered to drive decision making in clinical practice. Those factors include amongst others personal factors such as; limited time to search the literature, inadequate knowledge on the use of computers, and lack of knowledge to appraise the literature. Organizational challenges include increased workload compounded by shortage of human resources, absence of mentors, unsupportive leadership, culture that is not supportive of EBP and not free to change practice (Khammarnia et al., 2015; Majid et al., 2011; Melnyk and Fineout-Overholt, 2012 and Ubbink et al. 2013).

According to Khammarnia et al. (2015) and Thorsteinsson and Sveinsdottir (2014) time and skill to search for evidence were the two main constraints of EBP use in their studies. Their concern with regard to time is that nurses' primary goal is to assess the patients and provide

the necessary care. The challenge arises when they have to explore the literature and appraise the evidence in order to determine if the available evidence can be integrated in practice or not. This is an exercise the researchers stress is time consuming. Furthermore nurses still have to appraise the quality or level of evidence which on its own is a process which requires skill and is a labour intensive exercise too.

Weng et al. (2013) found that although Taiwanese nurses were receiving support from the NHRI but their knowledge and skills of EBP was limited. These findings are in line with that of Mallion and Brooke (2016) where nurses did not demonstrate to be possessing knowledge of EBP. It is interesting to note the differences across the different professional groups in Taiwan, with Physicians and Pharmacists reported to be the most aware of EBP as Weng et al. (2013) reported. Disturbingly technicians were identified as the group which were least aware of EBP in the same study. This is an important report to note for the African context as renal technologists constitute a significant number of the clinical staff members in the nephrology setting. Their numbers are proliferating and ideally a parallel move amongst them and nurses should be taking place in order to avoid conflicting care decisions that may produce dreadful results in clinical practice. Meanwhile Melnyk and Fineout-Overholt (2012) suggest that factors such as limited knowledge, negative attitudes and limited academic skills are responsible for the behaviour of nurses not being consistent with EBP use.

A solution for this may be an EBP intervention programme. Sindi, Hamouda and Bankhar (2017) found that a robust educational intervention together with supportive management were instrumental in successful application of EBP in Saudi Arabia. Their assertion is supported by Stevens (2013) who affirmed that previous exposure to EBP through training or involvement in a project is linked to the nurse's comfort in integrating EBP. However training alone is not enough as the researcher reported that despite positive attitudes and training of EBP use, nurses specified that other challenges still inhibit them from keeping up with new evidence. Inability

to interpret statistical results, and not understanding the jargon used by researchers were the primary challenges that were reported. Some researchers believe that training should be coupled with experience. According to Shafiei et al. (2014) the researchers discovered that not much had changed since EBP was introduced in 2007. Nurses in Singapore considered EBP to be a waste of time than a necessity in their professional practice. This negativity was propagated by the realization that nursing care was and is still coordinated from doctors' orders and not research findings or best practice guidelines.

With all the documented challenges Hadju et al. (2015) and Majid et al. (2011) report that nurses generally demonstrate positive attitudes and beliefs towards EBP and also recognize the significance of including EBP in their daily activities. Findings from these studies specify that the attitudes and beliefs of nurses are positively associated with the extent to which EBP is applied. They are of the opinion that accordingly values, beliefs and attitudes of nurses towards EBP can theoretically predict their behaviour. However they are in agreement that theory is yet to be tested in practice to support that allegation, as up to this far it has not been verified. Contrary to that assertion Mallion and Brooke (2016) is of the different opinion, stating that the positive values, beliefs and attitudes do not confirm the willingness to implement EBP or affirm its knowledge. These researchers assert that positive attitudes alone would not bring about change nor guarantee positive health outcomes, they are undependable in as far as EBP implementation is concerned. Whilst application of EBP is a challenge for many countries, the consequence of not using it is catastrophic. Amend and Golden (2011) mention that not using EBP for the patient can mean rendering out dated treatment methods that do not promote positive health outcomes. They further posit that, failure of clinicians to use EBP can result in poor patient results and loss of patient's trust in the healthcare team. Unlike the Australian support of EBP, several countries experience serious challenges especially with limited human and management factors affecting EBP implementation (Melnyk et al. 2012).

2.1.10 Challenges to EBP implementation in Africa

In Africa, few studies have explored the challenges of EBP use in public health system and none in the field of Nephrology. Findings by Hadju et al. (2015) in Ethiopia disclosed that the progress of EBP implementation by nurses in Africa is slow which is in agreement with earlier studies by (Melnyk et al. 2012 and Stokke et al. 2014). The researchers found that the perception of the nurses towards EBP was positive but with various implementation challenges. Mulenga and Naidoo (2017) identified main challenges as lack of resources and difficulties in accessing research material in Malawi. Majid et al. (2011) learned that nurses with longer work experience are more confident and are thus in a better position to implement EBP than the junior nurses. They reckon that novice nurses have inadequate clinical knowledge and this disadvantage suppress their confidence and willingness to take the leading role in engaging in EBP. This assertion is supported by Hezaveh et al. (2014) who reported that newly graduate nurses have problems related to communication. The novice nurses were found to have difficulty in connecting with patients and their families and were not able to communicate effectively with multi-disciplinary team due to lack of confidence. As a result, they will not have the necessary ability and confidence to implement EBP, even when it was taught as part of their curricula. Contrary to this allegation, Hadgu et al. (2015) assert that the graduates and junior nurses have recently been exposed to EBP through theoretical training and can still recall and implement what they have recently learned. On the other hand senior nurses are bound to experience challenges as they are more comfortable with application of expert knowledge and worsened by the reality that they have not heard about EBP before. This will make implementation difficult and cumbersome for them. EBP also require people who are technologically affluent to appraise the literature and most senior nurses are disadvantaged with that skill and this will exacerbate its rejection.

Contrary to challenges that have been reported in Africa thus far, Adamu and Naidoo (2015) reported that in Nigeria nurses have understandings of EBP and of research utilization. Furthermore, the nurses perceived that they were adopting EBP when implementing nursing care. In Zambia, Abdulwadud et al. (2017) identified challenges that are common to other studies and lack of management support and feedback from meetings as leading causes of implementation failure. In Egypt, Mohsen et al. (2016) found several challenges that are identical to those in other countries globally but in particular education and training on evidence based nursing being their primary and main need. They assert that healthcare management should increase time for employees to conduct online search. They advocate for the supply of health facilities with new informatics infrastructure.

In other departments it was discovered that leadership as well as physician behaviours retarded progress which led to deteriorations in care decisions by nurses. Poor management support, evidenced by shortage of human and material resources that are required to enable nurses to function effectively emerged as significant challenges in Africa, (Tacia et el. 2015). Contrary to findings of Sindi, Hamouda and Bankhar (2017) in Saudi Arabia where management was found to be supportive with the application of EBP as well as supporting research related activities, managers in Africa have not reached this point. Other challenges that emerged during the study were computer access and internet connection as well as the knowledge to search for evidence. Wallen et al. (2010) found that successful implementation of EBP require a change in the strategy of organizations and inclusion of educational interventions in practice. Provision of an EBP mentor or champion who will act as a role model together with robust EBP training were recommended by (Khammarnia et al., 2015; Mohsen, 2016 and Warren et al. 2016) respectively. Jordan et al. (2016) affirms that the recognition of EBP is increasing in healthcare institutions of South Africa, with many institutions trying to integrate it, but obviously with observed and recorded challenges.

2.2 SUMMARY

This chapter explored different literature focusing on evidence based nursing practice. The concept was unpacked and its origins explained. The importance of the use of EBP was discussed and the benefits to the patients were elaborated. The use of Evidence Based Protocols and Guidelines in Nephrology units as well as the role of the nurse leaders in making EBP practical in clinical areas were explained. The developments in terms of implementation in certain countries as well as challenges to implementation were described. In the next chapter the research methods will be discussed.

CHAPTER THREE

RESEARCH METHODS

3.0 INTRODUCTION

This chapter describes the research method that is used during the course of the study. The study followed an exploratory, descriptive and contextual design. A qualitative method was used to explore and describe challenges that are faced by the nephrology nurses regarding the implementation of EBP in Gauteng hospitals. The chapter addressed the methods and procedures that were used to realize the purpose and objectives of the study.

3.1 RESEARCH DESIGN

A research design is defined as a framework of methods and techniques that the researcher chooses to combine various mechanisms of research in a practically reasonable manner so that the research problem is effectively controlled. It provides an understanding about "how" to conduct research using a certain methodology (De Vos, 2012). The design selected is influenced by the research problem and therefore the researcher felt that the research problem will be clarified by this method.

According to De Vos et al. (2012) "qualitative research is used to answer questions about the complex nature of phenomena with the purpose of describing and understanding that phenomena from the participants' point of view". Proponents of qualitative research believe in making use of inductive reasoning directed at more general than specific phenomena. Qualitative research is also conducted within a natural, relaxed and holistic environment enabling the participant to be themselves. Grove et al. (2013) explains qualitative research as allowing the researcher to discover the depth, richness and complexities that characterize lives

of human beings in order to improve one's comprehension of the problem. This approach therefore allowed the researcher to tap into the thoughts and perceptions of nephrology nurses and allowed her to gain an understanding of how they not only viewed the research problem, but also how they managed it (Creswell, 2014). As a result, the researcher was able to get a rich descriptive data from the participants.

Exploratory research is conducted to increase knowledge and understanding as well as discover new meaning about a phenomenon in the field of study (Polit and Beck, 2012). With this research method, a researcher starts with a general idea and uses it as a medium to identify issues that can be the focus for future research. An important aspect here is that the researcher should be willing to change his/her direction upon revelation of new data or insight. Researchers following exploratory research utilize their creativity, open mindedness and flexibility as they adopt an analytical position and explore all available information (Grove et al. 2013). This design was followed to gain an understanding and insight into views of nephrology nurses regarding challenges that they faced with implementation of EBP in clinical practice. In the light that this topic is a new area of interest, the researcher assumed that this design will be relevant as participants will be able to express themselves freely in unstructured and uncontrolled environments.

According to De Vos et al. (2012) "descriptive research describes an image in detail about a situation or setting and specifically focuses on the how and why questions. The goal of descriptive research is to describe a phenomenon and its characteristics within a study thereby providing a picture of situations as they occur. In descriptive studies participants give a representation of their experiences, feelings and meaning of the phenomenon. De Vos et al. (2012) assert that in qualitative research description is associated with an intensive investigation of phenomena and its deeper meanings, thereby presenting a thick description of what is being studied. Descriptions develop from the data that emerges from the study. This

data is then reported in the participant's own words. The researcher has provided a detailed description of what each participant shared from the expert group and the focus groups in phases one, two and three.

Babbie and Mouton (2011) posit that contextual research present a description and understanding of phenomena as it unfold in its natural setting. In qualitative research the use of a natural, flexible and unstructured social context is important in order to understand the participant's worldview. The researcher collected information addressing the participants within their own context. The findings that will be drawn from this study will remain unique to this context implying that they cannot be transferred to another similar setting.

3.2 RESEARCH METHODS

Research methods are systems used to provide structure to a study and to collect and evaluate in an effective, efficient and analytical manner the information that is crucial to the study (Polit and Beck, 2012). Research methods therefore comprise of the selection of the population, sample and sampling methods, data collection and data analysis.

3.2.1 Population

The population according to Grove et al. (2013) is sometimes "referred to as the target population, it is the entire set of individuals or elements who meet the sampling criteria". The population of this study was all registered nurses who have acquired a diploma or advance diploma in nephrology and are registered with the South African Nursing Council as Nephrology nurses.

The accessible population is the portion of the target population to which the researcher has realistic access to (Polit and Beck, 2012). The total number of 43 participants was 43.

Table 3.1 Overview of accessible population and samples of the three phases of the study

Phase one	Six participants	Individual experts
Phase two	Four focus groups	Trained nephrology nurses
Phase three	Three focus groups	Two groups of shift leaders & one group of unit managers

3.2.2 Sampling and methods

Sampling is a process followed by the researcher to select people, events or elements that will deepen the understanding of whatever phenomenon is being studied using a certain method. Non probability snowball, purposive and convenience sampling methods were used.

3.2.3 Data collection

Grove et al (2013) define data collection as a precise, systematic gathering of information relevant to the research purpose or objectives of a study using a specific data collecting method. Data collection in qualitative research is also explained to be happening simultaneously with data analysis. This complex process required the researcher to be fully involved in the study in order to perceive, react, interact, collect, record and attach meaning to the data that was shared. The researcher used one on one in-depth interview for phase one and focus group discussions for phases two and three to obtain data. According to Creswell (2014) interviews have a hierarchical relationship with an asymmetrical power distribution between the interviewer and

the interviewee. Focus groups are said to serve a variety of purposes in qualitative research including understanding people's experiences (Gove et al, 2013). They are designed to obtain the participants' perceptions in flexible and non-threatening settings. Data collection commenced only after ethical clearance was obtained. The researcher engaged in data collection serving as an instrument herself, this implies that the researcher collected data herself. Creswell (2014) explain the importance of researcher immersion as allowing one to observe, interview, take notes and interpret the data that is being collected.

Interviews and focus group discussions were conducted in English although none of the participants were first language English speakers. This was done to subscribe and conform to the universal recognition and standardization of the English language. The use of the English language was however not obligatory as participants were given the liberty to express themselves in their preferred languages, if they chose to.

3.2.4 Data analysis

Data analysis is a process of bringing order and attaching meaning to the words that derived from observations, interviews and discussions that emanated from the study. De Vos (2012) emphasizes the importance of analysing qualitative data at the same time that it is collected in order to build a coherent interpretation of the data. Data was analyzed following Hsieh and Shannon (2005) qualitative conventional content analysis. This is one of the methods used to analyze transcribed data. According to Hsieh and Shannon, "a researcher using qualitative content analysis focuses on the use of language as the beginning point of communication with special focus devoted to the content or the meaning extracted from transcriptions. As Hsieh and Shannon (2005) explain, this data might be in verbal or in electronic form. It may have been printed or even it might have been obtained from narrations, interviews, focus groups,

observations, open-ended survey questions, or print media such as articles, books, or manuals. These researchers assert that qualitative content analysis goes beyond simply counting words but comprehensively and intensely examine language. The purpose of this is to classify large amounts of data into a controlled and efficient number of categories that present similar meanings. The goal of content analysis is to provide knowledge and understanding of the phenomenon under study. Hsieh and Shannon (2005) describe three types of content analysis: the directed approach, conventional and summative content analysis.

According to Hsieh and Shannon (2005) the researcher using this method avoid influencing data with their own ideas but rather bracket that knowledge to allow categories and their names to flow from the data. They also immerse themselves in the data to allow new insights to emerge in order to be able to inductively describe in an analytical manner data that has developed.

Data analysis starts with reading all data repeatedly to achieve immersion and obtain a sense of the whole as one would read a novel. In order to produce codes, the researcher first read data word by word which allow them to extract the exact words from the text that captured key thoughts. Thereafter the researcher makes notes of their thoughts and impression of the read data which forms part of the initial analysis. Immersion into this data through reading over and over facilitates the development of labels for codes that is reflective of several key thoughts and this forms the preliminary coding scheme. This process is followed by the sorting and classification of the codes into sub categories based on their relationship. Clusters emerge from the grouped codes to form subcategories. The degree of the relationship that is between subcategories can allow the grouping or combination to form the categories. This data is then prepared for reporting. Hsieh and Shannon (2005) postulate that a conventional approach to content analysis should be supported by relevant theories or other research in the discussion section of the study.

3.3 PHASE BY PHASE DESCRIPTIONS OF POPULATION, SAMPLING, DATA COLLECTION AND DATA ANALYSIS

3.3.1 Phase one

- **Population**

The target population for this research was all the nephrology nurses registered with SANC, however since it was impossible to conduct the research with all the nephrology nurses from all units in the country, the study population consisted of trained nephrology nurses from the units in Gauteng healthcare sectors.

- **Sampling and method**

A sample of six expert nephrology nurses (n=6) was obtained for this phase. The criteria for selecting these nurses were that they had to have a qualification in nephrology nursing. They must have trained 15 years ago or before, and must have been currently practicing in the nephrology units or having a contribution in the nephrology field, such as a lecturer or transplant coordinator. This sample was recruited as it was considered by the researcher that they were highly experienced in nephrology nursing. The years of experience must have awarded them with sufficient knowledge and experience to qualify for a status of being regarded as experts in the field. The difficulty that was experienced by the researcher was that some of this nurses had left the public healthcare for different reasons. As a result the initial context was changed to include an additional two experts from the private health care sector. A total of six experts made up the sample for the first phase.

Snowball sampling method was used to recruit expert nephrology nurses as they were not known to the researcher. Grove et al. (2013) assert that this method assist to identify samples that are challenging or difficult to obtain. The method derives its advantage from social networks and the fact that friends are prone to have characteristics that are common. The

researcher recruited one expert nurse known to her and requested referrals and suggestions for encouragement of others to participate in the study. This pattern was followed until the targeted sample size was reached and data was saturated.

- **Phase one data collection.**

The in depth interviews with expert nurses were conducted at different venues as proposed and agreed with the participants and the researcher before the meetings. All venues where interviews were conducted were private and decent places that facilitated a fruitful and private discussion. Data collected from the expert nurses was obtained to determine if the expert nurses were familiar with the concept of EBP and to establish their perceptions on how implementation of EBP can affect nephrology nurses in clinical practice.

- **Phase one data analysis**

In keeping with Hsieh and Shannon's (2005) conventional data analysis method, the researcher transcribed the data verbatim from the tape recordings after every interview. Data analysis was directed by the research question. The analysis started with reading and re-reading each narrative in order to get sense of what was shared. The focus was on the information shared and not on what was known about the topic. Words which captured the thoughts of the researcher were highlighted as they formed codes. Field notes were made of what was assumed by the researcher as information making up the initial analysis. Observations were done and all verbally expressed data was recorded and non-verbal communications such as gestures were documented and interpreted. Data across all the individual interviews was compared for similarities and differences. With further immersion codes emerged from the data and were identified with labels. From these codes content subcategories emerged and were subsequently

condensed and grouped into the main categories in accordance to Hsieh and Shannon (2005) data analysis method.

3.3.2 Phase two

- **Population**

The accessible population for phase two was drawn from the trained nephrology nurses with a minimum of one year experience post training. This group was selected based on their ability to fit the criteria of being registered as nephrology nurses by the SANC and of being currently practicing as nephrology nurses from the three Gauteng public healthcare hospitals.

- **Sampling and method**

In the second phase four focus groups of nephrology trained nurses with a minimum of one year experience post training and above were recruited for the study. Firstly three sets of seven (7) participants and one of six (6) were recruited for four focus group making it a total of twenty seven participants. This was done in order to ensure saturation would be obtained (Polit and Beck, 2012). The ultimate sample number in these groups ranged from four to six and a total of 19 nurses participated (n=19).

A non-probability purposive sampling method was selected for use with this group. This method was selected to provide information that is rich and that will contribute greatly to the study (Grove et al. 2013). With this method the researcher applied their own judgement on who to select based on the knowledge about the study and population, therefore participants were selected according to the needs of the study. In this case the researcher applied her knowledge

of the discipline and its practice by selecting participants who met the selection criteria to provide information that is rich to answer the first research question.

