

**Knowledge retention strategies for professional nurses at Philadelphia
Hospital, Limpopo, South Africa**

By Josias Kgwadi Mamabolo

65189906

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DECLARATION

Student number:

I declare that the dissertation: "Knowledge retention strategies for nurses at Philadelphia hospital, Limpopo, South Africa" is my own work and all the sources I have cited or quoted have been acknowledge by means of a complete reference list.



.....

SIGNATURE

(Mr. Mamabolo JK)

08/11/2021

DATE

DEDICATION

I dedicate this dissertation to my parents, my mother Merriam Sadie Mamabolo and my father Johannes Raselepe Mamabolo. I give thanks to their motivation, guidance and continuous support. It is through their support that I was able to make it this far. To Karabo Percy Mamabolo and Theresho Salvation Mamabolo, thank you very much for the sacrifice; your understanding and support provided me the strength to complete the dissertation. I would also like to dedicate this work to my siblings Lerato Precious Mamabolo, Boledi Anna Mamabolo and John Mamabolo. I hope this will serve as a motivation, and certainly make you proud as I am always aimed at achieving anything that has never been achieved in our family before. Finally, I would like to dedicate this work and give tribute to my late uncle Ntjana Morokotsane "Swallow" Mamakoko, whose eloquent undying wisdom motivated me to reach this level.

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ABSTRACT

In the nursing profession, knowledge retention is aimed at retaining ownership and recognising the importance of critical nursing knowledge across all healthcare organisations. In Philadelphia Hospital, like many other healthcare organisations in South Africa, knowledge retention is hardly understood, practiced, and implemented in the nursing profession. The challenge of losing critical nursing knowledge in healthcare organisations has resulted in the occurrence of countless medical blunders, misdiagnosis and erroneous treatments leading to multiple drug resistant diseases and unpredicted deaths. The purpose of the study was to develop a knowledge retention strategy for professional nurses with the views to retain critical nursing knowledge that is vulnerable to loss when professional nurses leave the organisations through a variety of employee attrition factors. The study adopted a qualitative research approach and a case-study research design in which interview guides were used to solicit data from participants. Out of 90 professional nurses, 20 professional nurses were interviewed to a point of saturation. Data collected were analysed by virtue of content analysis. From the research findings, it was deduced that, Philadelphia hospital encounters individual, organisational and technological challenges that affected their current knowledge retention practices in the nursing profession. However, challenges also occurred when professional nurse were reluctant to participate in knowledge retention practices due to the lack of awareness and educational training programmes on the importance of knowledge retention. The study recommended alternative ways in which knowledge retention practices for professional nurses may be enhanced, this included the following: development of knowledge retention policy, awareness training programmes on knowledge retention, reward systems and programmes for effectively encouraging professional nurses to participate in knowledge retention practices, programmes for recovering lost knowledge, conducting knowledge audits on the basis of lost knowledge, making resources available for utilising retirees to capture their expert knowledge, identifying and adopting tools for preserving nursing knowledge. The study suggested that more studies should be conducted on knowledge retention in the nursing profession in South Africa, particularly quantitative research studies that will explore the concept on a broader quantifiable approach. The study further suggested that factors to be explored should also include, knowledge retention tools, knowledge retention challenges,

knowledge retention practice enablers and enhancers within healthcare sectors, particularly within the nursing profession.

Keywords: knowledge retention; professional nurses; nursing knowledge, Knowledge; Knowledge management; knowledge transfer; knowledge sharing; Philadelphia hospital; healthcare sector; strategy.

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LIST OF ACRONYMS

UNISA	University of South Africa
SANCA	South African Nursing Council
ACET	African Centre for Economic Transformation
WHO	World Health Organisation
LDOH	Limpopo Department of Health
APQC	American Productivity Quality Centre
KR	Knowledge Retention
KM	Knowledge Management
DHIS	District Health Information System
HRM	Human Resource Management
ICT	Information Communication Technology
4IR	Fourth Industrial Revolution

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Introduction and Background Information to the study

Nurses form part of the largest group of healthcare professionals and caregivers who play a key role in the provision of improved healthcare to patients (Shaari, Bakri & Rahman 2015). To this end, nurse's knowledge provides the basis for decision-making in the pursuit of quality patient care (Ramadan 2017). Retaining knowledge among professional nurses should be the heart of everything that happens in the healthcare environment (Shaari *et.al.* 2015). Knowledge retention is highly relevant in the nursing profession as it provides greater culpability and high efficiency in the process of structuring, strategy implementation and service delivery in healthcare organisations (Jane 2016). In the nursing profession, knowledge retention initiates a significant role in making sure that the appropriate information reaches the relevant people, and it is used for the precise determinations at the right time (Wang, Hailey & Yu 2014).

Healthcare sector is a composition of healthcare professionals and care givers such as professional nurses, general nurses, medical doctors and other medical practitioners whose sole purpose of their profession is devoted in patient care (Bibudha, Urmila & Siba 2015). The Documentation Guidelines for registered Nurses (2019) asserts that, healthcare sectors around the world have been experiencing challenges in retaining the know-how of professional nurses and this has affected patient care. Ali, Mohajjel and Madineh (2018) observe that, it is essential that knowledge transfer occur from highly experienced to less experienced nurses to ensure the know-how of professional nurses is captured and retained to improve patient care.

Knowledge retention is important in the nursing profession precisely because it involves the process of retaining ownership, not losing, practising or recognising knowledge in healthcare organisations (Nursing standard: official newspaper of the Royal College of Nursing 2002). Poorshikhani and Akbar (2018) are of the view that, knowledge retention is important in healthcare organisations primarily because nurses are requisite to be resourceful in rendering patient care, and always be prepared in yielding fresh curative know-how occasions that contribute in patient care. In this

sense, the process of retaining knowledge should transpire through cooperative communiqué networks thereby ensuring that the knowledge of patients is constantly accessible and applied in order to expand excellence in patient care and satisfaction (Documentation Guidelines for Registered Nurses 2019).

There are several definitions of knowledge retention with each varying according to their context. Dalkir (2011) defines knowledge retention as the systematic process of preserving knowledge in the organisation for future usage. Stephen (2016) defines knowledge retention as the process of capturing valuable knowledge and capabilities of employees that are at risk of being lost when they leave the organisation. Peterson (2012) is of a view that, the aims of knowledge retention in organisations is to retain as much knowledge and expertise of employees as possible for future usage. He further argued that it is a common executive exercise to ensure that knowledge is preserved and sustained before employees in various fields of expertise depart from organisations. In the case of healthcare organisations, where nurses decide to leave the organisation via numerous forms of abrasions, knowledge retention enables continuous sustainability and preservation of knowledge within the organisation (Bazlur, Rashid & Choudhury 2019).

A vital feature of knowledge retention is to determine what valuable knowledge is highly at risk of being lost when employees depart from organisations (Poorshikhani & Akbar 2018). Knowledge is diverse from information: information is data or facts, whereas knowledge is the capacity to develop actual choices or facts. Researchers in the knowledge management turf have also noted that knowledge is thought to be the essential component of institutional memory and fundamental elements of procedures that drive sharing, transferring and learning (Olivera 2000; Argote *et. al* 2003). According to Maponya and Ngulube (2007), knowledge allows employees to accomplish and make conclusions in order to contribute to a great degree in the ways in which individuals conduct themselves in organisations.

The provision of insufficient care to patient is due to the inability of nurses to apply present and pertinent knowledge needed in patient care (Haughom & Advisor 2014). Disintegration of medical knowledge, unproductive collaboration across administrative boundaries coupled with an inauspicious healthcare environment has resulted in

difficulties for nurses to utilise all the relevant knowledge required for the provision of a high typical care (Cruz & Ferreira 2016). Haughom and Advisor (2014) are of a view that dismantling complications and decision making in healthcare organisations is deeply reliant on having the authority to access knowledge. Knowledge management is an important aspect of knowledge retention as (Maponya & Ngulube 2007) highlights that an efficient and active policy for managing knowledge in healthcare organisations is significant in developing a knowledge retention strategy for nurses in healthcare organisations to achieve their goals.

Nurses comprise of 56% in all healthcare organisations in South Africa with a variety of models implemented to project subsequent future and current nursing shortages (State of the Worlds Nursing Report 2020). Like in any other countries, South Africa nurses are in the centre of addressing multifaceted loads of diseases and viruses through primary healthcare approaches to improve healthcare procedures and performance (Andualem, Kebede & Kumie 2018). The State of the World's Nursing Report (2020) further contends that, South Africa lacks the capability to develop norms and consensus to increase nursing staff to full capacity in order to address the challenges of unresponsive and slow nursing patientcare problems to meet the needs of the entire population within healthcare systems. With the increasing of high turnover of nurses in South Africa, healthcare organisations encounter significant amount of challenges with the shortage of professional nurses which impedes the capability of healthcare organisations to execute their directive patientcare mandate effectively (Andualem *et al.* 2018).

Knowledge retention in healthcare organisations in South Africa is hardly understood and practiced by numerous healthcare workers including executive leaders and managers (Andualem *et. al.* 2018). When nurses leave their jobs, voluntarily or involuntarily, healthcare organisations lose the know-how that nurses leave with them because healthcare organisations do not have adequate knowledge retention practices in place to prevent the loss (Peña 2013). The problem of losing Institutional memory impacts healthcare organisations capability to carry out its mandate effectively. According to Shaari *et. al.* (2015), this creates a root burden, and results in the occurrence of countless medical blunders, misdiagnosis and erroneous treatments leading to multiple drug resistant diseases and unpredicted deaths. Most

healthcare organisations in South Africa fail to ponder the implementation of knowledge retention practices to develop strategies to sustain, preserve and document valuable knowledge of professional nurses for future usage (Guidelines for Nursing Documentation 2019). Nursing attrition is inevitable in healthcare organisations, most experienced professional nurses depart from their current field and location of employment for various reasons. When these experienced professional nurses leave, they depart with organisational know-how which has never been captured, stored or retained for continuousness (Peña 2013). This creates grave challenges with regards to the quality of services rendered to patients.

Professional nurse scarcity is a global challenge and South Africa is not excluded as nurses depart the republic for greater incentives in developed countries (SANCA 2019). The problem of nurse relocation has occupied typically the crucial personnel having upright fundamental clinical expertise, for instance nurses working in theatres (Peña 2013). The relocation of professional nurses from unindustrialized nations to industrialized ones is a well-known initiative in weakening healthcare organisations in low-slung revenue countries, and it is a well-thought-out prime risk to attaining the health linked sustainable improvement priorities (SANCA 2019).

Limpopo Province is one of the nine previously disadvantaged province in South Africa with the shortage of professional nurses and this has raised considerable attention (World Health Organisation 2017). Limpopo is considered as a rural province with a typical nurse-patient ratio of 1:7. According to Aiken, Sermeus and Van den Koen (2012), this ratio surpasses the WHO's unconditional minimum nurse to patient standard ratio of 1:5. The WHO estimated that the current work force at Philadelphia Hospital requires to be ascended to 140% in order to reach the national health development goals (Aiken *et. al*/2012). The South African Nursing Council assessment report for Rural Nursing in South Africa (2018/2019) has alluded that, because Philadelphia hospital is rurally based, were living conditions do not meet the standards of living of most professional nurses coming from Urban and formal settlements, professional nurses are departing from this hospital. According to the Limpopo Department of Health and Social Development (2020), there were 444 registered professional nurses at Philadelphia Hospital in the year 2017/2018. In the year 2019/2020 Philadelphia hospital is currently having 219 professional nurses. Drawing

reference from the Limpopo Department of Health Statistics for Professional Nurses (2020), and the South African Nursing Council assessment report for rural nursing (2018/2019), it can be concluded that, professional nurses are departing from Philadelphia hospital and considering employment opportunities in urbanised and formal settlements. Philadelphia Hospital, like many other healthcare organisations in South Africa, effective knowledge retention practises and strategies are hardly developed and implemented, to ensure that knowledge of professional nurses is captured, stored and retained for future reference. It is in this regard that the study seeks to investigate knowledge retention practices for nurses at Philadelphia Hospital.