- **Phase two data collection**

Data for phase two was collected using focus groups from nephrology trained nurses. Focus groups are carefully planned discussions that are carried out in non-threatening environments. They are commonly used in qualitative research to provide a clearer understanding of how people behaves and express themselves about an issue or service when they are in a group. De Vos et al. (2012) explain that focus groups are focused and involve some kind of collective activity. They are also facilitated conversations with the goal of determining the perceptions, feelings and thoughts of participants and not on reaching consensus. Krueger and Cassey (2009) posit that "people are the product of their environment and are influenced by other people. As a result they may need to listen to opinions and perceptions of others and themselves to create awareness about their own abilities and strategies". De Vos et al. (2012) add that the advantage of the focus group is to produce composite information in a cost effective manner and in reduced times. They enable the investigator to listen and learn from people and explore the principle of group process to uncover information. According to Polit and Beck (2012) focus groups are meant to range between six to twelve participants but they can also range between four and twelve (Krueger and Cassey, 2009). Selected participants are homogenous in nature in order to promote a comfortable group dynamic.

The second phase participants were the groups that were recruited to answer the main research question which is 'What are the challenges faced by nephrology nurses in implementing evidenced based practice in Gauteng nephrology settings?' The four focus group discussions were conducted in pre-arranged training rooms of each of the three hospitals. A non-threatening

environment with seating facilities was created. In order to minimize distractions and noise, a notice stating that the interviews were in progress were put at the door posts and this resulted in private and productive discussions developing. Participants were welcomed and introductions done. They were reminded that permission was requested for the recording of the focus group discussions. Participants were invited and stimulated to participate in the discussions by explaining that there was no right or wrong answer to the questions, but that their thoughts with regard to the discussed problem were appreciated to give depth to the study. Once the ground rules were set and agreed upon then the discussions commenced. Cues such as body language and facial expressions were used to indicate if participants wanted to agree, disagree, or were uncertain about the response during the focus group discussions. In such cases probes were then used to obtain clarity by redirecting the responses back to the participants in a reflective way. The participants were encouraged by the researcher to share information by indicating their interest in the discussions with non-verbal techniques such as head nods and eye contact but with minimal use of verbal responses. Field notes were taken. The researcher noted all non-verbal gestures made by the participants as well as their interactions and wrote them down. At the end of the discussions the main points were summarized and participants were given an opportunity to express their final comments or pose last questions before the focus group discussion were adjourned. The number of individual interviews conducted depended on the saturation of information which was reached when information and data became repetitive with no additional value to the data collected (Polit and Beck, 2012).

- **Phase two data analysis**

Verbatim transcriptions of audio tapes were done by the researcher. Data that came from the focus groups were compared to the field notes that were made and all analysed using Hsieh and Shannon's (2005) conventional content analysis method. Analysis started with reading of the transcriptions over and over as if reading a narration. The research phenomenon guided

data analysis and specified what to analyse and what to create as content. Verbal and nonverbal forms of data including gestures which were observed and documented during collection were analysed in order to be interpreted. The idea was to make sense of the data shared by participants and to reduce data to concepts that could be described. As rereading was done ideas started coming to the mind of the researcher and they were written down and prepared accordingly. Data was then coded. Coding led to the process of abstraction in which concepts were created. These concepts were further used to group data into different subcategories in accordance to Hsieh and Shannon (2005)'s content analysis method. Main categories were developed from the sub categories which emerged. The process of organization of the data was completed when it was prepared for reporting. This process was followed with all the four focus groups and analysis was compared for similarities and differences.

3.3.3 Phase three

- **Population**

The accessible population for phase three was drawn from the trained nephrology nurses who were shift leaders and managers in the nephrology units. This group was recruited based on the criteria being met of possessing the nephrology qualification and functioning in the position of either a shift leader, operational manager or an area manager. They also had to be employed in one of the three nephrology units in Gauteng public hospitals.

- **Sampling and method**

The third phase was made up of three focus groups. Two of the three focus groups were the shift leaders consisting of a total of thirteen (13) nephrology nurses and a third group of five (5) unit managers were recruited. A convenience sampling method was used in this phase. The reason for selecting this method was because the shift leaders and operational managers could

not commit to focus discussion times, as their work schedules determined their availability at particular times. These group of participants were included in the study so that they could provide data that would address the second research question which was 'What recommendations could be formulated to assist Nephrology nurses implement EBP in clinical practice?' They were presented with the challenges that were perceived by the participants in the second phase focus groups as hindering implementation of EBP. Thereafter they were requested to provide information that would be utilized as recommendations that would assist the nephrology nurses integrate EBP in clinical practice.

The method used to select this sample was the convenience sampling method which necessitates that subjects be included in the study because they happen to be in the right place at the right time. Available participants were simply entered into the study until the desired sample size was reached (Grove et al. 2013.)

- **Phase three data collection**

Three focus groups with decision making nephrology nurse leaders were conducted to establish how they could eliminate challenges to EBP implementation. These groups were presented with the challenges that were extracted from the second phase and they were requested to share recommendations that would ultimately see the adoption and implementation of EBP in Nephrology clinical settings.

The participants were allotted sufficient time to comprehend each challenge as it was presented to them and respond once they felt ready to do so. In order to extract as much information as possible, the atmosphere was as informal as could be handled. The focus group discussions were allowed to happen solely between the participants, unless clarity was needed.

Observations were carried out and field notes were made. All verbally expressed data and non-verbal communications such as gestures were documented in order to allow for interpretation. Undivided eye contact was maintained throughout and the facilitator listened attentively whilst taking reflective notes and marginal remarks as they occurred. Data was collected until saturation was reached. At the end of the focus group discussions, summaries of the main points were made and participants were requested to share their last thoughts on the problem under discussion before the meetings were adjourned.

- **Phase three data analysis**

The responses of the participants were analyzed according to Hseih and Shannon's (2005) conventional analysis method. Data was transcribed verbatim as required. All forms of communicated and non-communicated information that arose during focus discussions was captured in order to be analyzed and interpreted. This data was guided by the second research question of what recommendations could be made to assist nephrology nurses implement EBP in clinical practice. The researcher listened intensely and repeatedly to what was shared in order to arrive at concepts that were eligible to be described. A comparison of data across the three focus groups was done. Some of the content that emerged from this phase was aligned to the data that made up subcategories and categories of the first two phases. This was done because some of the responses that were shared expanded on the concerns raised from the second phase and were not necessarily recommendations. Similar content that emerged was grouped together to make codes. Coding led to the creation of concepts that were grouped together to subcategories that were then condensed to main categories. This data was then organized and prepared for reporting.

3.4 RESEARCH RIGOUR

In order to ensure reliability and trustworthiness of the study, Lincoln and Guba's (1985) model for measures of trustworthiness was followed with both the in-depth individual interviews with expert nurses and focus group discussions with nephrology nurses and decision makers. The four main aspects of trustworthiness applied to this study were credibility (truth value), dependability (consistency), transferability (applicability) and conformability (neutrality).

Credibility was achieved through prolonged engagement and constant observation with the participants (Lincoln and Guba, 1985). In-depth interviews were conducted by the researcher herself and transcriptions of recorded information were captured on an audio tape. As a result all information shared during the interviews is available and can be verified again after the interviews. Credibility also refers to confidence in the truth of the data and interpretation thereof, (Brink et al. 2012). Credibility determines the truth and authenticity of what was shared by the participants and also forms part of the findings of this study. This also correlates to some extent to what is provided in the literature as challenges to EBP implementation. Recordings of the transcriptions are kept locked and only available to the researcher and supervisor. Password protected computers were used to safeguard the information received.

According to (Polit and Beck, 2012) dependability refers to the constancy of the research findings over a period of time and through all conditions. It was achieved in this study through provision of detailed descriptions of the data that was obtained though immersion of the researcher into the study. Dependability also indicates the level at which some activities and thoughts are embedded in a contextual interaction. It addresses the consistency of the findings,

and is achieved by striving for objectivity and being truthful with all data that has been collected and analysed. The researcher reserved what she knew about the discipline and allowed information to come from the participants. This data was analysed in its original sense. Dependability is also achieved through stepwise replication which entails a full and complete description of the research process. The researcher gave the same question to participants and probed further as and where it was required. To increase dependability an experienced qualitative research staff member from the Nursing department of WITS University did an inquiry audit and a dense description of the findings was given.

Transferability refers to the extent to which the outcomes of the specific study can be applied to other situations. According to Lincoln and Guba (1985) the sample size in qualitative research is determined by the saturation of data. Transferability is therefore assumed from the sample to the target population only. It is therefore not the intention of the researcher to transfer the findings of this study to another setting because of the uniqueness of the context and the participants. For this study however, transferability was achieved by detailed and rich descriptions of the challenges that came out of phase two and this information was corroborated by the decision makers in the nephrology units of the three hospitals. The similarity of the information that was shared in these three hospitals limit the findings of the study only to these settings. De Vos et al. (2012) explain that the study transferability option can be enhanced by using multiple sources of data and in this case three categories of samples were selected and used to engross the research question in order to strengthen the study's usefulness for other settings. Transferability of findings to other settings is an equivalent of criterion applicability and it also requires description and disclosure of changes that may have happened in the setting during the process in order to give a complete and accurate account of the events.

Confirmability refers to the objectivity or neutrality of data in order to eliminate bias. It addresses the question of whether the study could be confirmed by another study and this is enhanced by removing the characteristics of the researcher. Objectivity and neutrality was observed by bracketing what the researcher knew already about the topic but allowed the information to flow from the participants in order to extract as rich as possible data from the study. Reflexivity was thus observed as the researcher was aware of some values and experiences that were brought to the study but did not allow them to influence the study (Creswell, 2013). Reflexivity was also achieved by support of verbal data with recordings and also supplementing text data with the use of an audio tape-recorder in which verbally expressed and non-verbal cues were observed and recorded and field notes were captured. Data remained a true reflection of the participants' responses. Information that was shared, observed and documented was checked with the recorded data from the audio tapes.

3.5 ETHICAL CONSIDERATIONS

Ethical principles in this study were observed in accordance with The South African Nursing Council (SANC)' Ethical Principles and values that have to be "upheld at all times by all Nursing Practitioners" (South African Nursing Council: Code of Ethics for Nursing Practitioners in South Africa. 2013).

Following meeting the requirements of The University of the Witwatersrand Human research Ethics Committee, clearance certificate was issued and also permission was granted by respective hospitals to conduct the study.

The following ethical principles were observed. The right to self-determination is based on the respect for persons that the researcher is to observe when conducting a study. According to Fouka and Mantzorou (2011) the autonomy is protected when a person expressively, willingly, logically and in a clear and manifest way, gives their consent. The participants who were requested to participate in this study were given information letters with full details about the study, see Appendix F. Thereafter they were requested to indicate their willingness to participate by signing the consent form and permission was also obtained to use a tape recorder for accurate data collection. See Appendices G and H.

According to Fouka and Mantzorou (2011) the principle of beneficence includes the professional mandate to do effective and significant research so as to better serve and promote the welfare of constituents. The right to protection from harm and discomfort is based on the principle of beneficence, that is to do good and above all to do no harm (Grove et al. 2013). Beneficence relates to the positive outcomes of the research which will be realized in the future, while non-maleficence relates to the potential risks of participation. This study carried no potential risks anticipated presently or in the future. The potential participants who declined to participate in the study were not coerced to do so but their rights were respected.

Participants were assured that their identity will be protected from public revelation and that they would not be identified by name in the research process including the report. The codes were used to identify them so that no person would be identifiable from the raw data. Participants were reassured that only the researcher and the supervisor would have access to the transcriptions. This was done so that their anonymity is respected. They were also reminded that their participation was voluntary and that they could withdraw their participation at any time they wished to without any penalty. They were assured that no risks will be posed to them by participating in the study and in fact the benefit of their participation will be realized by all

who will be positively affected by the outcomes of this study. They were informed that there were no costs and payments to be made with regard to participation in this study.

3.6 SUMMARY

This chapter provided a discussion of the research design and methods of the study. The population, sample and sampling methods of each phase were discussed. Data collection and data analysis procedures that were followed were also outlined. Measures of trustworthiness as well as ethical considerations were addressed. The next chapter will address the discussions of the findings.

CHAPTER FOUR

RESEARCH FINDINGS

4.0 INTRODUCTION

The purpose of this chapter is to provide a description of findings regarding the challenges faced by nephrology nurses in implementing EBP in Gauteng public hospitals. Data was collected using an audiotape in semi-structured individual interviews and focus groups respectively. The findings relate to the research questions that guided the study, which are: What are the challenges faced by nephrology nurses in implementing evidence based practice? The second question was: What recommendations could be formulated to assist nephrology nurses implement EBP in clinical practice?

The data was analysed using Hsieh and Shannon's (2005) conventional content analysis method. These challenges were attained within a qualitative, exploratory, descriptive and contextual design. In the first phase a sample of six expert nurses with fifteen years' experience post training and above were interviewed. These participants were used as experts in the nephrology field and mostly held senior positions in their areas of employment due to the length of experience they had. This group was included in the study in order to establish their perception on how implementation of EBP can affect nephrology nurses in clinical practice.

Some of the information that they shared was included in formulating the question for the second phase. The two central questions that were asked these expert nurses were: In your own words describe what do you understand by the concept EBP followed by how will implementation of EBP affect nephrology nurses in clinical practice?

In the second phase four focus groups of trained nephrology nurses with a minimum of one year experience post training and above were conducted. This group of nurses formed the

pinnacle of this study as they were at the operational level and were the ones who could supply rich data that is aimed at addressing the first research question which was: What are the challenges faced by nephrology nurses in implementing evidence based practice.

In the third phase three focus groups of decision makers consisting of shift leaders, a clinical facilitator, an educator and operational managers of the nephrology units were conducted. These were the decision makers in the units and they were included so that they could provide data that will address the second research question which was: What recommendations can be formulated to assist nephrology nurses implement EBP in clinical practice? This group were presented with the challenges that arose from the second phase and were requested to provide information that would be utilized as recommendations that would assist the nephrology nurses in implementing EBP.

Field notes were taken by the researcher during and immediately after individual interview sessions and the focus groups to support the data collected. The interviews, focus group discussions, field notes, and transcripts formed the data that was analysed. The description of the findings is in accordance with the final list of the categories and subcategories as indicated in Table 4.1. Initially five categories were identified with seventeen subcategories, and they were finally condensed to three categories with ten subcategories. In order to highlight the participant's data verbatim statements were indicated in italics.

4.1 METHODS OF DATA ANALYSIS

The researcher began by reading each transcript word by word from beginning to end in order to familiarize herself with the content. Then she read all transcripts prudently paying attention to the hidden message portrayed in non-verbal reactions that were demonstrated by participants

and then she wrote down such words in the column labelled gestures on the transcribed interviews using the participant's words or symbols. The researcher then started coding the first set of the data that arose from the first phase which comprised of six in depth interviews. The same pattern was followed for coding of the second and third phase of the transcribed data.

After all transcripts had been coded, the data was then examined within an actual code that has been identified. In order to epitomize the findings, quotes from the interviews and focus group discussions were used. These quotes were followed by the letters indicating where the remarks came from. The remarks from the expert nephrology nurses were coded by "ENN" followed by the code number. For an example, the second expert nephrology nurse was coded ENN: 2. Remarks of the focus group were identified with the letters FG1:5 for focus group one, fifth participant. The ones for the shift leaders were reflected as DM1: 2, decision maker first group, second participant and lastly the operational managers are coded differently with the alphabets only, i.e. OMG: C is the third operational manager. From these coded transcripts the subcategories emerged and categories were developed from those subcategories. Lastly the researcher examined the final coded data and reflected it as categories and subcategories.

4.2. DISCUSSION OF THE DATA

Three categories arose from the transcripts, namely: Management Practices, Organizational culture and leadership practices and Training and Development. These categories were grouped from seventeen subcategories that had emerged during data analysis. The categories and subcategories are comprehensively presented and fully supported by the participants' verbatim expressions as reflected by table 4.1 below.

Table 4.1: Categories and Subcategories.

CATEGORIES	SUBCATEGORY
Management practices	Shortage of staff. Recognition and rewards. Shortage of material resource, procurement practices and contractual obligations.
Perceived organizational support and leadership practices	Social isolation of the renal discipline resulting in absent management. Redundant position of the operational manager and communication. "If it is not broken why fix it"? Doctor- nurse relationship and improving the relationship through ward rounds.
Training and development	Protocols and guidelines. Development through In service trainings, congresses & workshops. Access of computers, knowledge of use of computers, searching and appraising literature.

4.2.1 CATEGORY ONE: Management practices

- **Shortage of staff**

The participants in this study were mostly dissatisfied with the working conditions and reported to be greatly affected by the shortage of staff. This problem subsequently led to increased patient loads leading to exhaustions which in turn resulted in a high absenteeism rate and burnout. The demand for the service does not match the supply of personnel on the operational level and even worse the participants are of the view that management is not doing enough to address this problem.

Shortage of nurses is a global problem that was estimated by the World Health Organization (WHO) to be about 4.3 million of nurses and midwives in 2010 (Tshitangano, 2013). The researcher reported in her study in the Limpopo Province that over half the population of nurses are more dissatisfied with their work, and she cited factors amongst others such as: staffing problems, availability of resources, salaries and career development opportunities as reasons for the dissatisfaction. This dissatisfaction either contributes to the nurses staying away from work or leaving employment. Burmeister et al. (2018) allege that shortage of staff is related to several risks such as poor care, less satisfied patients, disillusioned staff as well as increased mortality. They assume that an increased number of patients to care for increase the likelihood of the nurse to leave the organization.

> *"Arg man all over nurses are always exploited,* (Irritated) *I don't think that this problem will ever be resolved". (DMG1:4)*

> *"When there is shortage of staff the nurse patient ratio cannot be matched, we are challenged not just physically but mentally as well". (DMG2:5)*

"I think management basically they don't care, we are really drained; I think they don't care giggling" (Sarcastic laugh). *(DMG2:5)*

The participants in this study were mostly not satisfied with their work due to shortage of human resources. Although they did not openly disclose the reasons for their dissatisfaction but they mainly focused on the impact of shortage of staff on both the patients and themselves. Shift leaders identified themselves as the worst affected because of their positions and felt helpless at observing the consequence of the shortage of staff towards patient care.

"At the end of the day staff shortage is killing us. At times you are the only trained nurse on a shift and all the responsibilities lie on your shoulders". DMG1: 6

"Perhaps if the nursing managers and doctors were coming on board it would be something. Look, mina [I] *I travel a lot and I see things done smoothly in other countries, but it is difficult and different here". ENN: 5*

"People can't cope with the number of patients that they have to do. They become too tired and end up becoming sick resulting in continuous absenteeism". DMG2: 6

"This is a serious challenge to us and indeed a factor that contributes to poor quality nursing care". DMG2:5

Some participants recommended some suggestions.

"I feel that in those vacant posts they can organize part time nurses to come and help especially when there is a crisis of shortage". DMG2: 2

"The management must try to find out why are people leaving and try to support them". DMG2: 5

"Enough trained people should be available on each shift so that people do not get worn out and discouraged. Most people are burned out because of this situation". DMG1: 6

- **Recognition and Rewards**

The participants reported that they were not timeously compensated for the Specialty allowance post training and as a result they are not translated into the new position at the expected time. They also felt that they are not rewarded adequately for the efforts that they put in, as a result they were not prepared to embark on any activity that would put the name of the organization on a map when the same organization did not recognize them. Additionally nephrology nurses expressed frustrations with regard to differing incentive policy interpretations and implementation in the same Province.

Financial incentives are the most used strategies to improve and encourage employees to stay motivated and to increase job satisfaction during the employment period. Often inequities or perceived inequities with incentives are the ones which create ideas in the mind of employees that they are not being fairly compensated and as a result they become enticed to leave the organization.

According to the ICN (2008)'s guidelines on incentives for health professionals it is indicated that employees are demotivated by feelings of perceived inequities in the manner in which incentive strategies are designed and implemented. In a study by Mokoka, Ehlers and Oosthuizen (2011) on factors influencing the retention of nurses in Gauteng Province, they cited bonuses for additional qualification as a factor that would retain nurses in the current employment.