1.2 Contextual Setting

Philadelphia Hospital is a public hospital headed by the Limpopo Department of Health which is located Groblesdal under Elias Motswaledi Local Municipality, in Sekhukhune, one of the many previously disadvantaged district municipalities. It is located near Philadelphia Road in a small rural village called Dennilton in the Limpopo Province. Dennilton is located 32km south-west of Groblesdal and 126km south-east of Bela-Bela in the Limpopo Province. Philadelphia Hospital has thirteen (13) divisions, serving twenty (20) townships with overall thirty (30) professional nurses and 90 nursing workers and 12 nursing divisions managers (WHO 2017). The hospital is based in a very rural area where living conditions do not necessarily meet the standards of many professional nurses who come from Urban and formal settlements. Due to this fact, and many other rural community challenges such as water scarcity, electricity, lack of proper infrastructure, shopping malls and the lack of public transport for mobility the hospital have been selected as subjects for this particular study precisely because professional nurses are departing from this hospital and considering other employment opportunities in developed countries and urbanised areas without their knowledge being captured, preserved and retained for future usage. According to the Limpopo Department of Health Statistics for Professional Nurses (2020), there were 444 registered professional nurses at Philadelphia Hospital in the year 2017/2018. In the year 2019/2020 Philadelphia hospital is currently having 219 professional nurses.

1.3 Problem Statement

Knowledge retention is relevant in the nursing profession as it provides greater accountability and evidence-based processes in structuring, strategy implementation and service delivery in healthcare organisations (Shaari *et. al.*, 2015). In the nursing profession, knowledge retention initiates a significant role in making sure that the appropriate information reaches the relevant people, and it is used for precise determinations at the right time (Wang, Hailey & YU 2014).

The South African Nursing Council Assessment Report for rural nursing in South Africa (2018/2019) has alluded that because Philadelphia hospital is rurally based, were living conditions do not meet the standards of living of most professional nurses coming from Urban and formal settlements, professional nurses are departing from this hospital. Due to this fact, and many other prime rural community challenges such as water scarcity, electricity, lack of proper infrastructure, shopping malls and the lack of public transport for mobility, professional nurses are departing from this hospital without most of their knowledge being captured, retained and preserved for continuity. At Philadelphia hospital, like many other healthcare organisations in South Africa, effective knowledge retention practises and strategies are hardly developed and implemented to ensure that the knowledge of professional nurses and many other healthcare practitioners is captured, stored and retained before they leave the organisation through a variety of employee attrition factors. With the integrated challenges of nursing knowledge being lost and the inability to retain experienced professional nurses, this study sought to develop effective knowledge retention strategies that will rapidly ensure that, the know-how of professional nurses is captured, retained and preserved for future usage.

1.4 Purpose of the study

The purpose of this study is to develop a knowledge retention strategy for professional nurses at Philadelphia Hospital.

1.4.1 Objectives of the study

1. To explore the different knowledge retention strategies for nurses at Philadelphia Hospital.

2. To explore the tools for preserving nursing knowledge at Philadelphia Hospital.
3. To explore the challenges experienced in retaining nursing knowledge at Philadelphia Hospital.
4. To develop a strategy for retaining nursing knowledge nurses at Philadelphia Hospital.

1.4.2 Research question

1. What are the current strategies for retaining nursing knowledge at Philadelphia Hospital?
2. What are the tools for retaining nursing knowledge at Philadelphia Hospital?
3. What are the challenges experienced in retaining nursing knowledge at Philadelphia Hospital?
4. What strategies can be used to enhance knowledge retention practices for nurses at Philadelphia Hospital?

1.5 Significance of the study

This research study is significant to the Limpopo Department of Health (LDH) and the Information Science profession in the sense that it seeks to develop an actual and proficient knowledge retention strategy for professional nurses at Philadelphia Hospital. This is to ensure that the hospital does not lose valued knowledge when professional nurses depart from the hospital. This study is also significant in the sense that many studies conducted on knowledge management have been on knowledge sharing and most importantly not focusing on the public sectors. Moreover, it will add more knowledge on the existing body of knowledge-on-knowledge retention in public sectors. The study could also provide guidance to the Limpopo Department of Health concerning the application of successful retention policies of professional nurses in the province.

This study is also substantial in originating thoughts around professional nurses and knowledge retention strategy expansions and applications in healthcare sectors, precisely because it seeks to retain knowledge regarding patientcare among nurses in order to preserve the institutional memory for future usage. It also highlights the necessity to have knowledge retention in an institution of healthcare to be implicit and valued, formalised and provided the consideration it warrants. The study is also

probable to deliver underpinning improved knowledge retention strategy for professional nurses in Limpopo Department of Health. The research conclusions of this study will induce management and professional nurses to comprehend the prominence of emergent effective and efficient knowledge retention strategies among professional nurses.

1.6 Scope and limitation of the study

The scope of the study is Philadelphia Hospital, as the study focuses on knowledge retention and subject matters related to it specifically in healthcare organisations. The hospital was selected because of its rurally based location, which is the prime contributor to the departing of professional nurses including many other rural factors such as water scarcity, electricity, lack of proper infrastructure, shopping malls and the lack of public transport for mobility. The aim of this study is to development retention strategies for knowledge of professional nurses at Philadelphia hospital. The study will therefore analyse the ways in which the selected organisation retains critical knowledge of professional nurses before they leave the organisation. Furthermore, it will assist in identifying what critical knowledge is vulnerable to loss when nurses leave the organisation. This research project will attempt to develop a knowledge retention strategy to preserve critical knowledge of regarding patientcare. Although the findings of the study might be applicable to other healthcare organisations, the information will be gathered within the context of Philadelphia Hospital which has its own unique environment. The fact that the research will only be conducted in one hospital might not yield similar findings if it had to be conducted in other hospitals.

1.7 Research Methodology

Research methodology is a systematic approach of resolving research problems. It is mainly understood as a form of scientifically studying different approaches on how research is accomplished (Creswell & Creswell 2018). There are numerous methods which are mainly applied in research studies. Three of the greatest commonly applied methods are qualitative, quantitative and mixed method approaches (Ngulube 2015). Usually the research questions, research problem as well as the type of data and information dictates the choice of methodology to be applied. This section provides a detailed elaboration of the research methods applied in this study.

1.8 Research methods

The three main research approaches, and the greatest prevalent used are quantitative, qualitative and mixed methods. Bryman and Bell (2015) asserted that there is a fundamental difference between these three approaches to research. Quantitative research method provides prominence on numerical assertion in the process of acquiring and analysing data (Bryman & Bell 2015). Qualitative provides emphasis in terms of social articulation or words (Creswell & Creswell 2018). On the other hand, mixed method approach is a combination both quantitative and qualitative methods in the same research in order to acquire understanding of the phenomenon under study (Bryman & Bell 2015). This study adopted a qualitative research approach precisely because it seeks to explore the narrative attributes of professional nurse's perceptions regarding the strategies for retaining critical nursing knowledge at Philadelphia hospital through the use of semi-structured interviews. The different research approaches are discussed in this section.

1.8.1. Qualitative research method

As noted in the preceding section, this research study adopted a qualitative research method. This is because the study is deeply rooted in the descriptive nature of harnessing data that was acquired through the use of semi-structured interviews. This has allowed the researcher to explore and accumulate a greater insight on how critical nursing knowledge is retained in a healthcare organisation. Furthermore, the qualitative nature of the study will allow participants to provide an expressive articulation as far as knowledge retention is concerned at Philadelphia hospital. Ngulube (2015) quantified that, the fundamental component of a qualitative research method is essentially to associate significance to the practises of respondent's day to day operations. Furthermore, the use of qualitative research advocates for a precise data collection tool that will enable integration of the data collected and what has been observed to strengthen the findings (Creswell 2016).

Creswell (2018) is of a view that qualitative research methods involve descriptions, phenomenology, ethnographies, grounded theory and case studies as strategies of inquiry. Data is collected with the intent of developing themes and to get a comprehensive viewpoint from part takers under study. The advantage of this method

is that it allows a diversity of responses, and it also possesses the capability to allow recent matters during the process of research (ACET 2013). In addition, it provides a greater benefit in the sense that participants are flexible in responding to questions the way they like (Ngulube 2015). Qualitative depends on data acquired in the form of interviews, documents and even observations (ACET 2013). The advantages of applying qualitative research method in a study is that, during interviews, the interviewer has an opportunity to pose questions that are complicated (ACET 2013). Moreover, qualitative research is advantageous in the sense that, it provides participants with an opportunity to narrate a particular phenomenon as board as the question may require expressive articulation, thus, this provides the research with an opportunity to harvest data from multifaceted angles (Bryman & Bell 2015).

1.8.2 Quantitative research method

Quantitative research methods are those methods which use numbers to provide a detailed elaboration of findings (Kowalczyk 2016). The research procedures are through experiential exploration with collected data being statistical (Creswell 2016). Through the utilisation of numerical data study has to possess advance knowledge of descriptive and inferential statistical measures of calculations and standard deviations. Bryman and Bell (2015) is of a view that the notion of quantitative research is to provide explanations, predictions, investigations and examinations of possible influences on specific outputs. Ngulube (2015) emphasise that a good quantitative research method is one in which researcher does not form part of the research instrument. Creswell (2018) is of a view that the phenomena under study are hypothetical; literally entailing that there is no absolute truth. A quantitative research method is commonly applied when the variables in the organisations wherein the researcher desires to conduct the study are directly proportional to one another in omission of other variables. According to Creswell (2016), when used in social science quantitative research method is used to test hypotheses. The advantage of quantitative research method is that deductions are derived from a larger number of participants, it provides effectual analysis of data, it provides examination of possible cause and effect and preconception are controlled, and participants are usually taken as numbers. Its restrictions are that the utterances made by the participants are generally not taken into considerations and there is less understanding of the background of respondents (Ngulube 2015).

1.8.3 Mixed method

Creswell and Creswell (2018) is of the view that mixed research methods are new and emerging especially in the field of health and social sciences and encompasses the process of merging both numerical developments and stories to conduct a clear and accurate research on human and social challenges. The central hypothesis is that when an inquirer joins both quantitative and qualitative methods, it provides a clearer perception of the problem than using either method alone (Ngulube 2015). A mixed method thus, is a combination of both quantitative and qualitative methods with sole purpose of getting a precise thought of the phenomenon under study (Bryman & Bell 2015). Mixed research method typically results in greater research because of its operational diversity or extensiveness (Creswell & Creswell 2018).

1.9 Research designs

The design chosen is informed by the qualitative approach. This study aimed at developing a knowledge retention strategy among professional nurses in Philadelphia Hospital. There are various methods of research designs applied in qualitative research; for instance, phenomenology, ethnography, grounded theory, emergent and case study designs (Bryman & Bell 2015). For the importunity of this research, case study is the appropriate design to apprehend the actions of the organisation for the purpose of retaining knowledge.

1.9.1 Case study design

Case study design is a method of design that investigates the difference in the single bounded systems typically of social phenomenon. The concept case study implies the notion that a restricted numerical evaluation of components is examined intensively (Ngulube 2015).

The technique of research provides the researcher with the privilege of studying phenomena in which the framework of the precincts among the researched topic are purely unobservable (Bryman & Bell 2015). Case study designs are normally applied when the researchers want to acquire a broader insight of particular occurring phenomena (Bryman & Bell 2015).

Therefore, case study approach was appropriate for the current study because the significant determination of the study was to explore and provide greater insight of retaining knowledge amongst professional nurses in healthcare organisation. The benefit of this design is rooted in its capability to provide a comprehensive exploration of extensive and complicated researchable phenomena (Bryman & Bell 2015).