"*You find that people who have a scarce skill qualification don't get the scarce skill allowance but when they* [go] *to other institutions they get compensated for it"*

OMG: B

"They don't pay people for going to school to get better education. This education is used here, so they must pay us". DMG2:1

[In this institution] "*the management will make you act indefinitely in a position without recognition or reward". OMG: C*

- **Shortage of material resources (drugs, supplies and equipment), procurement practices and contractual obligations**

The participants are of the view that the institutions are mostly running short of priority drugs and suppliers and there are no sufficient machines. This shortage negatively influences their decision making capacity and compromises the level of quality. With the absence of necessary resources, they questioned how can they implement EBP? With more and more patients falling into renal failure, the demand for resources far exceeds the supply worsening the situation. The researchers Kilonzo et al. (2014) are of the opinion that the pressure for dialysis slots is likely to intensify giving the growing population of nephrology patients and Oluyombo et al. (2014) added that non-availability of equipment and supplies in nephrology units prevent good health care service delivery in the whole continent. Drugs, medical supplies and equipment are classified under material resources that are used in the healthcare institution for the sake of health care provision and they account for a high proportion of the health care cost, World Health Organization (WHO). The drug and supplies shortage is considered to be a complex global challenge and it seems to have deteriorated over the years (WHO, 2010).

Participants shared their frustrations of shortage of drugs and supplies like this:

> *"Sometimes you find that there is no medication. For an example, right now we do not have heparin".FG1:2*

> *"At times the patient need to be dialyzed with a low calcium bath because his serum calcium is high, wa bona,* [you see] *it is a challenge as we don't have variety".FG2: 2*

"The diabetics are also dialyzed with a solution used by non-diabetics. We don't individualize the care. Even the dialyzers we have is only fx 60". FG2: 2 [This is an artificial kidney used during dialysis to facilitate the removal of waste and water from the blood].

"Sometimes there's no money to buy the disinfectant solution and woooo then machines won't be disinfected for that period, nxa [irritated]". *FG2: 5*

Meanwhile the same problem is experienced with the provision of equipment.

"Right now we don't have machines to dialyze the patients; they come here at 3am and go into the machine at 3pm because ten machines are broken". FG2: 6

"The wards are crowded with patients who require dialysis and the quality renal care cannot be given in conditions of shortage of equipment". DMG2: 4

Impact of shortage of drugs and equipment on the quality of care.

"In this institution you need not waste time because you are going to give the patient the same care as the next and next and next patient". FG2: 3

"Patient care is really going down, and those that are turned away complicate and you know what happens" DMG1:6

"We use whatever that is available at the time to give treatment, how can they receive adequate dialysis when there are no resources?" FG2: 3

Impact of shortage of equipment on nurse education and training.

The participant who is a clinical facilitator shared her frustration as such with clinical facilitation:

"There are no resources to work with and this impacts negatively on the education of the student and deny us the opportunity to test if the student have mastered the content or not". OMG: 4

"Not all of us know how to operate our equipment. I think it start with us. We all need to know how to handle the machines properly". DMG2: 2

"When there is new equipment the company should send in a representative that will give training". DMG2: 3

"Support should be provided continuously if the equipment is to last us long and be used for its intended purpose". DMG2: 6

- **Procurement practices and contractual obligations**

Participants were under the perception that the lack of resources in the institution is due to the fact that suppliers were not paid. This was reported as a serious problem that stood between the patients receiving the best care and the staff carrying out their duties effectively. Mazibuko, (2018) on his study on analysis of the procurement practices in the South African public sector, postulates that contractual relationships could play an essential role in the administration of procurement practices but when deviations and non-compliance occur with the agreement, the results can be disastrous and costly in human, financial and reputational damage between the organization and the supplier and affects the consumer badly.

"When you report the machine and [discover] *that the company was not paid so they won't come to fix the machine. The machine will stand like that not being fixed". DMG2:*

"We owe the company; [the institution] *doesn't want to pay so the company is refusing to come to our rescue" FG2: 5*

"Right now we have a machine standing there [pointing at a machine a meter away from where we were] can you see it? Sipho, a technician from the supplier [not his real name] *suggested that he* [strip] *this machine to fix another one". FG 2: 1*

"We are not trained on how to fix the machine, we are only trained on how to use the machines. Maybe if we [can] *be taken to the plant of the company and be shown how to fix the machines it will be better". DMG2:5*

4.2.2 CATEGORY TWO: Perceived organizational support and leadership practices.

Organizational culture is often painstakingly viewed as a requirement of cohesion and teamwork in any organization. It is defined by Tsai (2011) "as the shared values, beliefs, or perceptions held by employees within an organization and is the social glue that holds an organization together". The researcher posits that in organizations where the culture is strong employees are assisted to achieve their goals and remain satisfied in their job. Therefore organizational culture is responsible for the behaviour and performance of people in the workplace.

- **Social isolation**

Participants in this study assert that their discipline is not known by the management and other departments which are supposed to be supporting them, hence they are subjected to a perceived negative treatment and they are not supported. They felt isolated from the rest of the hospital departments and they are of the impression that their misfortune is attributed to the fact that they are wrongly assigned as a medical ward instead of a Specialist unit. They expressed that it seems as if the management don't understand really what is happening in their units.

The concepts of isolation and alienation are used interchangeably to describe social exclusion of a person or group in an organization. "Workplace isolation is a psychological construct that describes employees' perceptions of isolation from the organization and their co-workers and

this perception form when there is an absence of support from the organization as well as a lack of social and emotional interaction within the team" (Marshall, Michaels, and Mulki, 2007).

These are frustrations that were greatly experienced by operational managers and subordinates as they shared this:

> *"Nephrology units are treated as aliens by all. When we express our concerns as managers to the management no one take us seriously". OMG: D*

> *"I think the problem is that we are included under medical here, the bosses do not know where to put renal and they don't understand what is happening in renal". FG1: 5*

> *"The matron in charge of this block said it himself that he thought this is a ward just like any other medical ward. He always declares that he doesn't understand this discipline and is frustrated to deal with its issues". FG1: 2*

> *"Sometimes stock is ordered and it is not delivered because people don't know the unit and don't know the value of what you are ordering in those amounts". OMG: D*

As a result of nephrology units being an unknown territory the management then become invisible and manage the units in theory whilst they are purely not there (Management in absentia).

The participants across the three institutions expressed an undivided dissatisfaction at the level of support that they received from the management. They posit that the management is invisible

and only come to the units when something grossly negative has occurred. They further report that the absent management also avoids their leadership role and as a result decisions are delayed or not made at all. They reckon that perhaps the lack of knowledge of the department is what is barring the management from being visible.

Hussain, (2017) assets that the world is changing fast and as a result the organizations have to come on board for development and survival of their businesses. These researchers are of the opinion that for any change to happen the leader and the leadership style are crucial to drive the process and leaders should lead and not be led.

> *"When management come here it is usually because there is a complaint or an incident, then they come". OMG: C*

> *"You hardly ever see them* [management], *I think they are running away from the nephrology units because they don't understand the dynamics of the unit". FG1: 6*

> *"The only time you see top management is when they bring negative news". DMG1: 5*

Proposed solutions

> *"We want someone from the top management who have a* [basic] *knowledge of nephrology, someone who will know how much stock is needed in the renal unit per month". OMG: A*

> *"We have to demand that the top management come down at least twice a year to listen to us, they must come and spend time in this department". OMG: D*

"Our area manager's office is here in the corridor and that's where we end up seeing her, in that very corridor". DMG1: 6

"Our very own managers at times they want to enforce non nursing duties on us. Can you imagine you are already short staffed, going an extra mile and yet you still have to do non nursing duties, there's no support". DMG1: 6

- **Redundant position of the unit manager**

The subordinates at the unit management positions felt that their seniors hordes authority and do not share or delegate functions that could be dealt with by the shift leaders and operational managers. As a result they felt inadequate and developed feelings of inability to solve the problems that they encountered in their own units. In an exploratory study on talent management by Koketso and Rust (2012) the researchers reported that quite often there's no good management guidance from the top coming down, as a result people feel disconcerted at the treatment that they receive from their immediate managers and then they leave the organizations. The participants expressed their concerns like this:

"Working with the dialyzer and not knowing how you order it is out. I'm used to doing everything by myself from ICU to different wards that I have worked in". OMG: C

"Let's say I want somebody [staff] *to work tomorrow I can't do it by myself, I have to always go through the* [area manager]. *If she refuses I can't have that person come to work". OMG: B*

"The area manager does all [activities] *that are supposed to be done by the unit managers and I don't think it is right. I always ask myself what do we manage?". OMG: A*

"The sad thing is that she is the only one who possesses the knowledge of the unit. She's the only one who does it and who knows how and where". OMG: B

"I also think that it is about time she grooms someone who will take over when she leaves as she is old and obviously she will be leaving soon". OMG: A

This negatively impacts on communication

The participants were frustrated by minimal communication that they perceived to be taking place in their units. Effective communication is a channel that is mandatory for all who are working in health care institutions. Communication links different departments and is vital for the overall well-being of both the staff and the patients. Wagner, Bezuidenhout and Roos, (2015) reported that in Gauteng Province the National Department of Health (NDOH) identified that communication is not effective interdepartmentally and it is one directional in

most health institution. Lack of regular and constant feedback from management was cited as a problem by Koketso and Rust (2012).

> *"I have personally raised this issue with the operational manager but nothing has been done. I think the manager did not take this matter seriously too. FG1: 1*

> *"We talked to the unit manager and she said that she'll tell the matron; even now we are still waiting. To see the matron is a mission". FG1: 2*

> *"You see how issues are handled, one group will receive crucial information and the others' are not privy to that information". DMG2: 3*

> *"Sometimes you are a shift leader and the OM will come and make decisions without consulting* [you]. *FG4: 4*

- **"If it is not broken why fix it"**

The participants reported experiencing a lot of resistance from colleagues and doctors in the units and as a result they felt that they cannot be innovative. They reported lack of opportunity to be creative as staff members are inclined to practice things the way that they have always done them. The other participants provided a counter argument saying that change may bring about uncertainty of the future with new treatment that has never been tested before. They advocate that patients are not guinea pigs that change should be practiced on, as a result experience and traditions in most cases rather than research evidence take preference on

decision making matters. They reported resistance to the change as perpetuated by the older nurses, patients, managers and doctors.

"The colleagues here don't support each other, let's say I come with something that I have learned from private or somewhere else, people will be saying, we have been doing this for so many years and we are not in private". FG1: 5

"Even if something new can be adopted in here it all depends who initiates it and when the initiator leaves it gets discarded. FG1: 5

"Sometimes even if we want to try new things there's no time. Anything new that we start just dies a natural death". FG1: 1

Some participants' felt that older nurses are the ones who are resisting change and this is what they shared:

"At times I get frustrated with the old nurses, they need to be educated and made to understand that the old evidence does not work". FG1: 2

"We can't hold on to the past forever. We the young one's need to work hard to show them that there is no place for old evidence and start doing the right thing [Annoyed]". *FG1: 2*

"Yes there is resistance because there is a huge generational gap. It is about the older generation mostly resisting change". DMG2: 5

''You mentioned nurses sharing expertise knowledge but that is not possible because nurses cannot carry their independent function, even with a simple thing as dry weight you have to call the doctor'' ENN:1

The older participants' version of the new evidence.

"The old nurses try to discard the old methods but remember the new ones have not been tested before and as a result it may or may not work. FG2: 4

"Why should we change what worked all along? You can't fix something that is not broken, and yes sometimes you can't even see the difference", [throwing the right hand on air]. FG1:3

"Patients, they are not guinea pigs you know and they don't have to agree to the new practices. Sometimes it [change] *is not even worth it".* [Irritated and shaking head] *FG1: 3*

The participants felt that the patients also contribute to resisting change.

"Attitudes especially of the patients deter us from implementing current evidence. When we want to implement anything sometimes they refuse". FG3: 3

"And the mentality of the chronic patients you know them, they will tell you that "I don't know this, I only know that". FG2:4

"You are not gonna do things that I don't know of; I don't wanna die. If you want to practice this new thing, first show me the person that it has worked on". FG1: 4

''People do not give EBP a chance, the younger nurses are not dedicated, older nurses fear change and the doctors do not take anything from the nurses. Who suffers, the patient'' ENN: 3

- **Doctor- Nurse Relationship**

The participants in this study perceived this relationship to be erratic and condescending in some institutions and at times it is bordered on verbal abuse. This study showed resemblance with other studies where the doctor-nurse relationship is influenced by a power differential and assumed professional hierarchy.

The relationship between the doctor and a nurse is expectedly a professional relationship that is supposed to heighten the recovery of a patient and ensure that care goals are met. The result of the survey in Texas portray an image of over 3/4 of staff nurse and over half of nursing directors as having experienced verbal abuse and a lack of respect from doctors in their practice. According to Asegid, Belachew, Yimam (2014), verbal abuse is responsible for a quarter of the staff nurse and directors resigning from their jobs in nursing. Meanwhile Warren et al.

(2016) reports that lack of autonomy and not being involved in decision making as well as physician resistance all contributes to slow progress with EBP implementation. Nurses reported that doctor's orders and not research findings direct nursing practice, (Hadgu et al. 2015).

"When you dialyze patient you are wrong, when you don't you are a fool who can't even assess and dialyze the patient". DMG1:2

"As for the head of the department, he is worse. We do not have a harmonious relationship with him, he frustrates us". FG1: 5

"I insisted on a written prescription [for a complicated patient]. *He* [humiliated] *me in front of everyone, patients, nursing students and doctors alike". FG2: 5*

"The doctors don't want to listen what nurses have to say, like I can say the nurses are not taken seriously or they are not given an opportunity to voice out their opinions". FG1:1

"They always want their decision to be the final one even when they see that they are wrong. So we are not working as a team here, there is no harmony". FG1: 3

This negative behaviour by the HOD in hospital C was not displayed in the other two hospitals. In hospital B, the reverse was true as the relationship was professional and supportive. There were however some challenges with the junior doctors who were resistant and felt that the nurses want to play a superior role.

> *"The relationship is bad between nursing staff and the junior doctors, but you know it is so funny because the relationship that we have with the consultants is cool, we relate well with them". FG2: 2*

> *"The issue here is the junior doctors get irritated when you engage them, now they come with this attitude that they are the doctors and they have never seen us in the medical school". FG3: 2*

> *"We report them to HOD, every month we have a multi-disciplinary meeting and the HOD actually tells them off. Our HOD is very supportive". FG3: 3*

This is a comment of an expert nurse who compared the relationship between the doctors and nurses in the country to outside the country.

> *"I'm not condemning South Africa, but we still have a long way to go in terms of the relationship between the doctors and nurses. It's painful that sometimes you gain knowledge somewhere and when you want to use it someone cuts you off just like that". ENN:1*

"Whatever knowledge that you have, it evaporates because you are not putting it to [use]*". ENN: 1*

- **Improving the relationship through ward rounds**

The participants in this study raised a concern that ward rounds are no longer done in some units of some hospitals and in some cases junior doctors lead the rounds. This assertion is supported by Agha (2017) who posits that ward rounds are being neglected and that they needed to be reprioritized to become a "cornerstone" of daily life in hospitals again. Ward rounds are considered essential for communicating with patients and their relatives, involving them in their own care, monitoring progress, arranging an integrated management plan and coordinating discharge, but in particular if effectively and consistently done they have a way of improving communication and relationships amongst the multi-disciplinary team. According to Okoro and Anwal (2015) the multidisciplinary team of physicians, nurses, pharmacists, therapist and allied health professionals should collaborate in care decisions of patients and these teams should be led by senior doctors.

"People are tired, doctors are not there to teach, and neither the staff nor the patients are taught any more". DMG1: 6

"The Prof and senior doctors are sending junior doctors to the units and they are not there to support them". DMG1:4

"When the doctors are doing a ward round they are not doing us or the patients a favour, they are merely doing what they are supposed to do". DMG2: 5

The shift leaders and unit managers' version regarding ward rounds:

"When I came here I observed that doctors were not coming to my ward? And only after I complained do they now come". OMG: B

"The consultants are worse, you will never see them at all. You only meet them in the private sector and there they make a thorough round all days" DMG1: 4

"Even attending the Professor's round we are not allowed as shift leaders. The operational managers are the only ones who [go there]". *DMG 2: 2*

"What I don't understand is why should we be regarded as senior nurses when it suits them but when it doesn't we have to take a back seat." DMG2: 2

4.2.3 CATEGORY THREE: Training and development

The participants identified lack of training and development as a serious challenge that impedes continuing education and development with the following sub-categories: Protocols and guidelines, development through in service trainings, congresses and workshops and access of computers, knowledge of use of computers, searching and appraising literature.

- **Protocols and guidelines**

Policies, protocols and clinical guidelines are used in clinical practice to provide direction on how to perform the functions in a synchronized and methodical way. When these are in place and updated work becomes easier and personnel are then able to practice their profession in a standardized way. Participants reported that a lot of their units do not have protocols and in instances where they are available they are not updated. Some reported not to be following any guidelines except doctors' orders. Most of the clinical decisions are guided by experience and tradition or old evidence. Specialist nurses in this study were also preferred to use traditional methods of knowledge and seldom referred to a research evidence approach, despite of them having been exposed to EBP. This concern is consistent with the findings of Majid et al. (2011) where care of the patients were directed by the expert knowledge of senior nurses in providing treatment and not scientifically based on research. They understood the significance and consequences of not following them, but there were inconsistencies to compliance. Schmalbach et al. (2017) found that the mere fact that evidence-based guidelines exist in units does not confirm their implementation.

> *"Whatever we are using is our experience, what we have learned when we were doing the renal courses and some of the nice things that we pick up when we go for congresses". FG2: 1*

> *"The policies and protocols that we have are never revised. They are so old that they have even changed the colour, the papers are now yellow and some of the ink has faded". DMG2: 5*

"Haemodialysis no, we don't have protocols in place. We used to [follow] *them when the previous HOD was still here". FG2: 1*

However inconsistencies were observed as other units confirmed to be following protocols and guidelines, consistent with findings of Estrella et al. (2013) which revealed that the guidelines were not universally adopted.

"We have protocols in place that guide us on how we should render care so I think that the care that is given is evidence based" FG4: 6

"I can say yes the care we give patients is supported by evidence in the sense that of [using] *heparin, we have been using standardized heparin following the protocol" FG3: 2*

''If nurses can be involved in the development of protocols they will be motivated to use them ad that will make their life so easy'' ENN:5

When approached to comment on this concern this is what the operational manager's and clinical facilitator shared:

"We do not have updated protocols; that is the first thing that I complained about. I [directed my complaint to the committee] *that deals with the protocols here in the hospital". OMG: B*

"It is not a task of an operational manager to formulate [protocols], *not to say that we cannot do them we can, but it is not our duty". OMG: B*

"We have even failed the audits as a result of not having protocols". OMG: A

"I'm worried because the unit will not get accreditation without updated and signed protocols and if we are not accredited we won't be able to receive and train students". OMG: D

- **Development through in-service training, congresses and workshops.**

Participants reported that they are not developed in all forms and expressed their dissatisfaction with that challenge. They highlighted the advantages of trainings and acknowledged that with absence of such training, both patients and nurses were negatively affected. Managers confirmed to have led the staff members down by not honoring in-service trainings and not sending them for congress. In-service education pertains to activities that are aimed at assisting the professional nurse to acquire, maintain and or increase proficiency in carrying the allotted responsibilities specific to the expectations as per their job descriptions. Frost (2019) is under the impression that employees can be convinced that the organization values them and have

their developmental welfare at heart by investing in training. Training supports the work environment and creates a sense of fulfilment for employees. Appreciated and challenged employees may feel more satisfied and fulfilled by their jobs. The researcher is supported by Sadler (2018) who believes that an institution need to have an organized and ongoing professional development program that will centralize, operationalize, and organize quality standards.