1.9.2 Population

Population is the entire collection of cases which researchers are concerned with (Polit & Beck 2012). Burns and Grove (2011) are of a view that the available population is the some of the aspects of the targeted populace which researchers have equitable access to. Philadelphia hospital has a total number of 310 nursing staff of which 90 are professional nurses and 220 are enrolled nurses (South African Nursing Council 2016). In this study, 90 professional nurses from the hospital who have five or more years of experience were targeted because of the skills and experience they possess regarding patient care.

1.9.3 Sampling procedure

Ngulube (2017) is of the view that a sample is a collection of components with the purpose of decisively deriving a meaningful aspect out of the population from which they are acquired. Members taking part in the research are usually denoted to as participants (Burns & Grove 2011). Sampling is a concept that used in research to refer to the procedure of choosing samples from populace with the purpose of obtaining reliable data about occurrences that are representative of the entire populace under study (Ngulube 2015). Professional nurses possessing five years and more working experience were interviewed to a point of saturation. Purposive sampling was used in this study because of the qualitative nature of the study. Given (2016) defines saturation as the idea in which additional data do not lead to any new emergent themes. A similar position regarding the nonemergency of new codes or themes has been taken by others. According to Creswell and Creswell (2018), saturation transpires when the comprehensive series of concepts that construct a principle is signified by the information acquired. In comprehensive relations the notion of saturation is used in qualitative research as a standard for discontinuing data collection and analysis (Ngulube 2015). Its origins lie in grounded theory proposed by Glaser and Strauss (1967). In one form or another it now commands acceptance

across a range of approaches to qualitative research. Creswell (2014) claim categorically that failure to reach saturation has an impact on the quality of the research conducted.

1.9.4 Sampling method

There are two types of sampling techniques, i.e., Probability and non-probability sampling techniques. This study adopted the non-probability sampling technique given that it is a qualitative study. There are numerous methods of non-probability sampling, including convenience sampling, quota sampling, opportunistic sampling, and purposive sampling among others (Welman, Kruger & Mitchell 2005). Purposive sampling is a type of non-probability sampling upon which the researcher depends on the knowledge, resourcefulness and prior research discoveries to purposely attain elements of exploration in a way in which the model obtained will be viewed as appropriately illustrative of the entire populace (Welman, Kruger & Mitchell 2005).

1.9.5 Data Collection Procedure

Data is defined as unprocessed information, or as bits and pieces of information found in an environment (Maponya 2013). The first step in collecting data is to acquire access to the subjects under study. Whether they be survey participants, archival records, workplaces or interviewees, it is essential to acquire access in order to obtain credible data.

Several methods of collecting data such as transcribed quantifiable, head-on discussions, observation, emphasis collection conferences, conventions and diverse transcripts may be appropriate to this research (Jarvinen 2000). In light of this, the researcher typically used an interview dictate. Creswell (2014) emphasises that unstructured interviews provide interaction between the interviewer and interviewee and thus, provides alternatives when the researcher has insufficient knowledge of the phenomena under study.

In this study, data was obtained from widespread interviews from professional nurses with five and more years of working experience. The data collection technique that were be used in the study is interviews, and it is discussed in a broader detail in the next section.

1.9.6 Interviews

In this study formal interviews will be employed as a means of acquiring data from potential participants. Welman, Kruger and Mitchell (2005) asserts that there are various forms of interviews that are used as methods for acquiring data from participants, which are: structured, semi-structured and unstructured interviews. In structured interviews the researcher employs interview agendas by preparing questions to be asked, and it is necessary for the schedule to be produced before the researcher to be aware of what exactly requires to be covered (Ngulube 2015). In the case of semi-structured interviews, the researcher uses a guide that has a list of potential questions to be asked and may differ from one interview to another depending on the responses provided by the participants. Unstructured interviews are not formal and are applicable to discover generic ideals.

In qualitative research the purpose of interviews is to understand the notion embedded in the participants' experience (Creswell 2014). In this study, semi-structured interviews were applied to collect data from professional nurses at Philadelphia Hospital.

1.10. Data collection procedure

The researcher consulted those in authority in the nursing profession to grant consent to proceed with collecting data from professional nurses meeting the following requirements:

- Professional nurses having five and more years of experience.
- Professional nurses on duty willing to partake in the study.

A document was read to professional nurses partaking in the study. Arrangements were set with participants; the researcher bodily interviewed nurses in an isolated area in order to uphold secrecy; discretion was upheld by not disclosing the respondent's credentials.

1.11. Ethical considerations.

Ethical considerations include the characteristics of volunteers in the participation process. It is also centred right on the policy of protecting participants from all sorts of

dangers including discretion, secrecy, conversant agreement and the comportment of the researcher when carrying out the study process (UNISA 2007 & Neuman 2006). In this research study the subsequent moral deliberations were considered: confidentiality, informed consent and briefing and providing detailed clarity about the research under study.

1.11.1 Confidentiality

Confidentiality is centred on the notion that no one will be able to determine the identity of all participants who part took in the study including the responses they uttered throughout the process (Babbie2010). In order to sustain discretion in research, the personal details of all those who part took in the study will remain confidential. All those who voluntarily partook in the study were provided with assurances that the evidence they provided is to be preserved with confidentiality for the persistence of the study.

1.11.2 Informed consent

The researcher has the obligation to provide participants with the required information about the origin of the research study (Hofstee 2017). The researcher acquired conversant agreement from all those who partook in the study. Authority was granted to the researcher to conduct the research from the institution, University of South Africa (UNISA). The researcher produced a letter sheet containing information with the institution of higher learning to all the participants. This letter was used to inform participants about why the study is being conducted.

1.11.3 Institutional Approval

For the researcher to be granted permission to collect data from Philadelphia Hospital, ethical clearance must be granted by the Limpopo Department of Health through the National Health Research database. An application must first be forwarded to the National Health Research database. The application will be evaluated on the basis of the purpose of the study, research methodology, and ethical approval from the academic institution upon which the student has registered.

1.11.4 Provision of debriefing, counselling and additional information

All partakers should be broadly briefed about the common knowledge of the research (Hofstee 2017). The researcher provided partakers of the study with an overview of

the phenomenon under study. The University of South Africa (UNISA) unilaterally developed its policy regarding ethics that provide a wider emphasis pertaining participants. The policy is constructed on the view that the privileges of participants must be preserved. It is of vital significance precisely because information acquired from participants might be leaked, thereby posing a greater threat towards the anonymity and dignity of those who partook in the study.

Hofstee (2017) is of a view that the privilege of those partaking in the research study includes the following:

- The privilege not to take part in the research
- The privilege to withdraw
- The privilege to provide informed consent
- The privilege to withheld identity
- The privilege to privacy.

1.12. Data analysis and presentation

Botma *et.al.* (2010) defines qualitative data analysis as the procedure that involves the process of analysing theories, data and information thereby constructing them into more meaningful categories or attributes. Botma *et.al.* (2010) is of a view that analysing data consists of a systematic procedure of making meaningful codes and categories of data. This involves the process of expressively analysing data and shifting towards a profounder meaningful attribute. In qualitative research, analysing data is done simultaneously with the process of acquiring data. Botma *et.al.* (2010) accentuates that the notion of analysing thematic content is quite significant in qualitative research and it is usually explained together with concepts identified by researchers. The process of data analysis is similar to the notion of statistical analysis data in quantitative research. In qualitative research the process of data analysis involves two steps. In the first step of the analysis data and information acquired, are normally attained through the review of literature. In this sense, the appropriate subjects are then determined and concurrently developed in line with interview questions. The process of analysing data acquired through interviews gives the researcher a chance to internalise the perceptions of participants and ultimately match them in relation to the theoretical analysis.

The process of analysing data is articulated by Stangor (2011) who developed five steps that researchers could follow when analysing data:

- Phase 1: Knowing your data-internalising data; this involves the process of carefully reading materials in order to acquire a better insight of the phenomena under analysis.
- Phase 2: Derive careful attention on analysis-substantial attention should be placed on the purpose of appraisal and what the research will bring out.
- Phase 3: Categorise information-themes are constructed in order to shape the work.
- Phase 4: Determining connections between categories-conduct evaluations of diverse themes and subside relations and variations.
- Phase 5: Clarification: consolidate the data into an expressive presentation.

1.13. Definitions of terms

1.13.1 Knowledge management: Haesli and Boxall (2005) define knowledge management as a systematic procedure of acquiring, managing, preserving and disseminating employee's know-how throughout an organisation. Wamundila (2008) defines knowledge management as a systematic approach to managing both tacit and explicit knowledge.

1.13.2 Knowledge retention: Preserving knowledge involves the process of sustaining fundamental knowledge and experience that are most likely to be lost when employees retire or depart from organisations (Kim, 2005 & Dan 2005).

1.13.3 Knowledge transfer: knowledge transfer is a procedure that involves the activities of knowledge dissemination in organisation (Bou-Llugar & Segarra-Cipres 2006). Knowledge transmission is a contrivance that is mainly applied in the process of resolving problems and enhancing operational and organisational efficiency (McCall 2006).

1.13.4 Knowledge: Davenport and Prusak (1998) delineates knowledge as a combination of organisational experience, norms, information and proficient understanding that develops a strategy for bringing about new information and experience.

1.13.5 Tacit knowledge: Tacit knowledge is defined by Narasimhan (1997) as the knowledge that determines our behaviours and perceptions. It is normally perceived as common sense or knowledge that everybody has that is acquired through informal means.

1.13.6 Explicit knowledge: refers to the knowledge that is visually tangible and expressive through communication between two or more individuals. It is usually acquired through formal means (Bou-Llugar & Segarra-Cipres 2006).

1.14. Organisation of the dissertation

Chapter one of this study provided an introduction and background of the dissertation, a detailed historical background, research problems, objectives, questions, significance of the study, and finally definition of key concepts. Chapter two comprises of the literature review, where in information, concepts and issues related to the study are presented. Chapter three outlines the research methodology, expressive elaboration of the methodologies and activities that took place, the targeted population, sample framework, research instruments, data collection tools and procedures, and lastly ethical considerations. Chapter four presents and analyses data obtained from participants through the use of semi-structured interviews, where research findings are supported by corresponding literature. Chapter five provides conclusions and recommendations on the basis of the research problem by addressing research questions and objectives of the study.

1.15. Summary

This chapter of the study provided an introductory overview of the dissertation and the context in which the study was conducted. The chapter also presented and discussed the overview of the aims and objectives of the study, research questions, research designs, research methodology and definition of key concepts used in the study. Lastly, the chapter provided an outline of the chapters of the dissertation. The next chapter of the study provides a detailed elaboration of the literature relevant to the field of study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The preceding chapter provided a detailed elaboration of the introduction and background to the filed study. This chapter reviews literature and theory on the subject of knowledge retention in healthcare organisations, particularly in the nursing profession. According to the Royal Literary Fund (2016), literature review refers to the systematic search and thorough evaluation of literature present in a field of study for the purposes of research. For the persistence of this study, the review of literature was conducted to explore a variety of findings brought about previous research on the similar topic. The motive is to derive a clear context and background to develop a knowledge retention strategy for professional nurses at Philadelphia Hospital. Before literature relevant to the study could be discussed, it is important to first elaborate on the theoretical framework relevant to the study. The next section provides a detailed explanation of the theoretical framework adopted for this study.

2.2. Theoretical framework

As mentioned, the purpose of this study is to develop a knowledge retention strategy for professional nurses at Philadelphia Hospital. This study has adopted DeLong's (2004) knowledge retention strategy framework, however, it is of fundamental significance to explain how the framework is relevant to this study. The basis of this framework is instigated on the development and application of human resources aspects for transferring knowledge of professional nurses through the use of ICT resources to recover and retain critical knowledge of professional nurses in healthcare organisations. The framework further calls for the applications of tools designed precisely to capture, store and retain valuable nursing knowledge that is at risk of being lost when professional nurses depart healthcare sectors. DeLong's knowledge retention strategy framework is relevant to this study because its core mandate is instigated upon the implementation of measures necessary to capture, store, transfer and retain knowledge for the purpose of future reference in all organisations (DeLong 2004). Furthermore, it provides accurate measures through the use of ICT tools and HR expertise to retain such knowledge.