> *"Yes there is no in service training here and this affects patient care. "No one teach any other even the new nurses can't be welcomed with any form of training". DMG1:1*

> *"I also think that the management at all levels are concentrating on production more than anything else. Management do not care about personal development". DMG2: 5*

> *"The management need to understand that when they empower the staff they are investing on a whole lot of things including the image of the very institution* [Irritated]". *DMG1: 5*

Yet this participant felt that they are responsible for the situation and should shoulder the blame for lack of in-service trainings.

"We used to give each other topics for discussion and take turns giving presentations. That assisted us because we would be forced to search for current information". DMG1: 3

"We have to be committed and make it work. We have to stick to the program. There is just no way we cannot have in-service trainings, it wouldn't be right. OMG: A

"I agree we are failing the subordinates with the in-service trainings. Every year we compile a list of topics to be covered that particular year but they just do not happen" OMG: B

- **Congresses/Workshops/Seminars**

Participants raised a concern that they are discouraged and demotivated by the absence of further development in their institutions and when an opportunity arise, managers are the ones who attend. Congresses, workshops and seminars are on-going forms of continuous development that are aimed at ensuring that staff acquires new skills or refine older ones in order for them to increase their contribution to the organization. The knowledge that is acquired from congresses, workshops and seminars up skill staff to do new and different tasks which keep them inspired and treasured. The activities learned at such forums also facilitate standardization which works to an advantage of equitable patient care.

"I have worked here for seven years but I have never been to a congress. I have never been to any form of training whereby they presenting papers related to my field". DMG2: 5

"We are not motivated anymore. We are not saying that they must pay for us, we just want them to tell us on time so that we can save money to go". DMG1: 3

"People get discouraged for funding their development at all times. Remember after that development the hospital benefits through the changes that I'm gonna bring on board, so they also need to develop us". DMG2: 6

"Anyway we know that even [with] *the past congresses, [they were] attended by the senior persons who will not even come back to make changes in the unit". DMG1: 1*

The unit managers shared this:

"In here the Professor says the only time a [nurse] will attend the congress is when they will be presenting some work". OMG: B

"They treated this as an outing, and then Prof heard about the nurses' conduct you know what I mean". OMG: C

"I don't think that Prof just stopped people for no reason, things happened and Prof decided to bring this congress thing to an end". OMG: B

Proposed solutions

"The management should have funds for development. It is the right of the employee to be developed and the responsibility of the employer to do so for their staff members. DMG2: 6

"We should take turns attending these congresses or any training and it should be consistently practiced. DMG2: 3

"We need to go back to Prof and plead on behalf of the subordinates and we must really try to change our behaviour and attitudes when we are sent out". OMG: B

"We should lead by example. And once this is corrected we continue as discussed". OMG: D

"The managers should also rest and give the staff an opportunity; they go to these things at all times and they don't share the information". DMG2: 4

- **Access of computers, knowledge of use of computers, searching and appraising literature.**

The technological era have exposed nurses to changing demands as they perform their patient-related duties in the workplace. Participants' knowledge to access and use of computers in this study ranged from not knowing to knowing but not motivated to search. Other concerns included limitations of access to both computers and internet connection. The integration of information technology (IT) in healthcare systems adds a benefit to the quality of care provided and it is a necessity for EBP. The problem of lack of access and knowledge to use of computers is however identified as a problem in healthcare institutions in developing countries. Nkosi, Asah and Pillay (2011) found in their study that that the post basic student nurses demonstrated a positive attitude towards the use of computers but with limitations linked to access to and the actual use. Abdulwadud, et al. (2017) also reported the lack of internet access as a serious problem in the Nigerian settings. The nurses said they could not search for research evidence from the online free databases and use them for their practice and as a result of this challenge, implementation of EBP was hindered.

> *"I trained 2003 and we were never taught anything like that, we didn't even do the computer course like they are doing now. So even if I wanted to, where do I start"? FG1: 3*

> *"The management once promised a long time ago to give us access but we are still waiting. They promised us codes and we are still waiting". DMG1:1*

"We have the Wi-Fi here in the hospital which is not open to everyone, it is not for nurses but for doctors only [feeling discriminated]" *FG1: 4*

"We have access but it is one computer available for over ten people a day including the manager, so can you imagine how long it takes one person to get a turn". DMG1:5

"The new unit manager does not want us to touch the computer and as a result we can't search and discuss topics anymore". DMG2: 4

"But I think that the challenge here is the culture [and not the access]. I think we don't have the culture of searching and retrieving literature". DMG2: 5

However the other participants objected saying it is not the manager's responsibility to provide access as all has got an access to a smart phone nowadays. Their assertion is supported by Bruce (2018) who states that in South Africa over 40 million people are in possession of cell phones even though majority are still living below the poverty line.

"I personally don't agree to the computer access challenge. I think everyone has got access to the internet nowadays through the smart phones". DMG2: 5

"We should not blame the institution for not giving us access, even at home we have to search for latest information because here at work we are always busy". DMG2: 1

"I think we are not using the internet to the best of our benefit at the moment. I think the computer access is there, we all have smart phones". DMG2: 3

- **Lack of relevant knowledge to search and appraise literature**.

The participants felt that they lacked the required skill to search and appraise the literature. Those that received training a long time ago were more disadvantaged than those that received training currently; meanwhile those that were currently trained felt that they have lost the skill by not putting it into practice. Majid et al. (2011) affirmed that nurses lacked adequate search skills and searching experience. Meanwhile others felt that they knew how to search and can effectively use the computer but they are just demotivated. They were supported by findings in Adamu and Naidoo (2015)'s study, where participants rated themselves as having good skills on information technology and internet search but did not put it to practice.

"Even if we have access we don't know what to search for and where exactly to search. [Shrugging shoulders]. *FG3: 2*

"I personally don't remember which site to search. I last accessed the web when I was in college, when you come back you truly can't put that knowledge to practice due to resource problems". DMG 1: 5

"I do know a little bit how to search, I go to Google and type what I'm looking for and further more I do not know anything". FG3:

"Although I know how to but i have cited my reasons why I'm not doing it because I do not have interest anymore".DMG2: 5

4.3 SUMMARY

This chapter presented the research findings. Three categories emerged from the study and ten subcategories were identified and aligned with the main categories. The three categories that the participants perceived as the challenges that inhibited integration of EBP in their clinical practice were identified and presented as: Management Practices, Perceived Organizational Culture and Leadership practices as well as Training and Development.

Under the first category of Management Practices the subcategories that emerged were: Shortage of staff, Shortage of material resources as well as procurement challenges and rewards and recognition. The second category of Perceived Organizational Culture and Leadership practice produced the following sub categories: Social isolation resulting in management in absentia, Redundant position of the unit manager affecting communication, "If it is not broken why fix it" and Doctor Nurse Relationships and improving the relationship through ward rounds. The third category of Training and Development produced the following subcategories: Protocols and guidelines, development through in service trainings, congresses and workshops. Access of computers, knowledge of use of computers, searching and appraising literature

Findings were indicative of both personal and organizational factors that prevented integration of EBP in clinical settings and the participants expressed without doubt that those factors should be corrected if EBP is to take ground. Recommendations that were shared by the

participants as enablers or facilitators that can help circumvent their challenges were also captured and expressed by their verbatim statements. Participants' statements were presented in italics. The next chapter will focus on the discussion of the findings, recommendations and the conclusion.

CHAPTER FIVE

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.0 INTRODUCTION

This chapter discusses the findings that are related to the challenges that were experienced by the nephrology nurses in implementing evidence based practice in Gauteng public hospitals. Based on the findings, the discussion was drawn and discussed in terms of the study objectives. Thereafter the recommendations were made regarding measures that could be applied to facilitate the implementation of evidence based nursing care in clinical practice. Literature was used to compare and support the interpretation of the participants' comments. The limitations were identified and discussed and a conclusion reached was discussed.

Three categories and ten subcategories are presented, discussed and interpreted within the applicable literature. The discussions that emerged are validated by the verbatim quotes from the transcripts and the field notes.

5.1 SUMMARY OF THE STUDY

The purpose of this study was to explore and describe challenges faced by Nephrology Nurses in implementing the modern scientific approach of Evidence Based Practice in the nephrology units, and to describe the recommendations that would be drawn from the focus groups in clinical practice in order to optimize patient care. Description of the recommendations could assist to fill the gap that was identified of the nephrology nurses not implementing EBP whilst delivering nursing care.

The study objectives were:

- To establish the expert nurses' perception on how implementation of EBP can affect nephrology nurses in clinical practice.
- To explore and describe challenges faced by Nephrology nurses in implementing EBP in Gauteng renal settings.
- To describe recommendations that would be drawn from the nephrology decision makers that are aimed at assisting nephrology nurses implement EBP in clinical practice.

5.2 DISCUSSION OF THE FINDINGS

EBP has received increasing attention in the past few years globally and Africa is also slowly developing. The nephrology nurses who were introduced to an EBP curriculum expressed interest in evidence-based nursing practice but with no change in practice. Considerable challenges were reported that hinder them from delivering EBP care. A greater understanding of these challenges was essential so that they could be described, with the expectation that they could be addressed in order to allow implementation to happen. The study looked at challenges faced by nephrology nurses in implementing EBP and to describe the recommendations that were drawn from the third phase focus group. Participants were divided in three phases. From the findings seventeen sub categories emerged which were condensed into the three main categories. The researcher identified the main concepts that emerged from each of the categories in this section. The description is supported by references to the relevant literature.

The ACE Star model of knowledge transformation (Stevens, 2004) which is a determinant framework was identified as the ideal model to assist the nephrology nurses implement EBP in clinical practice. This model was complemented by the Birken's (2012) theory on the role of the middle manager in implementing innovation.

5.2.1 Category one: Management practices.

- **Shortage of staff**

The participants in this study were dejected by the working conditions that subjected them to work under extreme conditions of staff shortage. They felt that they could not attend to all patients' needs due to this problem. They alleged that prolonged exposure to shortage of staff resulted in those on duty feeling exhausted and worn out which led to ill health. Their plights were shared by Duclay et al. (2015) who reported that due to shortage the remaining staff members have limited time to satisfactorily perform extra tasks. The unit managers attested that having few staff members means that those that are at work shoulder an undue workload causing an imbalance in their health, resulting in a cycle of absenteeism. The situation was made worse by the refusal of staff to do overtime in order to overcome shortage. The unit managers explained that using two systems to claim for the overtime, made it difficult to secure the staff through the hospital overtime as they did not have the authority to organize staff themselves. The request had to first be made to and be approved or disapproved by the deputy director. The unit managers' frustration was that often their requests were not granted and the excuse given was that the staff on duty would deliver the care required. The second hindrance was that the nurses did not want to work overtime through the hospital system as it took a long time to receive the remuneration, unlike the agency which paid them on a weekly basis. This grievance was driven by the fact that the hospital management only allowed critical care nurses to utilize the agency system and the rest of the staff had to claim via the hospital payroll system. The segregation of the different pay systems resulted in nurses feeling discriminated against by the system and as a result they refused to work overtime.

The other factor that resulted in the shortage of staff in the nephrology units was a misperception by the management that this department is less strenuous and as a result all

nurses who had been certified to do less strenuous work were transferred to nephrology departments. The unit managers reported that once in the department these nurses do not cope with the intensity and complexity of the work. Some of these nurses come to work today and stay absent the next day. Absenteeism therefore is high in the nephrology units affirming what Duclay et al. (2015); Ha, (2015) and Nkosi (2015) postulated about the relationship that exists between a physically strenuous environment and the likelihood of being absent from work.

The work environment is made even worse when the job demands are great such as is the case of what is experienced by the shift leaders from these settings. In fact some regret the decision of having done the nephrology course to acquire a status of being specialist nephrology nurses. Shortage of nurses is a global problem that was estimated by the World Health Organization (WHO) to be about 4.3 million of nurses and midwives in 2010 (Tshitangano, 2013). The researcher reported in her study in the Limpopo Province of South Africa that over half the population of nurses are dissatisfied with their work and she cited factors such as staffing, availability of resources, salaries and career development opportunities as reasons for the dissatisfaction. Raziq and Maulabakhsh (2015) report that work demands have the ability to affect the health workers negatively. The shift leaders felt that the responsibility was far too much and they were left to deal with the shortage of staff with minimal support. They reported that at times they were the only trained nurses on a shift and had to see to the total running of the unit including the fact that they too had patients to care for. At times they would literally work day and night without rest as there were no replacements of those who were absent and no one to hand over the patients to.

As a result continuous shortage with subsequent increase in patient loads was the main contributor of absenteeism. This impacted on the level of burnout. In a survey of nurses that were randomly drawn from the American Nephrology Association's membership list Flynn, Thomas-Hawkins and Clarke (2009) looked at burnout among haemodialysis nurses in the US.

They felt that it was unfair for management to expect the highest standard of care to be given but neglect to supply the number of staff to carry it out. The California Senate and Assembly introduced bills in 2017, (SB349 and AB251) which were aimed at improving the quality of care for patients receiving maintenance haemodialysis by establishing fixed staffing ratios of 1:8. These Bills caused much debate across the globe and Rastogi and Chertow (2018) reported that the bills were withdrawn due to insufficient evidence that they would improve quality of care. The RCSSA and SARS prescribed a ratio of 1:4 as being acceptable in the nephrology chronic setting and that has been the standard practice in South Africa, however the guidelines have not been observed in some settings due to critical shortages of nurses. Shortage of staff was reported by the researchers globally as a barrier that deprived nurse's time to search and appraise literature for current evidence. This assertion is affirmed by (Abdulwadud, 2017, Hadgu et al. 2015 and Mohsen, 2016). In environments of continuous shortage of staff, attainment of EBP is impossible.

- **Shortage of material resource, procurement practices and contractual obligations**

In this study the medical equipment implies all equipment required to render dialysis. According to Moyimane, Matlala and Kekana, (2017) medical equipment and drugs are indispensable devices used in healthcare settings for the purpose of prevention, diagnosis and treatment of disease and for rehabilitation of patients. Participants in this study reported critical shortages of equipment in their hospitals. Availability of dialysis machines has challenged the nephrology departments not just in South Africa but in the entire continent in the past and continues to do so (Kilonzo et al. 2017; and Wanjau, Muiruri and Ayodo, 2012). This makes it difficult or impossible to deliver quality patient care and cannot address problems that deserve to be solved using EBP methods. The use of outdated machines that cannot correct patients'

electrolyte imbalances instantly were cited as some of the problems experienced. Therefore EBP at the point of care was difficult to implement. The devastating state of non-functional equipment was reflected in the report of Moyimane, Matlala and Kekana, (2017) when they presented the statistics of functionality of equipment in the health sector of developing countries. Equally in this study the participants raised a concern that the state of the equipment in their settings were such that machines would stop working whilst patients were connected. The staff would have to act swiftly to disconnect patients and sometimes endured patients hurling insults at them as a result of this ongoing problem. These are unethical practices that are not concomitant with EBP delivery.

The World Health Organization estimated in 2012 that 50 to 80 percent of medical equipment were not working, impeding the delivery of health services to patients. Patient's safety become compromised and adverse events may result. This postulation is supported by Eldeeb, Ghoneim and Eldesouky (2016). In some nephrology units in Gauteng's public hospitals, patient safety is continuously compromised by services that are substandard and care that is intentionally poor and that constitutes unethical practices. Dhai (2012) reported that medical equipment shortages and malfunctions are common in hospitals. In some settings poor service histories or maintenance plans and suppliers are not paid on time. The inadequate provision of dialysis machines results in treatment delays, poor service deliveries and inefficiencies. The situations that are reported compel some nurses to overlook their commitment to professional ethics and disregard the patient's right to safe care. This was evidenced by the disclosure from a nurse with regard to attempting to fix the machine themselves so that the patient could be dialyzed.

During one focus meeting, participants pointed in the direction of where all broken machines were lined up in the corridor with parts stripped and others just hollow shells as they explained that parts were being taken off from one machine to fix another. The reason for this was that the suppliers were refusing to service or attend to faulty machines as they were owed money

for services that they had rendered, and therefore the contractual agreement were broken. Nurses adapted their practice to accommodate the constraints in their immediate environment and they became complicit to the ills of the system. Participants reported that at times patients arrived at the hospital at 3am to be connected at 3pm. This affirms the notion that shortage of resources causes a delayed treatment which may be injurious to both the patient and the institution. The same concern was raised in another hospital. Participants in this second hospital reported that often they tried to procure goods for the unit following basic ordering procedures that were provided in the hospital. Despite following processes, items ordered would not be received and no proper explanation or communication would be given other than the excuse that the "hospital does not have money". Goods and supplies enable one to deliver care and their absence negates the purpose of having specialist nurses on duty. Dhai (2012) reported that in 2013 the Gauteng DoH had an accumulative debt to suppliers of about 3 billion rand. This statement supports what the executives of the institutions report when they tell nurses that there was no money to purchase the essential goods and supplies. Mazibuko (2018) explains that contractual relationships play a central and fundamental part in the administration of procurement practices. However when things go wrong with this relationship, the failure can be expensive in human, financial and reputational terms between the organization and the supplier. Unfortunately the implications of his assertion are mostly felt by the patients. A relationship between EBP implementation and provision of equipment and supplies that serves patients' needs cannot be ignored.

It is not just the patients who are affected by shortage of equipment and supplies, but the students were unable to meet their training needs under resource constrained environments. A participant who is a clinical facilitator reported that the situation denies the facilitator and student an opportunity to experience a teaching-learning encounter. She affirmed that students could not perform the procedures in accordance with the tool given and the lecturer could not

discredit the student as the equipment needed for assessment purposes were not available. As a result most items from the assessment tool including critical points that could either fail or pass the student, were reflected as not applicable. A positive and supportive clinical practice setting should influence the integration of theory and practice but was not the case in these settings. The learning of the students who were allocated in these hospitals was negatively impacted by social and political injustices of the practice environment.

The importance of providing quality health services is non-negotiable and cannot be compromised by any means. However it emerged that the nurses were also responsible or contributed to the shortage of equipment as some did not know how to operate them. The end product is the equipment that does not reach their lifespan and manufacturers refusing to repair them due to negligence. This exacerbates an already existing problem. To alleviate this problem, Booyens et al. (2015) advises that before equipment is used nurses must be taught how to use it as self-teaching can lead to inefficient and dangerous use of the equipment. Equipment must also be used for its intended purpose and maintained and serviced at scheduled intervals in accordance to the manufacturer's instructions.

- **Recognition and rewards**

Salary was viewed as the primary source of job dissatisfaction amongst nurses. They also felt that the management did not recognize their contributions and only viewed them as sources of production. The unit managers supported the assertion of the nurses stating that subordinates appreciate simple gestures like praise or showing concern but agreed that was seldom done. In one institution the participants felt that they were not compensated fairly for the specialty qualification. They were of the opinion that studying for the specialty was a waste of time and effort as their qualification and achievements were not translated timeously into the correct

salary notch and thus they were not appropriately recognized as specialist nurses. In another institution the participants reported that after obtaining an advanced qualification in their specialty. They had to wait indefinitely for senior posts to be advertised and one would either be accepted or rejected when posts were advertised. Whilst waiting for these posts they were not recognized as specialist nurses and would be in the same rank as the experienced nurses. They felt demotivated by this. In the third institution however, upon submitting the certificate of qualification their salary were instantly adjusted. The inconsistency with application of human resource policies pertaining to recognition and rewarding people for additional qualifications led to feelings of dissatisfaction. There was an assumption by nurses that the managers were responsible for retarding their progress of being promoted. This dissatisfaction was confirmed by the operational managers as one of the reasons why nurses left their hospital to pursue careers where they were instantly recognized as specialist nurses. The operational managers were also concerned that if this policy was not revised, in the near future they will run the units with only experienced nurses as the trained nurses were leaving the organizations in large numbers for the private sector. They felt helpless as managers but expressed that they did not have authority to change the situation. Newly qualified specialist nurses were the group most reported to have left hospitals immediately after receiving the qualification. This setback was affirmed by the alarming realization that in 2018 only ninety seven (97) registered nephrology nurses appeared at the South African Nursing Council (SANC) register.

Rewards play an important role in any organization. They influence various work-related activities and also act as motivators for employees. Rewards are also used by organizations to guide behaviour and performance in an attempt to attract and retain the best skilled employees and keep them satisfied and motivated for longer. An employee who is satisfied with their job is likely to be motivated to stay in the organization, decreasing the turnover and as a result performing duties to a satisfactory level. This is attested to by Chinomona and Dhurup (2014)

who found evidence that demonstrated that employees who are content are inclined to remain longer in their positions and their intention is not to leave the organization. This belief is supported by Yucel and Bektas, (2012). The organization has the responsibility to provide a balanced work environment, develop policies and procedures that may provide a sense of fulfilment for their employees.

Studies in different healthcare environments of different countries Awases et al. (2013); Seitovira et al. (2014) and Schmiedeknecht et al. 2015) affirmed that inadequate compensation impacts the decisions of employees to leave or stay in their employment. It is an undisputable reality that employees are inspired by both intrinsic and extrinsic motivators to commit to the organization and perform well. The expert nurses in this study also supported the need for implementation of EBP but reinforced the necessity for employers to consider rewards systems that will motivate nurses to commit to the programs. They assert that implementation will alleviate many resource related problems and benefit patients and nurses positively. Several strategies to improve remuneration packages of employees have been implemented resulting in successful retention of nurses in various countries (Booyens and Bezuidenhoudt, 2014; Chinomona and Dhurup, 2014; Mokoka, Ehlers and Oosthuizen, 2010 and Muller, Bezuidenhout and Jooste, 2011). This assertion is also affirmed by managers in South African health care organizations who felt that promotion and salary structure of the nurses must be reviewed as they have an ability to contribute to retention of nurses, (Mokoka et al. 2010).

The challenges with policy interpretations that were voiced by participants in this study are brought by the differences in the interpretation of the financial incentive strategy of occupation specific dispensation (OSD) that was introduced in 2007 in order to attract and retain health professionals in the public sector. Researchers documented several problems that were identified after it was implemented. Ditlopo et al. (2013) conveyed that inadequate planning, budget overruns and some unmet nurses' expectations, inequities in the amounts received,

perceived unfairness, and dissatisfaction and divisions among the different categories of nurses as some of the problems that resulted in inconsistencies. The serious problem was found to have been in different interpretations of the strategy at the institutional level which is the hospitals, hence different hospitals treated this matter differently. The implementers were not properly capacitated and also received minimal support from policy makers. The researchers highlighted that resultant discrepancies can only be corrected by the revision of this policy.

Summary of category one:

This category addresses the findings that are related to the study's first two objectives. The expert nurses had high regard for EBP and believed in its value and worth in clinical practice. They understood the contribution of research findings to the current nursing practice but were aware that limitations of resources impeded delivery of quality nursing care. Meanwhile nurses at the operational level expressed wide generational differences to be contributing to resistance of seasoned nurses to implement EBP. Organizational culture and the context in which they delivered care also influenced their daily function. It became apparent that adoption of EBP by the organization first will result in support to flow from top management and cascade down to the operational level.

5.2.2 Category two: Perceived organizational support and leadership practices

- **Social isolation and alienation of the renal unit**

Participants felt that their departments were not clearly understood hence they were not supported with the necessary resources to enable them to provide the care required for the patients. They were of the opinion that top management should engage at the operational level and see how the nephrology units are run in order to assist them with correct decision making. They suggested that people with renal experience should be appointed in leadership positions so that they can advocate for the units.

Studies use the concepts of isolation and alienation interchangeably to describe social exclusion of a person or group in an organization. The intellectual roots of alienation as a concept can be found in the work of Karl Marx (1961). Workplace isolation is a psychological construct that describes employees' perceptions of isolation from the organization and their co-workers (Marshall, Michaels, and Mulki, 2007). The isolation perception are suggested to form when there is an absence of support from the organization as well as a lack of social and emotional interaction within the team (Marshall, et al. 2007).

These researchers proclaim that nurses who do not see meaning of their work in relation to the organization finds it difficult to comprehend its goals. With social isolation as well, the nurse cannot identify or be connected to the organization. There is no sense of belonging leaving a deeper void in realizing the organizational goal. The participants in this study assert that their discipline were not familiar to seeing management and departments which were responsible for supporting them hence they perceived negative treatment and felt unsupported. This concern by the participants at operational level was echoed by unit managers. The treatment

received from the management made them feel that they were on their own and not part of the organization. As a result they could not align themselves to the organizational values and goals.

Unit managers participating in this study believed that because top management did not understand the processes of the unit they treated it as a step down facility. This resulted in nurses that were placed on "light duties" due to disabilities being allocated to the renal unit thus increasing the incidence of absenteeism. In addition the staff felt ostracized. In one setting the unit was wrongly classified as a medical unit and as a result the manager who is familiar with medical units but not nephrology units and was responsible for the oversight function of that unit felt frustrated with supervising activities there. Correct classification of the unit would eradicate misperceptions and support the nurses giving them a sense of worth. Kothari, Hovanec, Hastie and Sibbald (2011) are of the view that challenges to effective knowledge management occurs as a result of unqualified, inappropriate actions from people who are in a position of power without the appropriate training. The participants agreed to this view by suggesting that people with knowledge of nephrology be employed in management positions in their settings. Their assertions are supported by Birken (2012) who believes that managers should have knowledge of their disciplines in order to be innovative and drive change. In the absence of visionary leadership EBP will remain a challenge.

- **Communication**

The participants were frustrated by the minimal and inconsistent communication that they perceived to be taking place in their units. Wagner et al. (2015) reported in their study on communication satisfaction of professional nurses in Gauteng Province, that the National Department of Health (NDoH) identified that there was no effective communication on interdepartmental level and communication is only one directional in most health institutions.

Participants supported this and were frustrated by the line of communication as they could not directly forward their concerns to the nursing services manager but had to do so via firstly the operational manager and then the area manager. As they never got any feedback they doubted if the area manager was genuinely forwarding their concerns to the upper levels. They felt that the tier that divides them from directly reaching the top management frustrates and impedes communication. Communication is an essential element in the success of any organisation. Effective communication is also a channel that is mandatory for all who are working in health care. Wagner et al. (2015) posit that for an organisation to perceive itself as effective, it must have a thorough understanding and in-depth knowledge of its communication system and if found not to be serving a purpose anymore, the communication style should be changed. Different types and forms of communication take place in a hospital setting and irrespective of the type and form, it must serve the purpose.

In a study carried out by Koketso and Rust (2012) researchers reported that more often than not the management did not acknowledge employees and this was demonstrated by the way they handled feedback. They also cited lack of regular and constant feedback from management. Wagner et al. (2015) also found feedback to be unsatisfactory. Participants in this study reported that the feedback they received was often incomplete or inaccurate. In some instances it was obtained "via the grapevine". The inconsistencies that arise when information is not freely disseminated can be catastrophic and brings about dissatisfactions and divisions amongst nurses. Nurses may share wrong information that could lead to the onset of conflict in the unit. Feedback is regarded as the completion of the communication cycle and in its absence, the concern remains open. Feedback has the ability to improve productivity and performance and bring about satisfaction in the unit.

The participants were also not happy with intradepartmental communication. They were of the view that even simple matters that required intra-managerial consultation and problem solving

were not addressed adequately. Moore and Prentice (2013) found that intra professional communication is complex. It is influenced by interpersonal and professional factors and as a result it is directed by the leadership style and it does not occur spontaneously as expected. Nurse Managers should be aware of the importance of communicating effectively. If they fail in this, the failure may lead to them avoiding contact with units resulting in managing units in absentia.

- **Management in absentia**

The concern of the nurses at the operational level was that management is invisible and as a result no one can advocate for change in their units. They reported that top management only come to the unit in times of trouble. They perceive the level of support given by management to be inadequate and fault finding. These nurses concluded that the only thing that moved the managers from their offices to the units were patients and family complaints or adverse events. The nurse participants in this study stated that absence of authorities applied to all levels of management. Eisenberger, Malone, and Presson (2016) posit that employees whose level of organizational support is perceived to be high believe the organization is concerned with their well-being and as a reaction to this they reciprocate with high levels of commitment. This statement is supported by the findings of Ngo et al. (2013) who revealed that the perceived organizational support positively influences the staff's attitudes in terms of job satisfaction and a demonstration of high commitment. The opposite was found to be true with the employees who felt less supported by the organization not motivated and responded with less commitment. This was affirmed when the participants complained about non nursing duties imposed on them during times of staff shortage. They reported that such conduct made them feel as if the managers did not care for them and were only concerned about productivity.

In some cases the managers were the sole decision makers denying the nurses input on patient care issues. As a result participants reported loss of respect for the managers and vowed to only do the minimum they could and not contribute whatsoever to any innovative initiatives. Although in some units the operational managers were not supportive, in other units the participants reported optimum support from the manager. Hussain et al. (2016) are of the opinion that managers cannot invisibly drive the units in health care settings. They assert that for any change to happen the leader and the leadership style are crucial to drive the process. Jooste (2018) asserts that if effective change is to take place in the organization, employees must be informed about the reasons for change. The author is of the opinion that a lot of face-to-face communication is required to get nurses involved in the change process.

- **Redundant Position of the Unit Manager**

The unit managers in this study voiced that they do not understand their role. They reported that if there is shortage of nurses they have to report to the middle manager first, who will inform the deputy director of the hospital. The decision will then be made from that level and often this decision does not support the request they made. They felt frustrated by the lack of permission to communicate directly with the deputy director and to organize the unit activities according to their wish. As a result they felt inadequate and redundant in their positions. The unit managers felt that their seniors held on to the authority and did not share or delegate functions that could be attended to by shift leaders and operational managers. A simple task such as ordering of dialysis stock was done by the area manager in one hospital and none of the unit managers knew how to carry out that function. They reported that they did not have any authority to make leadership decisions and as a result they were frustrated and felt inadequate. One participant who had been a unit manager in other areas expressed shock at

how narrow the function of the unit manager was in the nephrology unit as she shared that she felt frustrated from working with a dialyzer but not knowing how to order it. She was perturbed by this treatment and articulated that their positions were undermined with no room for development and growth.

According to Muller and Bester, (2017) resistance to delegation occur as a result of the supervisor lacking the confidence of subordinates to carry out the tasks. As a result they would prefer to perform the duties, tasks and responsibilities themselves rather than delegating. This gave them the assurance that the work is done. However researchers warn that delegation should not be seen only as a way of getting work done but rather as an opportunity for personal and professional development of those under the supervisors' control. The problem of under delegation was also found in the findings of the study by Matlakala, Bezuidenhout and Botha (2014) where the authors posit that unit managers are exposed to huge demands of filling the many roles expected of them, but they are not afforded the autonomy and independence. They still obtained instructions from nursing service managers with regards to their leadership role. The same assertion is shared by Armstrong and Rispel (2015) who reported that unit managers are inadequately supported in nursing and health service generally despite the importance of their roles.

The unit manager is a clinical nurse leader whose role is constantly changing. This role has existed since the inception of modern nursing, underpinned by the Nightingale occupational convention. Fenton and Phillips (2013) explain that this role has advanced from a historically hierarchical nursing culture where an autocratic approach was cherished and nursing was solely based on task allocation. The function of this leader as the researchers explain was related to direct supervision of nursing staff and students, and the coordination of nursing care. However this role has expanded to include amongst other responsibilities, financial management and supply chain and asset management. The unit manager as explained by Muller, Bezuidenhout

and Jooste (2011) occupies a lower position in the hierarchical structure of the management, but also has leadership responsibilities that they have to account for. These managers are regulated by the South African Nursing Council (SANC) according to the Regulation R2598, for the scope of practice of the registered nurse (SANC 2005: R2598, as amended). Their functions pertaining to clinical care are therefore guided by the scope of practice of a registered nurse as it is with any other registered nurse. Most of them have an additional qualification within a specialty making them experts in their own field with a wealth of experience. However the boundary in terms of their administrative duties is unclear. It is also vague how much autonomy they have to lead the units successfully.

Jooste (2018) is of the opinion that to ensure effective leadership, amongst other roles, the unit manager must foster a culture of leading their teams to the achievement of goals, problem solving and decision making. Without the necessary support and the opportunity to learn, the unit managers will remain incompetent in clinical leadership functions, hence they would not be able to support or drive EBP activities.

It also emerged that in some hospitals people were requested to act in higher positions for long periods of time and then not considered for the post once appointments were done. There were no development or promotional opportunities and as a result nurses could not make any career planning. This act demotivated staff members as it gave the impression that they were not good enough for leadership positions. As a result of this poor recognition, those who acted and were not considered for the posts mostly resigned and took with them the knowledge gained whilst employed. The participants regarded this as wasteful expenditure since the new appointee would still require training and orientation. They further felt that management did not realize the nurses' potentials nor explore and nurture talents. Coupled with these concerns is the absence of succession planning. Koketso and Rust (2012) realized this gap when she reported that the mistake that managers make is not to nurture and develop talent that is at their disposal.

The researchers speculates that healthcare managers ignore and procrastinate with the mentoring and coaching of their successors. Additionally Kraai (2015) highlights the importance of organizations to recognize and empower people with leadership potentials, citing that this act will motivate others to work harder and to shorten and simplify the process of recruitment and selection.

This researcher is supported by Cabral, Oram and Allum (2019) who reported in their study that external appointments are not only costly but half of the senior managers recruited externally fail within the first two years and they attribute this failure to the lack of knowledge of the organizational culture. Succession planning therefore provides a realistic return on investment for the organization. Additionally proactive managers plan for the future of the organization through identification and mentoring commendable people in leadership positions.

- **If it is not broken, why fix it?**

The participants reported experiencing a lot of resistance from colleagues in the units and as a result they felt that they could not be innovative. Staff members were inclined to practice things the way they always have and reported to be comfortable with those methods. This assertion was confirmed by Koketso and Rust (2012). They were aware that change may be good and beneficial for organizations but just the thought of going through that change brought about feelings of uncertainty. Heathfield (2018) posits that change requires new ways of thinking and doing things and for this reason people should be adequately prepared for that step. In two out of three hospitals, experience, tradition and doctors opinions influenced clinical decisions rather than research evidence. The element of the nurses using expert knowledge rooted on tradition as a way to influence clinical decisions was also reported by Hadgu et al. (2015).

Abdulwadud et al. (2017) similarly testified that nurses rejected change. Change is naturally uncomfortable hence the first reaction of people who are expected to change is resistance.

It arose during interviews that a variety of people from different categories and different generational groups rejected change. It appeared as though everyone had reasons why they could not embrace change. In one hospital a participant reported that the lack of unity and teamwork contributed to a rejection of change. This allegation was directed to all generations of nurses. It was discovered that change would be embraced depending on who initiated it. It was more welcomed when it was suggested by senior staff or highly respected nurses than any other person but even then, the disunity that existed prohibited change initiatives from being sustained. That change invent would last for as long as the person who proposed it is still around, once they leave the idea and practice are dicarded. It sounded as though there were divisions amongst the groups.

Another reason for the resistance to change was attributed to a wide generational gap. The younger nurses indicated that the older generation resists change. The young generation shared that post training they return with all the excitement of having acquired new knowledge and are willing to share, but they were obstructed by the older generation. Seasoned nurses felt that as the custodians of the nursing profession they needed to safeguard it from being ruined by the younger nurses, however they objected to be labelled as resisting change. Hadgu, Almaz and Tsenay (2015) allege that the newly graduated and less experienced nurses perceive EBP to be useful as it was included in their curricula and expert nurses on the other hand may have difficulty integrating evidence with practice because of their traditional way of thinking about practice and their use of mastered methods. Re-learning new ways would be stressful for them. Contrary to this assertion, Majid et al. (2011) posit that nurses with a longer experience in nursing were likely to be more confident in implementing EBP due to service related experience that they have. The researcher is of the opinion that new nurses may find it difficult

to integrate EBP due to limited practical knowledge and experience. Both these researchers are in agreement that nurses who had attended EBP training irrespective of age considered themselves to be more comfortable in integrating EBP into their practice.

In response to the allegations directed at them, the seasoned nurses defended their position by stating that patients are not guinea pigs that should be subjected to trials. They insisted that they were upholding the rights of the patients and felt that changes violated patients' rights with untested evidence. It was apparent that there was minimal understanding of EBP by some of these nurses and of the benefits that it may contribute in clinical practice. It appeared as though their minds were deeply rooted in traditions and as a result they were rejecting EBP unconsciously. They strongly felt that they were not obligated to accept every new idea that is proposed without knowing how they would be affected by its outcome. It became apparent that they mostly feared the outcome if change would not yield the anticipated results and as a result were concerned about the unknown. Heathfield (2018) asserts that people have trouble developing a vision of what life will look like on the other side of change, so they tend to cling to what they know rather than embrace the unknown.

The seasoned nurses defended clinical decisions that are supported by expert knowledge because they were of the opinion that these work, particularly when doctors requested that they share some information of traditional practices. This made them feel in control of their profession. Their primary concern was why should they change what has been working all along. According to them "nothing is broken that required to be fixed". Rousseau and Gunia (2015) explain that some practices may be unintentionally harmful to the patients if not supported by evidence and as a result they cannot be continually carried out as this will constitute an unethical practice.

Patients were also reported to be resisting change, particularly chronic patients who were well informed about their conditions and had a role to play in their treatment. The participants found it easier to work with new patients who did not know much about their treatment plan than with chronic patients. Conceivably it may be maintained that because the new patients are ill they do not have the energy to question treatment decisions. Nurses reported that even if they were eager to implement changes, the attitudes of the patients deter them from implementing current evidence. They therefore find themselves struggling with upholding the patients' right of refusal to treatment or doing what is required, which involved delivering the expected care despite of the patient's resistance. Comments such as "I don't know this, I only know that. You are not gonna do things that I don't know of, I don't wanna die" were common expressions shared by participants in some clinical settings.

Similar contentions were reported by Tacia, Biskupski, Pheley and Lehto (2015). Nonetheless Spruce (2015) seems to believe that explaining to the patients the significance of certain care instructions helps engage patients in their care and makes treatment decisions easier. Once the patients are empowered, they will benefit knowing that they are receiving care based on what work best rather than historical preferences.

The younger nurses also felt that managers were intimidated by them and took offence when they were motivated and innovative. In one hospital, participants referred to the senior manager as the one person who frequently opposed change. Melnyk et al. (2012) cited an organizational culture that did not support EBP as a barrier that was identified in the United States. These researchers reported that nurses were getting resistance from nurse managers and nurse leaders and viewed it as a serious problem as managers are critical for providing the support needed to implement EBP and for providing role models.

Heathfield, (2018) is of the view that change is better accepted when the direction comes from leadership. This is supported by Birken, (2012) who emphasizes that with innovation in particular the middle manager is in the better position to initiate change as they fill the structural gap by being a link between the executive management and the team. Birken (2012) theorizes that middle managers express their commitment first by diffusing information about the change thus the middle manager conveys the problem upwards and the feedback downwards. The ability of the manager to articulate clearly the need to adopt the EBP activity will foster support of the top management and the entire multi-disciplinary team.