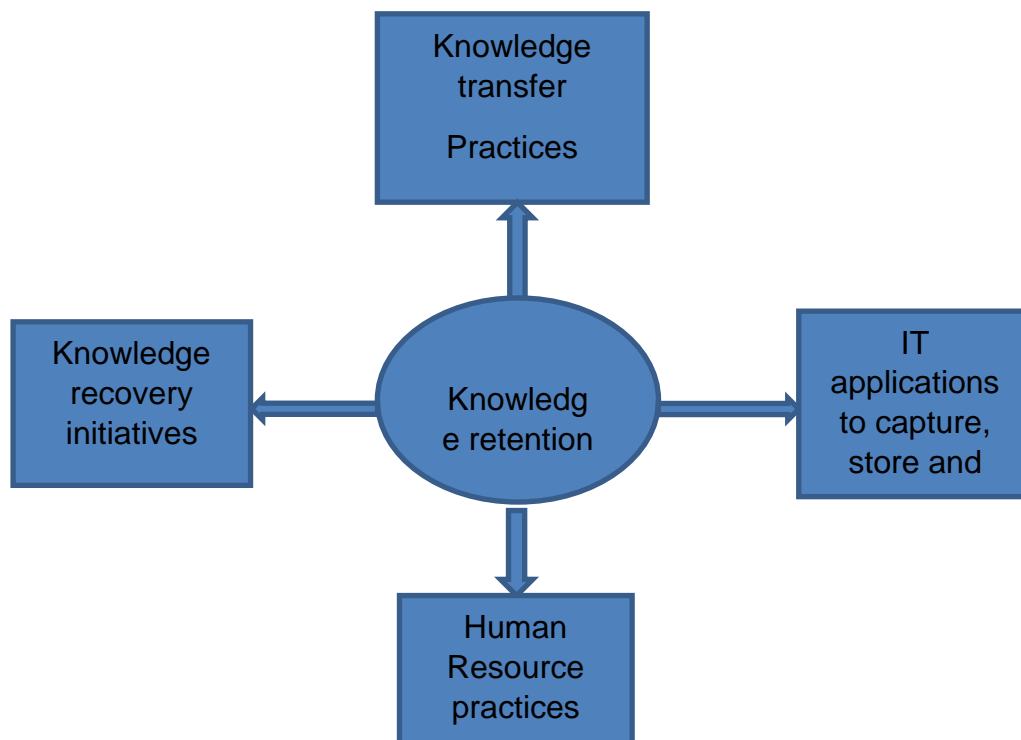


Figure 2.1 DeLong (2004) *Knowledge retention strategy framework*

2.2.1 Knowledge retention strategy framework

Various healthcare organisations have derived a strategy framework to assist in preserving the know-how of employees. DeLong (2004) signifies the development of a strategy for retaining knowledge is instigated upon the following:

- Human resource policies;
- Knowledge transfer practices;
- Information technology applications to capture, store, and share knowledge; and
- Knowledge recovery initiatives.

This study is founded on DeLong's (2004) strategy framework for preserving knowledge in organisations. The basis of DeLong's (2004) strategy for retaining knowledge in organisations calls for the development of human resources policies, knowledge transfer practices, information communication technology aspirations and knowledge recovery initiatives as the core centre in the process of instigating accurate and adequate knowledge retention strategies for capturing, storing and retaining valuable organisational knowledge. The objectives and research questions of the study are established in line with the framework. The literature is revised on the basis

of the objectives of the study. The assessment of individual personnel strategies, measures, including evaluation of knowledge preservation systems, Information Communication Technology (ICT) systems to preserve, sustain, and disseminate knowledge applicable to organisations and to explore the usage of knowledge retrieval initiatives forms the foundation of the knowledge preservation ideal that the researcher has developed. The research includes the assessment of healthcare organisations deficiency to losing knowledge, the evaluation of professional nurses in possession valuable knowledge, and to determine what crucial knowledge is more vulnerable to loss. A fundamental feature of a strategy to retain knowledge is not only the ability to determine the precise components in the organisation that are susceptible, but also determine employees whom if they depart the organisation can harshly affect the day to day running of an organisation.

As portrayed in Figure 1 DeLong's (2004) strategy framework for preserving knowledge stipulates four features of resourcefulness that forms part of the organisation's strategy for retaining knowledge. Each category signifies a set of features and applications an organisation can put in place to preserve critical knowledge (DeLong 2004). DeLong (2004) alludes that the strategy can be applied by organisations to determine the procedures and norms that if put in place will directly impact the notion of retaining knowledge. The framework also assists in determining newly developed aspects and inventiveness that an organisation could put in place to ensure continuous improvement in the process of preserving knowledge. DeLong (2004) further accentuates that, measures has to be established in order to develop an effective strategy that must be put in place. Appropriate resolutions to preserving knowledge do not alone involve computerised information systems; it also includes knowledge transfer programmes including resource of human policies and processes.

The next section of the study will provide a detailed elaboration of the literature review. The literature reviewed comprises of different sections relevant to the study with the views of addressing research questions and objectives of this study. The following themes and subjects will be discussed in this section:

- Knowledge

- Knowledge management
- Knowledge management processes
- Knowledge of professional nurses in healthcare organisations
- Knowledge retention amongst professional nurses in healthcare organisations
- Challenges experienced in retaining nursing knowledge in healthcare organisations
- Strategies for retaining nursing knowledge in healthcare organisations
- Tools and techniques for retaining nursing knowledge in healthcare organisation

2.3. Knowledge

Knowledge plays a fundamental role in the nursing profession as it provides greater culpability and evidence-based practices in health planning, policy making and strategy implementation in the pursuit of quality patient care (Shah & Hussin 2018). In order to implement a successful strategy for retaining nursing knowledge in healthcare organisations, it is of vital significance to comprehend the concept of knowledge. Shah and Hussin (2018) define knowledge as the cognitive recognition of experiences acquired through the process of informal and formal learning, with the capacity to act that resides in the mind of the possessor. Knowledge is an abstract concept closely associated with comprehending the know-how of performing a task, or engaging activities that requires experience (Davenport & Prusak 2000). The know-how possessed by individuals is mostly a substantive of their experience and standards through which evaluation of new inputs are applied (Shah & Hussin 2018). Shah and Hussin (2018) delineates knowledge as a mixture of unsolidified experiences, norms, customs, contextualised information, expertise, insights and gathered intuitions for the purpose of integrated evaluative measures necessary for the generation of new information.