The relationship between the doctor and the nurse and the need for collaboration.

The participants in this study perceived the relationship with doctors as erratic and condescending in some institutions and at times it was bordered on verbal abuse. The opinions of nurses were not considered important by many doctors. In some instances they were criticised for not challenging the treatment and in other situations they were considered disrespectful for having an opinion or advocating for the patient. Historically across the globe the relationship between nurses and doctors was a subservient relationship dominated by the doctors acting and viewing themselves as superiors and the nurse as inferior. The nurse was not permitted to make any contributions towards patient care but could do so if appropriate reverence was shown to the doctor and if they maintained their subordinate position (Mukeshimana and Asingizwe, 2016). These authors reported that senior doctors felt it was their duty to impart knowledge not only to their juniors but also to the nurses because they ranked them low and inferior to the medical profession. After decades of the struggle and developmental changes that saw the nursing profession acquiring an independent position with interdependent function, some doctors are still trapped in the historical attitude of the past.

Some participants in this study felt that they were not seen as partners in patient care activities and they often found themselves not knowing how to react to the hostile situations that they worked under. One participant vented that they were working in a state of confusion, when one dialyzes the patient they were accused, when they decided not to dialyze the patient, they were also found wrong. It is not the accusation that worried them the most but the verbal abuse in the presence of patients and visitors. In another hospital the participants labelled the doctor as a tyrant who terrorises everyone. They reported that they could not advocate for patients because he would victimize them. This tainted the communication in the unit especially when he was around.

Sometimes the doctor addressed them in an unprofessional manner stating that they reason like illiterates. Similar demeaning comments were found in the study by Hussein et al. (2018). The patronizing attitude that he demonstrated was extracted from comments such as "nurses could hardly read and understand the prescription, what more with the protocol" The nurses indicated that the attitude of this particular doctor stresses them and they become tense when he is present. Mahmoodi and Tahrekhani (2018) reported that evidence exist to suggest that the presence of tension within the professional communication between physicians and nurses can produce anxiety among nurses in a professional relationship. This results in increased stress with subsequent impaired decision making and poor delivery of quality care. The disadvantage of communication breakdown among nurses and doctors is its ability to produce costly mistakes from a health and a financial perspective. With such negative utterances, the relationship between the doctor and nurse is bound to wane.

In most units nurse's decisions did not matter and were not even considered regardless of whether one is a senior or junior nurse. Warren et al. (2016) report that lack of autonomy and lack of inclusion in clinical practice decision making as well as physician resistance all contributes to low EBP implementation by registered nurses. Clearly some of the doctors in

hospitals where the study was conducted were not aware that they have a complementary relationship whereby each party should respect and acknowledge the shared decision-making and equality of the relationship when performing their duties. This is what the researchers Safaan, Elkhouly and Ibrahem, (2015) and Falana et al. (2016) refer to as interdisciplinary collaborative care and they documented the advantages of this collaboration as including better patient and organizational outcomes. If this collaboration can be upheld patient care such as the ward round will occur smoothly.

- **Improving relationships by collaborating through a ward round**

The participants in this study raised a concern that ward rounds are no longer done in some hospitals. Not all units were affected but in one hospital, the rounds had literally stopped. They also raised a concern of absent senior doctors from the wards. The absence of senior doctors affirmed that ward rounds are no longer done as junior doctors never lead grand rounds. As a result of this gap the staff members no longer learn anything new and the patient's quality of care was also affected. Another source of frustration identified was that the junior doctor would see a patient on a normal round and then have to go and speak to a consultant to determine the best course of action. This was found to be a total waste of time. Agha (2017) recommended that a consultant should always be present in the ward round and if they are going to be absent they should communicate their absence to curb the problem of waiting for a consultant who may or may not be in the hospital. The researcher was supported by Powell, Bruce and Redfern (2015) who also suggested that senior doctors should lead the round as junior doctors lack confidence to perform rounds, possibly due to a lack of experience. These researchers assert that junior led ward rounds may affect patient safety and produce unwarranted negative outcomes.

Bedside rounding popularly known as patient or ward rounds, is a historical clinical model that brings together multiple care providers and the patient, to discuss the plan of care (Lyons et al, 2013). The ward round is an expansion of the collaboration between the doctor, nurse, other professionals and it incorporates the patient. The ward round is considered essential for communicating with patients and their relatives, involving patients in their own care, monitoring progress and arranging investigations, analysing the treatment plan in response to the progress. The ward round fits in perfectly with the third leg of evidence based practice by involving the patients and their family in the patient's care. The inclusion of the patient values, beliefs and preferences is respected by their involvement in care. The increased communication with the patients and family will decrease miscommunication. According to Okoro and Anwal (2015) the multidisciplinary team of physicians, nurses, pharmacists, therapist and allied health professionals should collaborate in care decisions of patients and these teams should be led by senior doctors.

The participants regarded ward rounds as clinical teaching time that provides an avenue for teaching and learning and they were concerned that their own development and the education of patients were no longer happening. They expressed their opinions that when doctors do the round it is not a favour done for nurses or patients but they were merely doing what they were required to do. There appeared to be inconsistencies in one particular hospital in which the unit manager in one unit did not experience the lack of ward rounds and yet in other units her colleagues were in agreement that ward rounds were not taking place. One operational manager affirmed with concern that ward rounds were done in selected units and not all of the units. This practice caused unhappiness in those units which were denied the opportunity of ward rounds. Participants therefore felt that with no ward rounds it will be difficult to work collaboratively with other members of the multi-disciplinary team to implement EBP.

The absence of a ward round was reported by the Institute of Medicine (IOM) to be contributing to an increase in mortality of patients. A gap in the communication process amongst the team members results in weak collaborations exposing patients to safety concerns. Health settings are reported as busy environments with documented shortage of staff members globally, but the time spent on a ward round is an investment that can contribute to positive patient outcomes and increase satisfaction by all. The participant in this study alluded to the positive contributions that they used to enjoy when ward rounds were done. Nurses and students all benefitted from the advantages of a ward round.

Linebarger (2014) affirmed that both nurses and physicians agreed that effective collaboration is important in the provision of quality patient care and can ultimately lead to improved health outcomes. The hospitals however do not have written policies that guide and bind interdisciplinary team to commit to ward rounds. The researcher recommended in her study that ward rounds should be made mandatory and members of the team should commit to the attendance. The students in a study done by Ladan et al. (2016) acknowledged that they learned greatly from the clinical ward round. Unlike a doctor's round which requires just a doctor, nurse and a patient, ward rounds are complex. These students described how they benefitted from different types of ward rounds and they were in agreement with other studies that ward rounds should be led by consultants as the information shared on those rounds is rich and fruitful.

Agha (2017) explains that rounds require medical knowledge, patient-specific knowledge, communication skills, clinical skills, patient management, teamwork and their integration with bedside data from various sources is important. Ward rounds therefore need to be planned for and time allocated for them. The doctors should not be able to cease to conduct them unilaterally. Linegarter (2014) is of the opinion that if ward rounds are made mandatory, they will produce commonly held goals by all health care providers. This belief is in agreement with

Grove et al. (2013) who add that mandatory bedside rounds reduce unintentional mistakes and lead to a more efficient patient care. When this is attained, the patient will have confidence in a team that is united and communicating effectively whilst planning and implementing their care. This in turn will increase patient satisfaction levels and the satisfaction of the interdisciplinary team will be heightened by accomplishment of goals. The frequency of the interdisciplinary ward round must be directed by the organizational and departmental policies.

Summary of category two.

This category addresses the findings that are related to the study's first two objectives.

In this category the participants expressed a concern that their discipline is not known and as thus it is not recognized by management. This gap leads to them not getting the required support. They are of the opinion that the feeling of isolation affects communication and with improved communication and support problems of resistance to change and poor collaborations will be addressed. In the meantime the unit managers cannot support their subordinates as they felt unsupported too. They stated that they have limited authority and felt dejected with the conditions that they working under. The expert nurses felt that workplace culture that provides clear communication of EBP goals is required as that will facilitate empowerment of nurses and enhance the ability to implement change.

5.2.3 Category three: Training and development

- **Out-dated or absent protocols and guidelines**

The participants in this study reported that most of the units they worked in did not have protocols and guidelines and where they are available they were not updated. CPG are defined by Kredo et al. (2016) as "systematically developed statements that assist practitioner and patient decisions about appropriate health care for specific clinical circumstances". The authors report that in 2011 the definition was updated to emphasize statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence. Protocols and clinical practice guidelines (CPGs) are used in clinical practice to provide direction on how to perform the functions in a synchronized and methodical way. When these are in place and updated work becomes easier and personnel are able to practice their profession in a standardized way. Chronic disease management worldwide is increasingly informed by CPG's (Leach and Segal, 2010)

According to Alonso-Coello (2011) protocols are detailed written set of instructions that are aimed to guide the care of patients or to assist the practitioner in the performance of a procedure. This definition is also provided by Kredo et al. (2016) who explain that protocols defines rules or instructions about how to do a particular process explicitly and without error. This mean that if protocols are literally followed the practitioner will be exempted from making any mistakes when carrying out a procedure. The difference between CPG's and protocols as the author explains, is that guidelines are flexible. They give a practitioner a guide on how to approach a treatment or procedure meanwhile protocols are rigid. Guidelines can be tailored to meet each patient's needs and protocols define a management plan that has to be followed. Guidelines can be adapted to a large variety of settings and protocols cannot be adjusted as they reflect a particular region or institution.

Some participants in this study reported not to be following any protocols or guidelines but only doctors' orders. Most of the clinical decisions are guided by experience and tradition or old evidence. Some were not familiar with the SARS or the KDOQI guidelines. Few were aware but expressed that those guidelines are not accessible. This concern is consistent with the findings of Majid et al. (2011) where care of the patients was influenced by the experiences and opinions of those involved in providing treatment and not guided by any protocols or guidelines. Nurses in this study also preferred to use more traditional methods instead of changing to new approaches. Kredo et al. (2016) responds to this predicament by explaining that historically CPGs were built mostly on the clinician's expert opinion and they were minimally selective in referring to the research findings. However the move today is to base activities on evidence constructed references. The current institutional protocols and guidelines should be informed by evidence in accordance to EBP and should be approached with the integration of expert opinion and patient values and preferences.

The participants indicated that in units where protocols existed, they were old, out-dated and not revised. They also indicated that in their organizations, protocols were supposed to be revised every three to five years but were not. This assertion was found by Alonso-Coello (2011) who observed that the updating of guidelines is often irregularly scheduled in organizations. In a few units however it was reported that nurses were following protocols that guided them on how they should render care, so they believed that the care that they were rendering is supported by evidence. Contrary to difficulties that organizations find with revision of the practice guidelines, the South African Renal Society (SARS) and the Renal Care Society of South Africa (RCSSA), respectively sought input from nephrologists, and renal technologists and nurses affiliated to the organization when they were planning to revise their guidelines. They then circulated them to all participants for comment and therefore they were inclusive of all. Within the guidelines the developers extensively used the European Best

Practice Guidelines (EBPG) and the Kidney Disease Outcomes Quality Initiative (KDOQI) guidelines in finalizing the document. The developers of these guidelines assured the readers that evidence-based recommendations were used wherever possible and recommended that these they be reviewed at least every 2 years.

In one organization the unit manager indicated that they were not responsible for developing or revising protocols as there is a committee of developers in the organization. By this she referred to generic protocols such as hand-washing ones that are standardized. This idea was a worrying concern as the hospital policy and protocol committee does not possess nephrology knowledge and will not be able to make a contribution to the protocol development of the nephrology departments. However protocol development is not within the scope of this study but this gap calls for a need for further research and implementation of strategies that will empower operational managers with protocol and guideline development.

The awareness of existing nephrology guidelines amongst nurses was observed to be inadequate. With the few who were aware of them expressing difficulty to access and use them. The existence of guidelines developed by the National Kidney Foundation (NKF) Kidney Disease Outcomes Quality Initiatives (KDOQI), Kidney Disease Improving Global Outcomes (KDIGO), guidelines by the South African Renal Society (SARS) and the Renal Care Society of South Africa (RCSSA) form part of those guidelines directing kidney disease care and management. The implementation of guidelines requires not only knowledge of guideline content but also practitioners with the ability to deliver care that is in line with CPGs. Jeffs et al. (2013) found in their study that in areas where nurses were involved in developing and implementing best practice guidelines they became more credible, mindful, collaborative, and accountable.

In a survey conducted by Estrella et al. (2013) on perceptions and use of KDOQI guidelines, the findings revealed that the guidelines were not universally adopted even by the physicians as they were found to be cumbersome, not easy to use and confusing. Also with them having been in existence for over decades, some physicians claimed not to be aware of them. The same opinion was shared by some participants, when they declared not to be familiar with those guidelines or with them being inaccessible. The SARS Guidelines provides a solution to this impasse as they are user friendly and accommodates all practitioners. They serve to ensure that best practices are upheld and that some consistency and impartiality with regard to treatment is sustained. They were also developed to ensure that patients are not unreasonably advantaged on the basis of limited resources. According to Kredo et al. (2016) guidelines and protocols have a range of purposes, intended to improve effectiveness and quality of care, to decrease variations in clinical practice and to decrease costly and preventable mistakes and adverse events, and therefore they should be consistently used in practice.

- **Development through In Service Training, Workshops, Conferences and Congresses**

The participants reported an absence of in service training as well as any other form of development. They were of the opinion that management modulate training and considered it a favour granted to the staff members. They also felt that management at all levels were concentrating on production and did not care about personal development. One participant reverberated out of frustration that management acted as if they did not know the value and worth of training. The fact that training is an investment that organizations make in nurses as well as the protection of the image of the hospital. By this the participant meant that informed

and developed nurses will save the hospital costs and the shame of reputational damages through litigations and bad media publicity.

Their assertions were supported by Frost (2019) who affirmed that many employers find the development opportunities expensive. In nephrology units that are operating under continuous shortage of staff, some units reported not to have had in-service training in a long time. Meanwhile the nurses view training and development as an investment that an organization makes to prove that they value them. The knowledge that employees gain from in-service trainings or any form of development support the work that they do and assist in crucial decision making. The nurses who participated in this study did not only focus on the benefits of training for themselves but they alleged that the absence of in-service affected patient care. They were aware that when they do not receive continuing development, the status quo remains and there would not be advancement and changes in clinical decisions. This stagnation is contrary to EBP's call for care decisions that are supported by current evidence. Chaghari et al. (2017) supports the version of the nurses by stating that in-service training of nurses plays an indispensable role in improving the quality of patient care. Therefore organizations need to enhance their effectiveness as they are able to raise the satisfaction level and improve the morale and confidence of the nurses in what they do daily in their involvement with patients.

Sadler (2018) also posits that an institution needs to have an organized and on-going professional development program that will centralize, operationalize, and organize quality standards. Some participants blamed themselves for lack of training and development opportunities. They reported that they were offered training with the previous manager as they were guided under her leadership to attend on specific days, but since she retired those practices have stopped. They recounted that they used to allocate topics for each other for presentations and that used to benefit all. New nurses learned faster and adjusted more quickly in the unit and newly qualified nephrology nurses had an opportunity to shine by sharing what they had

learned in College and University. That method became a culture of their unit and it assisted many nurses to learn to search and appraise the literature.

Some operational managers confirmed to have let the staff members down by not pursing in-service training. They testified to have compiled lists in the past of topics to be covered annually but did not enforce them. They also admitted not to have committed to in-service training in the past but promised to make it up to their subordinates as they understood the significance of trainings. They committed to scheduled and compulsory training days so that this problem is addressed. As part of development, in-service education pertains to activities intended to assist the professional nurse to acquire, maintain and or increase competence in fulfilling the assigned responsibilities specific to the expectations of the employer.

Congresses, workshops and seminars are on-going forms of continuous development that were also neglected. The aim of these developments ensures that nurses acquire new knowledge and skills in order for them to increase their contribution in the organization. These developments up skill them and keep them inspired. The activities learned at such forums also facilitate standardization which works to the advantage of equitable patient care for the organization. Sadler (2018) believes that it is important for organizations to prioritize professional development across each nurse's different career stages, from new graduates to experienced staff members. The participants in this study raised concerns about development in their institutions. They vented that when opportunities arise, managers are the ones who attend events and on returning from the event they do not share the knowledge or make a contribution in the unit. An irritated participant shared that he worked more than seven years in the institution and has never been given the opportunity to attend any congress. Many participants expressed that they have been demotivated and discouraged by not being empowered. Others blamed the organizations from not setting funds aside for development whereas others felt that they are partially responsible for their own development. An angry participant explained that

the organization is obligated to develop him as the hospital will also benefit through the changes that he will bringing on board. Meanwhile managers revealed that the funds for developmental opportunities such as congresses are managed and controlled by the departmental head (Professor) and the HOD has put stringent measures in place. These tough measures prevent them and their subordinates from attending such developmental opportunities.

Development of employees enhances productivity and employee retention through providing career development and job satisfaction in the long run. In nephrology settings, congresses are also an area of networking and development that cannot be ignored. Attending congresses uplifts the morale and knowledge of nephrology nurses as much wider and all-encompassing aspects of nephrology are presented. All nephrology nurses look forward to attending such programs and an opportunity should be awarded to all to develop them at that highest level.

Narayanasamy and Narayanasamy (2013) affirm that staff development is integral to clinical leadership and therefore is important to health service providers. They posit that development is concerned with all the activities that advance knowledge, skills and attitudes of staff. The researchers are of the view that in these difficult competitive times highly skilled and well qualified staff with impressive portfolios are the ones likely to climb the career ladder in nursing. Healthcare providers as these researchers assert, need to invest in clear staff development strategies if they are to maintain their status as effective care delivery organizations in an increasingly competitive market driven economy.

- **Limited access and knowledge of computer use, searching and appraising literature.**

The participants in this study also raised similar and other challenges pertaining to computer access and use. They reported varied knowledge of the use of computers. Some reported not to have knowledge of computer use, with others having some knowledge and a few verbalizing to be conversant with the use of computers and the ability to search scholar work from relevant search engines. The majority of the nurses who had recently undergone post basic training reported to have last searched the internet for articles during training and most have forgotten the search engines where information should be accessed. They reported that post training there were never opportunities to advance that knowledge due to various problems. The challenges that they faced ranged from not having access to no internet activity. It was concerning to observe in this era that in two of the three hospitals the units did not have a single computer. The operational manager had to access the computer in some units. Of greatest concern are those highly experienced nurses who trained many years ago before research and EBP were included into the post basic nursing curricula. They were never exposed to any computer use and they are a group that management should consider training urgently because of the knowledge that they could share in driving EBP. Some of these participants are the ones who shamefully shared that they are computer illiterate and it was evident that this lack affected their self-esteem. Meanwhile in other areas poor, selected or no connectivity through the Wi-Fi system was the main concerns. In one hospital Wi-Fi was present but only accessible by doctors and other allied health practitioners but not nurses. This made nurses' feel discriminated against by such decisions.

Different operational managers also cited different reasons why there was limited access to and use of computers. It was also apparent that the knowledge of some operational managers was minimal with how a computer store and protect information. This was evidenced by some of

them stating that the reason they deny staff access of the computer is because they wanted to protect confidential information. It became clear that they were not aware that different administrators or users can access one computer and that they could protect their access by installing a password. They were under the perception that for them to protect the information is through denying subordinates close proximity to the computer. Operational managers also reiterated on the internet frustrations that were shared by participants.

Whilst the majority of nurses blamed the management for not giving them access to computers, a few felt that blaming the management for computer access is an unfounded excuse as all nurses possess smart phones which they could utilize to search for literature. One participant felt that the challenge is the absence of the culture of searching and retrieving the literature. He was of the opinion that nurses do not have that culture of exploring more of the nursing activities and the managers were also not motivating them. As a result there was no interest and the willingness to search as they were not stimulated. Whereas others directed the failure to access and search for literature as related to time. They assert that due to the continuous shortage of staff there is no time to do any other activity than what they were required to do. This concern is similar to the findings of Mohsen, Safaan and Okby (2016) who reported that in Egypt nurses reported that their workload is too high to keep up to date with all the new evidence. This is in agreement with what nurses shared when they said that even if they wanted to try new things there is just no time to explore.

Nurses are exposed to the changing demands in technology as they execute their patient-related duties in the workplace. Integration of information technology (IT) in healthcare systems improves the quality of care provided. In a study by Atay et al. (2014) it was found that Nursing and Midwifery students who were previously exposed to computers tend to have a more positive influence of IT than those who were not exposed. Khammarnia et al. (2015) stresses that in order to find the best evidence to clinical practice questions, nurses have to have the

ability to work with computers. Therefore access to computers, the ability to use and the knowledge of how to search literature that will support the clinical question is crucial. This part forms the crux of EBP. In a study by Nkosi, Asah and Pillay (2011) on post basic student nurses' knowledge of IT use, the researchers found that the students demonstrated a positive attitude toward the use of a computer but access to and use of a computer and integration of IT was limited. In areas where the computers were available, it was found that internet connectivity lacks. This is often the case in many hospitals in developing countries. This assertion is supported by Abdulwadud et al. (2017) who cited that nurses reported that there was no internet access at the workplace.

Summary of category three:

This category also addresses the findings that are related to two objectives.

In this category the need for EBP supported guidelines and protocols that direct nursing practice was identified. Literature reinforces guidelines that are revised as new evidence emerges in order to render quality care. Guidelines have to be simplified and address specific problems to facilitate adoption by nurses. Training interventions that would see EBP implemented were equally discussed. The need to provide access to computers and internet connection that will result in the search and appraisal of the evidence online is crucial. Capacitation of seasoned nurses with IT skill in order to align their knowledge to that of the younger generation was supported by literature in the developing countries. This will bridge the gap and address resistance that comes with the limitation of computer illiteracy. This category called for nurse leaders to expose nurses to all forms of development such as workshops and congresses, so that they can stay abreast of development.

5.3 DESCRIPTION OF RECOMMENDATIONS FROM THE FOCUS GROUP (PHASE THREE)

Findings in support of objective three: To describe recommendations that will assist Nephrology Nurses to implement EBP in clinical practice.

5.3.1 Category one: Management practices

The participants agreed that managers of the nephrology units should motivate for replacement of staff that has been lost through any form of attrition. This will ensure allocation of time to engage in EBP activities as that goal will not be achieved under extreme shortage of staff. They believe that replacement of staff will correct other challenges such as inconsistencies with adherence to staffing numbers and ratios and absence of developmental trainings. In the event that the replacement of nurses cannot happen or is delayed, short term measures such as the provision of controlled overtime should be considered as this will ensure that people are not stretched beyond limits and will prevent documented problems that were identified by many researchers. Participants agree that nurses should also be relieved of performing non nursing duties so that they can focus on prescribed clinical activities. Management should work efficiently in maximally utilizing nurses solely for nursing activities. They also recommended that a fair and consistent system be followed that recognizes and reward nurses appropriately in the Province. They requested managers to acknowledge positive work done and nurse leaders should demonstrate that they value staff by expressions such as “thank you, well done” such recognition is motivating to the nurses and less costly. They also recommend consideration of an effective succession planning policy as well as provision of equipment that will allow work to be done effortlessly.

5.3.2 Category two: Perceived organizational support and leadership practices.

Nephrology decision makers request recognition and classification of Nephrology as a Specialty department so that their needs can be correctly addressed. This should be followed by the appointment of leaders with background knowledge so that they could advocate for the unit's needs and understand the personnel's challenges. This will counter the barrier that Kothari et al. (2011) highlighted that ineffective knowledge management occurs when unqualified, inappropriate authorities such as people who are in a position of power without the appropriate training occupy positions. They recommending that the hospitals executive take some time to learn the discipline as it is unknown to them, this will address misperceptions evidenced by the allocation of ill staff to those units. This can be achieved by the visibility of the managers into the units randomly, not only when there are negative incidences. The results of this will be improved communication and an assurance to the staff that they are valued, recognized and supported. That relationship is crucial for EBP adoption. Management should also consider talents and develop people for senior positions from within organizations first as this will increase satisfaction and foster commitment.

5.3.3 Category three: Training and development

The nurses recommended the revision of protocols and provision of hard copies of guidelines as not everyone can access them online. They also requested the revitalization of in-service trainings, attendance of external trainings by nurses and not only leaders. This will ensure that staff receive relevant feedback and changes will be introduced as well as development through attending congresses, seminars and conferences. The unit managers committed that for the interest of the development of their subordinates they will repair the relationship with the HOD and behave professionally and in a responsible manner. Other recommendations included

provision of computers, internet connections and training of nurses with use of computers and searching of relevant literature. They acknowledged that searching for information if one is not literate enough can be time consuming and as a result they needed to be trained on where and how to search. Together with this provision they requested the allocation of time and a champion as the concept of EBP is unknown to them.

5.4 RECOMMENDATIONS

5.4.1 Recommendation for Nursing Practice

After careful analysis of the challenges that emerged from clinical practice the researcher consolidated the recommendations that were suggested by the decision makers with the realities of the condition and state of health in the Province. In order for EBP to be integrated and for patients to receive quality care that is supported by evidence, the nephrology nurses should have a belief and value EBP as a system that will support the decisions that they make including involving the patients. The practice should be willing to adopt EBP and demonstrate positive attitudes aimed at successful implementation. The Specialist nurses should take a leading role and jealously guard their discipline by being involved in activities that will enhance knowledge and foster independency. They should develop their own protocols and structure their own trainings such as in-service educations in order to ensure that quality activities are assured at all times. They should also be driven and take responsibility for their personal and professional development, this can be achieved by them affiliating with the professional bodies such as the Renal Care Society of South Africa. The affiliation will keep them up to date with developments that are taking place within the discipline. The acquired knowledge will also improve their confidence and assist them with the skills required to advocate for the patients and themselves as and when necessary. The seasoned nurses should

understand that they have a crucial role to play in the units as their inherent knowledge and experience will assist in crucial EBP decision making. Meanwhile the younger generation of nurses should effectively utilize their technological mastery in assisting their colleagues with IT skills in order to attain the unit goals.

5.4.2 Recommendations for Nursing Management

Evidence based practice requires coordinated effort of the executive management and therefore implementation should take a top down approach. If the organization embrace and adopt EBP it will be easier for the departments to implement. Management should therefore pursue vigorous strategies that target the change behaviours needed to implement EBP by all health care personnel. Researchers have identified that change can be successfully achieved when it is driven by nurse leaders (Regan and Rodriguez, 2011). Therefore visionary and optimistic middle managers should be supported by the executive to stimulate innovative thoughts of the nurses at the operational level in embarking change towards EBP in nursing. For nephrology departments to benefit from this exercise, management should first strive to know and understand activities that are taking place in the units. Proper classification and the provision of necessary resources are crucial in successful implementation. They should be visible and improve communication in organizations. Management should strive to retain the staff through provision of fair and consistent remunerative strategies as this will ensure retention of crucial scarce skills. This will also prevent disruptions of pursued projects that are identified in the units and ensure continuity of care. Management should invest in providing units with mentors or champions who will continuously assist with identification of clinical problems that may be addressed with EBP projects as this is fairly new to most nurses. This act will counter resistance that may arise out of unconscious awareness of current evidence. In order to remain competitive

they should aim to develop staff. They should recognize, nurture talent and outstanding performance from within the organization.

5.4.3 Recommendations for Research

The context of this study was only one setting out of ten specialty nursing departments that are present in the Gauteng province and as a result further research is suggested to establish if the specialist nurses in other areas have challenges or not with implementing EBP. With the proliferation of kidney disease, there has been the establishment of many private practices rendering renal replacement therapies. It would be suggested that further research be done in those settings to compare if challenges that are faced by nurses in the public sector hospitals would be similar or not, especially during this transformative time when the health care system will be transiting to National Health Insurance (NHI). The middle manager has been identified as the ideal person who can drive EBP change however the influence of this leader in care activities and EBP knowledge in the public health settings has not been explored or evaluated yet, further research is therefore suggested in that area. The students are only exposed to EBP during post basic training in Gauteng Nursing Colleges, perhaps inclusion of this component in the basic nursing diploma course will prepare and empower the future nurse with knowledge and skills necessary to integrate EBP in clinical practice. Further research is also advocated in that area.

5.5 APPLICATION OF THE ACE STAR MODEL AND BIRKEN'S THEORY.

The ACE model falls under the implementation theories that aim to understand and explain influences on implementation outcome, (Nilsen, 2015). It illustrates how knowledge moves from knowledge discovery into clinical practice. The researcher in this study wanted to understand the nephrology nurses' reasons for not implementing EBP in clinical practice. Thus the gap was discovered and a search for literature supporting the identified gap began. In this case the "non-compliance" behaviour of nephrology nurses was regarded as a determinant and the implementation of EBP as an outcome. The implementation object was the research based knowledge (EBP) of nephrology nurses which was assumed to be in place. The researcher invited a population of nephrology nurses that were split into three phases according to their categories to share information that would answer the research question. The information that was shared was synthesized into an integrated whole supported by research findings. Multiple determinants that emerged from different levels that hindered facilitation of EBP were described. Based on these impediments which are challenges in this study, the outcome (which is implementation of EBP) was negatively affected. In order to realize the implementation outcome, a move that is aimed at changing identified determinants was deemed essential. Inputs to this move were addressed by the invitation of the third phase group who were regarded as decision makers in nephrology. These group shared information that could see the determinants being removed and the implementation outcome being realized. This is the translation of research into everyday language in practice, recommendations were thus requested and described. The practice guidelines should be formulated and norms set that will guide implementation. This model was complemented by the Birken's theory, seeing that identified challenges will have to be removed before implementation occurs. This theory rests on the foundation of Rogers (2003) Innovation-Diffusion theory. Innovation is seen as research findings which have to be diffused by the middle manager to ensure implementation of EBP.

According to Birken et al. (2018) middle managers were identified to be in an appropriate position to ensure that EBP is effectively implemented in clinical practice. The middle manager in this study is the area manager. The position that is occupied by the middle manager requires a lot of problem solving and decision making capabilities and therefore is ideal to foster EBP. In order to make any recommendations that would see implementation of EBP, this manager has to be knowledgeable about the nephrology discipline and understands its dynamics. They should be willing to lead the team to implementation change and be passionate about EBP. As thus the middle manager promote implementation by playing four roles: firstly they will diffuse information about EBP to all affected patients, nurses and the multi-disciplinary team. The diffused innovation may be adopted or rejected by the stakeholders, especially the nurses or patients. This will be followed by the synthesis of the information whereby together with the staff they explore and make sense of the gathered information. Thirdly, the manager mediates between strategy and day-to-day activities. This is achieved by removing challenges and providing resources that will see nurses implementing EBP as a norm. It is important at this stage to minimize challenges and enhance the facilitators. Guidelines are developed that will direct implementation. Lastly the manager sells EBP implementation to all those who will be affected such as the patients and the nurses who will be implementing it. On-going monitoring, support and coaching is provided. Nurses are called to account for the compliance or non-compliance behaviour towards EBP activities. According to this theory, the success of this model rest on the context on which the proposed change take place as well as the extent to which EBP implementation is rewarded or supported in the organization. Therefore a supportive culture that embraces EBP is required.

5.6 WHAT THIS STUDY ADDS

This study contributes to the identification of the challenges that the nurse practitioners encounter when they are expected to deliver quality care. It reveals the difference between realities versus the ideal situation. It eradicates the assumption by the nurse training and development departments that once theoretical knowledge is shared it is automatically integrated in clinical practice. It highlights the degree of bureaucracy as well as disadvantages of centralized authorities and their influence on decision making in health organizations. However if recommendations are heeded, the study will contribute in the delivery of care that is expected, required and standardized for all patients.

5.7 LIMITATIONS

The study design is contextual, confined to the Nephrology departments in the public hospitals therefore its findings may not be transferable to other nephrology units outside the Gauteng Province and in the private sector.

The problem of shortage of staff in the units resulted in meetings being postponed twice as nurses could not in any way be drawn away from the unit. This challenge elongated the data collection time. Twice again meetings were delayed due to situations of patients changing conditions requiring the group to be disrupted.

The selection criteria for the first phase which was the expert nurses was a difficult group to get, although during recruitment phase a sizable number was obtained but three could not participate due to different reasons, one cited time constraints, another one cited not having the interest to share her views for study purposes and the last one had to attend an urgent meeting

but could not avail herself thereafter. This led to saturation not being reached with four participants, hence additional two expert nurses were recruited from the private sector.

Although saturation was reached with six participants, but a smaller sample size in this phase may be less representative of the population.

5.8 SUMMARY

The study focused on the challenges faced by nephrology nurses in implementing EBP. Throughout data collection, participants raised multiple challenges such as resource problems, lack of access to technology, unreceptive work environments, lack of time, knowledge deficits, lack of management support and many others. They assert that those are the factors that impeded implementation of EBP. These challenges were found to fall mostly under the function of the middle manager. In order to create a receptive EBP culture, nursing management will have to remove these challenges for a smooth adoption to happen. In light of the fact that the participants did not reject the idea of rendering care that is supported by evidence, it is assumed that they welcomed EBP provided the challenges are removed. It was also apparent that the operational managers equally did not have much authority to bring about changes as they reported not to have direct communication with the top nursing management but liaise through the area manager. As a result of this limitation the middle manager as highlighted by Birken (2012) is found to be the ideal person that can drive the change process. They are a link between provision of quality care at the operational level and articulating and acquiring resources that will enable the rendering of care that is supported by evidence. Pryse (2012) also support the idea that nurse managers are in the position of authority that is responsible and answerable for unit EBP activities. They are said to be a hallmark of the health care context impacting on whether or not EBP is successfully adopted and they should be held

accountable for its success or failure. The culture and context that supports EBP activities should be consistent and it should be reflected in the vision, mission and strategic goals of the organization. Then they can be operationalized in the policies, procedures and guidelines as well as job descriptions of employees. Culture, context and leadership are all important for EBP adoption. It is therefore crucial that the combination of a leadership of supportive and committed managers, a workplace culture that empowers nurses and reinforces EBP and measurement of ways in which patient outcomes are improved through EBP are in place. If all these are put in place, the nurses may feel confident to identify and make decisions that will bring about change and are supported by current and applicable evidence. Additionally an enabling culture that support nurses to pursue and implement change and a known and transparent process by which change is sustained will ensure EBP success.

What the study aimed to achieve with the three objectives set have been realized as the participants assertively presented what they viewed to be challenged that prevented them to deliver care that is supported by current evidence. Their leaders also supported those assertions and shared what they felt were recommendations that could take the nurses and nephrology nursing forward, which is what the third objective aimed to attain.

5.9 CONCLUSION

This study focused on describing the challenges that were faced by nephrology nurses implementing EBP. The concern was the inability of the specialist nurses to implement what they were taught during post basic training as this affected patient care. The research problem, purpose, objectives and the questions were stated in order to guide the study. A qualitative, exploratory, descriptive and contextual research design was followed. Data was gathered from the population of nephrology trained nurses who were eligible to participate in the study. Non-

probability snowball, purposive and convenience sampling methods were used for the three phases of expert nurses, nephrology nurses and the nephrology decision makers. Data collecting methods of in depth interviews were used for the first phase followed by two focus groups for the second and third phases. Data was analysed following Hsieh and Shannon (2005) conventional data analysis method. Ethical matters were attended. Findings of the study were presented and a discussion of the findings as supported by literature was done in order to arrive at conclusions. Recommendations from the third phase that constituted nephrology decision makers were presented and complemented by the researcher's own recommendations. Research limitations as well as application of the Ace Star model and Birken's theory that supported the study were explained. Lastly the summary and conclusion of this study were presented.

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APPENDIX A

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

R14/49 Ms EL Dube

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M170937

NAME: (Principal Investigator)	Ms EL Dube
DEPARTMENT:	School of Therapeutic Sciences Department of Nursing Education Chris Hani Baragwanath Academic Hospital
PROJECT TITLE:	Exploring challenges faced by nephrology nurses in implementing evidence-based practice in Gauteng public sector hospitals
DATE CONSIDERED:	29/09/2017
DECISION:	Approved unconditionally
CONDITIONS:	Re-issued on 9 May 2018 to reflect the approval from all three study sites, viz Charlotte Maxeke, CH Baragwanath and Helen Joseph Hospitals
SUPERVISOR:	Ms A Hayward
APPROVED BY:	Professor CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	12/02/2018

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on 3rd floor, Phillip V Tobias Building, Parktown, University of the Witwatersrand, Johannesburg.

I/We fully understand the conditions under which I am/we are authorised to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated from the research protocol as approved, I/we undertake to resubmit to the Committee. **I agree to submit a yearly progress report**. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in **September** and will therefore be due in the month of **September** each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature _____ Date _____

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX B

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

Gauteng Department of Health
Helen Joseph Hospital
Enquiries: Dr. M.R. Billa
Chief Executive Officer
Tel :(011) 489-0306/1087
Fax :(011) 726-5425
E mail: Raymond.Billa@gauteng.gov.za
Date: 14 February 2018

Dr.M.R.Billa
Chief Executive Officer
Helen Joseph Hospital

Dear Dr.Billa

STUDY: Exploring challenges faced by Nephrology Nurses in implementing evidenced- based practice in Gauteng public sector Hospitals.

RESEARCHERS: Mrs. E. Dube

Ethic: M170937

The above was discussed at the Research Committee Meeting. We recommend that permission be granted for Helen Joseph Hospital to be used as a site for the above research. However, since this is a research project involving voluntary participation. We cannot guarantee participation of individuals/patients

As this is all independent research project it remains the responsibility of the researcher to recruit participants from the relevant department within the hospital and acquire their individual voluntary consent to participate in your study.

Thank you

DR. Murimisi Mukansi
CHAIRPERSON
DATE:

Approved

DR. M.R. BILLA
CHIEF EXECUTIVE OFFICER
DATE: 19-02-2018

APPENDIX C

GAUTENG PROVINCE

REPUBLIC OF SOUTH AFRICA

MEDICAL ADVISORY COMMITTEE
CHRIS HANI BARAGWANATH ACADEMIC HOSPITAL

PERMISSION TO CONDUCT RESEARCH

Date: 19 Feb 2018

TITLE OF PROJECT: Exploring the use and describing challenges faced by nephrology nurses in implementing evidence based practice in Gauteng public hospitals

UNIVERSITY: Witwatersrand

Principal Investigator: EL Dube

Department: Nursing Education

Supervisor (If relevant): A Hayward

Permission Head Department (where research conducted):

Date of start of proposed study: Feb 2018
Date of completion of data collection: Dec 2019

The Medical Advisory Committee recommends that the said research be conducted at Chris Hani Baragwanath Hospital. The CEO /management of Chris Hani Baragwanath Hospital is accordingly informed and the study is subject to:-

- Permission having been granted by the Human Research Ethics Committee of the University of the Witwatersrand.
- the Hospital will not incur extra costs as a result of the research being conducted on its patients within the hospital
- the MAC will be informed of any serious adverse events as soon as they occur
- permission is granted for the duration of the Ethics Committee approval.

.....
Recommended
(On behalf of the MAC)
Date: 19 February 2018

.....
Approved/Not Approved
Hospital Management
Date: 21/02/18

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

CHARLOTTE MAXEKE JOHANNESBURG ACADEMIC HOSPITAL

Enquiries:
Ms. G. Ngwenya
Office of the Nursing Director
Tell: (011): 488-4558
Fax: (011): 488-3786
06 August 2018

Mrs. Lerato Elizabeth Dube
Department of Nursing Education
Faculty of Health Sciences
University of Witwatersrand
NHRD REF: GP_201801_010

Dear. Lerato Elizabeth Dube

RE: **"Exploring the use and describing challenges faced by Nephrology Nurses in implementing evidence based practice in Gauteng public hospital"**

Permission is granted for you to conduct the above recruitment activities as described in your request provided:

1. Charlotte Maxeke Johannesburg Academic hospital will not in anyway incur or inherit costs as a result of the said study.
2. Your study shall not disrupt services at the study sites.
3. Strict confidentiality shall be observed at all times.
4. Informed consent shall be solicited from patients participating in your study.

Please liaise with the Head of Department and Unit Manager or Sister in Charge to agree on the dates and time that would suit all parties.

Kindly forward this office with the results of your study on completion of the research.

Supported / not supported

Ms. M.M Pule
Nursing Director
Date: 06/08/2018

Approved / not approved

Ms. G. Bogoshi
Chief Executive Officer
08.08.2018

RECEIVED CEO
07-08-2018
CMJAH

APPENDIX E

PERMISSION LETTER BY THE HEAD OF THE DEPARTMENT TO CONDUCT RESEARCH IN A GAUTENG PUBLIC HOSPITAL

7 York Road Parktown, Johannesburg, 2193,
South Africa

Telephone +27114883621

Fax +274884799

Division of Nephrology, Charlotte Maxeke
Johannesburg Academic Hospital

11/07/2018

Dear Lerato Dube

Regarding the study entitled "Exploring challenges faced by nephrology nurses in implementing evidence-based practice in Gauteng public sector hospitals ".

I hereby give my permission to conduct the study from the Division of Nephrology, at the Charlotte Maxeke Johannesburg Academic Hospital Renal Unit.

Yours sincerely

Prof Graham Paget MBBCh (Wits) FCP (SA) Cert. Neph (SA) MMed (Wits) FRCP (UK)

Head-Division of Nephrology at the University of the Witwatersrand

APPENDIX F

PARTICIPANTS' INFORMATION LETTER

Information letter for expert nurses

Good day

Invitation to participate in a research study.

I, Elizabeth Lerato Dube am currently registered as a master's student at the University of Witwatersrand. The title of the study that i invite you to participate in is: Exploring the challenges faced by nephrology nurses in implementing evidence based practice (EBP) in Gauteng public hospitals. The study is done under the supervision of Mrs Andrea Hayward from the Witwatersrand University. The purpose of the study is to explore and describe challenges faced by Nephrology Nurses in implementing the modern scientific approach of Evidence Based Practice in the nephrology units, and to describe the recommendations that would be drawn from the focus groups in clinical practice in order to optimize patient care. The objectives are: To establish the expert nurses' perception on how implementation of EBP can affect nephrology nurses in clinical practice. To explore and describe challenges faced by Nephrology nurses in implementing EBP in Gauteng renal settings. To describe recommendations that would be drawn from the nephrology decision makers that are aimed at assisting nephrology nurses implement EBP in clinical practice.
The significance of the study is to gain an understanding of the of use of EBP in renal settings and to identify the possible challenges that may exist and hindering nephrology nurses in implementing EBP in order to assist them in making accurate clinical decisions and implementing interventions that are supported by evidence.

In this first phase of the data collection the researcher aim to conduct in- depth interviews with six expert nephrology nurses who have given consent to participate in the study. The outcome of these interviews will form the basis of the second phase of data collection which will be done with the nephrology nurses using focus group discussions. The interviews will run for approximately 45-60 minutes and strict ethical principles will be adhered to. The interviews will also be tape recorded with your permission for accuracy and to facilitate that data be

transcribed verbatim. The confidentiality of the data from interviews will be maintained. The information shared in relation to this study will only be accessible to the researcher and the supervisors. All records with the data will be numbered and separated from individual numbers used for participants and all stored in a secure place for two years. This data will be destroyed after publication of the study and as per the University's policy. You will be identified by a number and no names will be used. The date and time when the interviews to be conducted will be communicated and agreed upon between you and the interviewer once the consent is obtained. Your participation in this study is voluntary. You have the right to withdraw at any stage during the research if you wish to do so without penalty or repercussions. The research findings will be made available to you on your request.

Should you have any queries related to the study please feel free to contact me on 0723327545 /011 247-3307 from Monday to Friday between 08h00-16h00.
There will be no risks or discomfort posed to you in sharing your valuable knowledge and insight and your contribution might benefit the discipline from the improvement that might be brought about by the outcomes of this study.

Thank you for your participation, your time and input is highly valued.

Should you agree to participate, please complete the attached consent form.

Yours faithfully

Elizabeth Lerato Dube

Contact details: 011 247 3306

Supervisor: Mrs Andrea Hayward

Contact details: 011 488 4271

Information letter for nephrology nurses (second and third phase)

Good day

Invitation to participate in a research study.

I, Elizabeth Lerato Dube am currently registered as a master's student at the University of Witwatersrand. The title of the study that i invite you to participate in is: Challenges faced by Gauteng nephrology nurses in implementing evidence based practice (EBP). The study is done under the supervision of Mrs Andrea Hayward from the Witwatersrand University.

The purpose of the study is to explore and describe challenges faced by Nephrology Nurses in implementing the modern scientific approach of EBP in the nephrology units, and to describe the recommendations that would be drawn from the focus groups in clinical practice in order to optimize patient care. The objectives are: To establish the expert nurses' perception on how implementation of EBP can affect nephrology nurses in clinical practice.

To explore and describe challenges faced by Nephrology nurses in implementing EBP in Gauteng renal settings.

To describe recommendations that would be drawn from the nephrology decision makers that are aimed at assisting nephrology nurses implement EBP in clinical practice.

The significance of the study is to gain an understanding of the of use of EBP in renal settings and to identify the possible challenges that may exist and hindering nephrology nurses in implementing EBP in order to assist them in making accurate clinical decisions and implementing interventions that are supported by evidence.

This is the second phase of the data collection in which the researcher is going to collect data from nephrology nurses from three public hospital using focus groups from participants who will give consent to participate in the study. Two rounds of focus groups will be conducted to give both shifts an equal chance of participating in the study. The focus groups will run for approximately 45-60 minutes in a neutral and non-threatening environment and strict ethical principles will be adhered to. The focus group discussions will also be tape recorded with your permission for accuracy and to facilitate that data be transcribed verbatim. The information shared in relation to this study will only be accessible to the researcher and the supervisor. The confidentiality of the discussions will be maintained and the participants will also be requested to treat the information shared during the sessions within the group and respect each other's information by keeping it confidential. Your anonymity although not fully assured as members

of the group might know each other but the researcher will omit the use of names and only use numbers in all discussions related to the study for your protection. All records with the data will be numbered and separated from individual numbers used for participants and all stored in a secure place for two years. This data will be destroyed after publication of the study. Your participation in this study is voluntary. You have the right to withdraw at any stage during the research if you wish to do so without penalty or repercussions. The research findings will be made available to you on your request. The venue, date and time when the focus groups will be conducted will be communicated and agreed upon between you and the interviewer.

Should you have any queries related to the study please feel free to contact me on 0723327545 /011 247-3307 from Monday to Friday between 08h00-16h00.
There will be no risks or discomfort posed to you in sharing your challenges, instead you might benefit from the improvement that might be brought about by the outcomes of this study.

Thank you for your participation, your time and input is highly valued.
Should you agree to participate, please complete the attached consent form.

Yours faithfully
Elizabeth Lerato Dube
Contact details: 011 247 3306

Supervisor: Mrs Andrea Hayward

Contact details: 011 488 4271

APPENDIX G

Consent to participate in a Research study

I hereby agree to participate in the Research study titled: Challenges faced by Gauteng nephrology nurses in implementing evidence based practice (EBP). I understand that my participation is entirely voluntary. I understand that i will be treated fairly, that my anonymity and confidentiality will be maintained. I also understand that my privacy will be protected and that I may withdraw my participation at any stage of the study.

Participant's signature_____

Date:_____

APPENDIX H

CONSENT FOR USE OF AUDIO TAPE-RECORDER FORM

I acknowledge to have been given the information about this study. I have read the proposed method of data collection and understand that this will include a tape recording of the conversations.

I consent to the researcher recording the interview and understand that my name will not appear in any documentation.

Participant's signature_____

Date:_____

APPENDIX I

Example of the leading question for the expert group

Question	Sub probe
What is your understanding of the concept "EBP"	In your own words can you define the concept of EBP? Explain how nurses in your units can be affected by EBP supported nursing care. (Can EBP influence nursing care) Do you personally think EBP has a role in nephrology departments? If Yes please explain how and if No why do you think it does not?

Examples of the leading questions for the second phase

Questions	Sub probes
What is your understanding of Evidence Based Practice?	Where did you first learn or hear about it and did you receive any training for it? Do you think you have adequate knowledge of EBP to integrate it in your practice? Either yes or no, can you tell us more? Do you believe in its worth?
Because you have been exposed to EBP, why are you not putting it in practice?	Can you explain the challenges that you think prevent you from implementing EBP when practicing if there are any? If any, can you identify them as management, patient or staff related challenges, please explain?

Examples of the leading questions for the third phase

Question	Sub probe
What would you recommend as measures that would assist nephrology nurses in implementing EBP in practice?	- What resources do you think will be required for effective implementation of EBP? - What do you recommend can be done to assist nurses implement EBP? - Do you as leaders think EBP has a chance in this modern day practice?

APPENDIX J

A VERBATIM TRANSCRIPTION OF SEMI-STRUCTURED INTERVIEWS OF EXPERT NURSES AND FOCUS GROUPS

Please note that I: Interviewer and P: Participant

Semi structured interviews of expert nurses, first phase.

I: My first question to you is: How familiar are you with the concept of evidence based practice? Can you explain it according to your own understanding?

P: I can't say I'm so familiar with it because eh, I was not used to it. It's only now that I'm getting more information about it. I must say I first heard about it when you came here to recruit me to participate but before that no. What I know or heard about is best practices, but eeeeh okay eh I'm now familiar with it because after I received your invitation I tried to get information what is it all about. And when I discussed with short silence then shrugged shoulders….my colleagues they just told me that it is something that you are able to see but not only to see, but it's got to go over research in order for it to be implemented and then it can be practiced.

I: Okay thanks, if I understand you well, you say it is linked to research, what is your believe then about the use of research in nursing practice?

P: I don't think I understand the question, can you come again?

I: In your opinion, how does research findings influence your practice, can nursing care be affected by the use of research findings?

P: Okay aah, the way I look at it, research help us to overcome the problems that the patients are experiencing. So aah for instance you'll find that there are patients who are working, and it becomes difficult for them to make hours to their employers, so if ever there's a way that you as a nurse can put for the patient that they do night duty, may be that can help.

I: Can you please clarify, how does advocating for night dialysis have to do research?

P: I mean eeh when I was working at [redacted] nee, we started off with about six patients on nocturnal dialysis neh, and then the number increased in six months because patients felt the difference, when they compared night dialysis to day dialysis and they said they felt better dialyzed at night than during the day. Maybe it's the number of hours I don't know. So the number of patients on nocturnal is high now because it is sort of concluded that the quality of their life is improved.

I: So if I understand you correctly, as a result of the research which was done, the results proved that nocturnal dialysis work better for patients, are you implying that research assisted uncovering the benefits of nocturnal dialysis?

P: Yes, that is precisely my point.

Second phase:

I: Thanks once more for participating, My first question to you is please explain what do you understand by this concept 'EBP', can you define it?

P1: I first heard about it two years ago when I was doing the post basic course, before then I have never heard about it, I also participated on an EBP project whilst I was a student but we never implemented the findings, we just focused on the EBP steps. Since I came here at [redacted] (name of the institution withheld for protection of its identity) I have never heard anyone talk about it.

P3: [Rolling eyes], EBP means that you are at par with other institutions, and that whatever you are doing needs to satisfy the patients. You are doing more or less the same thing and at the end of it, whatever care that we copy from others should make patients happy and improve quality patient care.

I: Please clarify that?

P3: I mean it's got to do with people doing the same thing, the one copying the good that is done by the other.

I: Do you mean standardized care?

P3: Yes, something like that…. [smiling].

P6: I used to hear about it sometimes when we were attending the renal congresses and that is where it ended, we never had to implement anything, they just shared information on how EBP can be applied and you know mos, these are mostly people from abroad that work in different conditions and different patients to us, so it is always easy for them to talk.

I: How far can you say that the nursing activities or nursing decisions are supported by evidence and if not what prevent you from giving care that is supported by research findings and recommended?

P2: I can say we always give evidence care practice ne, although the challenge will be on whether it is current evidence or old evidence. Others eh…like in our institution we have different age groups, so we have differences of issues of evidence because current evidence new people will come with it from training but the seniors will always keep and continue with their own evidence.

P3: It is not to say that we are resistant to change, but we have to evaluate all the change and see how is it going to affect us, we can't just take everything that they come with (pointing at younger nurses) and implement it on the patients, they are not guinea pigs you know and they don't have to agree to this new practices. Sometimes it is not even worth it. We don't resist change but my point is why should we change what have been working all along? You can't fix something that is not broken, and yes sometimes you can't even see the difference, (throwing the right hand on air). And the mentality of the chronic patients you know… the patients will tell you that I don't know this, I know only that, and now you'll have to sit and explain unending stories to the patient

P4: We do try to render care that is evidenced based but unfortunately you find that there are obstacles to delivering that care. Sometimes you find that there is unavailability of medication, the resources are not adequate. For an example right now we do not have heparin.

P5: I think the problem is that we are included under medical here, the bosses do not know where to put renal and they don't understand what is happening in renal and the seniors don't want to come, they say "this renal is expensive" Why are they running it if they don't want to support it?

P3: We do give EBP, the only challenge is that maybe we are doing things the old way and there are new trends that we can't keep up with, but we do give evidence based care. The only thing is that we don't have resources to help us work smartly.

P1: We are unable to provide the service that we are here for. Sometimes I'm so demoralized to a point that even to come here in the morning thinking that hoooo by the time I get to work I know already that I'm going to find this and that a problem. So its

demoralizing and also demotivating because I feel like I only come here to do half my job. I used to love this department but truly…

I: I hear your frustrations but how and to whom do you verbalize them to, is there anyone or somewhere where you express your concerns?

P6: Oho, the management is out, they are out. ….silence you meant in terms of management mam? If it's them you referring to, you hardly even see them, I think they are running away from the renal unit. The only time you see them here is when there is a complaint. Otherwise even if we can say the unit is burning I don't think they will come.

P1: Top management is not there for us, there are issues that we directed to them a long time ago, they are still pending.

P6: Yes and the only time you see top management is when they bring negative news, you will never see them unless there is a problem. So when you see them you are also planning a defense response in mind because you know you are going to be attacked.

I: If that is how you feel about the management, can't you engage the HOD, surely he can pull some strings where resources are concerned?

P3: No relationship, he frustrates us himself.

P6: The relationship is bad between nursing staff and the junior doctors, but you know it is so funny because the relationship that we have with the consultants is cool, we relate well with them.

P5: Doctors do not really give us that platform to be our best, even when you [suggest] something about a patient that you have been nursing and you have even seen their blood results but mostly they would not listen; it is only one or two who would listen.

P1: I know that some time ago the current HOD found us having ultrafiltrated only three litres on a patient who was overloaded. He wanted to know who said so and we said the protocol stipulates that. He was so angry belittling the protocols that we use and said from that day we should not reason like people who never went to school. We asked him to write a protocol addressing ultrafiltration, he said why should he waste his time when we can't even read a prescription, when or how can we even look and understand a protocol?

P2: But there were no protocols then.

P5: Sekecho vele(hence I'm saying) It was September 2016 when I was asking for a protocol yama blood transfusion that as renal sister what covers me should a patient react as there is no protocol and there is no prescription, we act on doctor's verbal orders most of the times. I will never forget that because he humiliated me in front of everyone, nursing students and doctors kaofela (all), anyway akawabali (he doesn't write protocols) ama protocols, he asks who'se gonna read them because we are "dumb"

I: how did you handle the arrogance or bad conduct of doctors?

P5: Not much, they victimize you or they make a joke about it like if you want to report the attitude at the professor's meeting. They lighten it and it gets to be laughed at and it passes. It will never be treated seriously.

I: So if I may ask as nurses if you are coming across a clinical problem that you are not sure of how to handle, where then do you get the information that will assist you in making a decision? Who is your source of information?

P6: We don't follow protocols, we ask each other. I go to somebody whom I know ukuthi will be able to assist and naye she'll come to me, like yesterday, no day before yesterday. We were not sure how to give hepatitis B vaccine, I had to go to somebody whom I knew

for sure that they'll be able to give me a right answer and definitely bekunjalo [it was like that]

P1: We google, nowadays we google. We do. Sometimes when we are faced with the dilemma that is serious, maybe there is this big diagnosis and you are not sure about it, we google and see ukuthi ohhhh this is how we are supposed to treat it. The problem is we don't always have data and there are no computers here as you see.

P2: Sometimes we go read about it. Sr. [redacted] always give us homework and we go read about the problem. Then I use the handbook of dialysis and google and the notes that we received when we were doing the course, nna (I) I still have them.

I: How long ago did you do the course participant 2?

P2: I did the course in 2011.

P3: Mina [I] cant google but when I want to use the internet my children help me, but I read a lot. I heard the other day that they say there's a way people can get internet here because the doctor said so, but it's for doctors not nurses.

P5: Yes ma'am and that is what is discouraging in this hospital, there is WIFI connection that is only open for doctors and the other professionals but not for nurses. We are always sidelined and not treated like the rest.

Phase three

I: This group was presented with the challenges that were raised from phase two and were requested to come up with measures that can be applied to correct them in order to ensure that EBP is implemented.

I: thanks ladies, the first challenge that was raised is the problem of shortage of staff.

OMG-A: Indeed shortage of staff is a problem that start with absenteeism. The reason for increased absenteeism is because of nurses being overworked as when others resign they are not being replaced. That subject remaining nurses with overload. You find that we keep on going understaffed and the staff end up getting sick and absenting ourselves from work.

I: Yes I hear all that, but what do you think should be done to correct that?

OMG-D: Renal units are treated as aliens. Sometimes stock is ordered and it is not delivered because people don't know the renal unit and don't know the value of what you are ordering in those amounts. They don't have an insight of what is really happening in the units therefore you end up not having resources. I'm seeing a lot of shortage of resources, both material and human resources. We are being told that there is no money and that is the end of the story. Then how can we see evidence based nursing care being implemented when we do not have resources, we don't have human resources and we do not have the material resources. We are losing a lot of people every day. We are training people every day and losing them to the private institutions, the private sector is benefiting at our expense, they are gaining from our hard work but our superiors are ignorant don't see the danger that we are facing here. They don't see the significance of supplying the resources no they don't; especially material resources. We have to demand at this level of management also that the top management come down at least twice a year to listen to us; they must come and spend time in this department. They must not stay up there and not come down, what are they managing up there, problems are on the floor, this is where they are supposed to be.

OMG-C: We want someone from management who have a baseline knowledge of renal, someone who will know how much stock is needed in the renal unit per month, how much dialyzers, acids, heparin, and so and so. That will make a difference.

I: Thank you for your contributions ladies. The meeting is formally adjourned.