According to Ibarra (2013), the purpose of knowledge is to improve our lives, as it allows humans to define, prepare, shape and learn to solve a task or problem. Davenport and Prusak (2000) accentuate that knowledge comprises of definite skills and techniques for the persistence of accomplishing a task. From the objective point of view, knowledge is considered as an object characterised by the world, self-regulating of human discernment, and occurs in a variation of practices and locations

(Dietel 2017). For the purpose of this study, knowledge is seen as dependent in the sense that it is reliant on human discernment. The perception struggles that knowledge does not occur autonomous of individual practices; as a substitute, it matures through the communal formation of denotations and conceptions, and hence misplaces a general objective oddity (Dietel 2017).

The literature being reviewed in this study places a thorough evaluation of the different types of knowledge. However, for the purpose of this study, tacit and explicit knowledge will be discussed. The next section will provide a detailed elaboration of tacit and explicit knowledge which are relevant in the development of an effective strategy for retaining nursing knowledge in healthcare organisations.

2.3.1. Tacit Knowledge

Dietel (2017) defines tacit knowledge as the knowledge located in the intellectual setting of an individual which cannot be articulated in words. Winter (2016) agree that tacit knowledge is an intangible abstract concept which cannot be easily shared amongst co-workers through formal and informal discussion, storytelling and face to face interaction. According to Dietel (2017) tacit knowledge is context dependent, and enthusiastically conveyed amongst people officially and methodically. Some authors in the knowledge management turf categorise the tacit nature of knowledge as the know-how knowledge (Jane 2014). Jane (2014) is of a view that the tacit origin of knowledge places a great deal of difficulty in being transmitted from one individual to the other, since it is deeply rooted in the personal aspects of individuals, co-workers and team members. In contrast to explicit knowledge, tacit knowledge is not easily retained, transcribed and coded in documents, manuals and guidelines (Jane 2014).

In the nursing profession, the tacit nature of nursing knowledge plays an important role across all healthcare organizations. It serves a source of guidance that has been acquired through years of experience within the profession. It is progressively acquired through passion and the constant interactions between nursing professionals and patients. It is important for healthcare organizations across to the globe to put measures in place for the purpose of transferring and retaining such knowledge for continuity.

2.3.2. Explicit knowledge

Dietel (2017) defines explicit knowledge as the type of knowledge that can be easily be denoted in words, numbers and concepts in order to convey meaning, shared experiences and lesson learned through codified procedures. Unlike tacit knowledge, the explicit nature of knowledge is characterised by perceptible dimensions that allows it to be easily stored, captured and codified for communicable purposes (Jane 2014). According to Gibbons *et al.* (2010) explicit knowledge is mostly captured and stored in institutional repositories, databases and integrated knowledge retention tools for future references in organisations. Zhua (2016) is of a view that, for organisational purposes, the explicit nature of knowledge exists in the form of memos, notes, documents, manuals and reports. It is the type of knowledge that provides readers with guideline, steps and instructions on how to perform or accomplish a task (Frank & Pushpam 2018).

Provided that the most common categorise of knowledge has been discussed, it is of vital significance to expressively take a deeper approach to the concept of knowledge management, as it plays an important aspect in the development of a successful knowledge retention strategy in any organisations. The next section will be devoted in discussing the concept of knowledge management and its role in the development of an effective strategy for retaining nursing knowledge in healthcare organisations.

The explicit nature of nursing knowledge remains one of the most important features in nursing operations across all healthcare institutions. It forms part of the basic nursing standard operating procedures which professional nurses rely on to provide healthcare services to patients on a daily basis. For the purpose of ensuring continuous efficiency in healthcare services delivery to the general public, this type of knowledge requires to be retained for future continuity.

2.4. Knowledge management

Knowledge retention is one of the fundamental process of knowledge management, thus understanding knowledge management is a key requirement in comprehensively integrating a successful strategy for retaining nursing knowledge in healthcare organisations. Alavi and Leidner (2001), Lee and Choi (2003) and Wan Fakeh, Shahibi and Hussin (2015) accentuate that knowledge management is the most significant and effective instrument for organisations to remain competitive. Knowledge management

is defined as the thoughtful and logical harmonisation of an organisation's people, expertise, practices and organisational constructions in order to add significance through recovery and advancements (Shah & Hasin 2018). Hassan, Noor, and Hussin (2017) define knowledge management as the underpinning of an organisation's determination in cultivating efficiency and enactment through leveraging organisational knowledge. The American Productivity and Quality Centre (APQC 2016) defines knowledge management as an assortment of organised methods to assist knowledge movement to, and between the relevant people at the right moment so that they can be able to act more proficiently and effectually to generate value for the organisation. According to Stevenson (2015), knowledge management refers to the systematic efforts of facilitating, attaining, generating, preserving, disseminating and developing organisational knowledge by employees in organisations. Martin and Meyer (2012) are of the view that knowledge management increases organisational performance by instigating instruments, procedures, systems, doctrines and motives of enhancing the creations, dissemination and utilisation of organisational knowledge. The next section discusses knowledge management processes, with a precise reference to knowledge retention.

Knowledge management continues to remain relevant even in the 4IR era across all healthcare organizations in the sense that, its main objective is to evolve over time in order to sustain and preserve vital knowledge that is critical in sustain operations in healthcare organizations. Knowledge management plays an important function in the nursing profession as it provides healthcare organizations with the capabilities to sustain the process of transferring, sharing, disseminating and retaining nursing knowledge that is vital to healthcare organizations to sustain the integrity of service delivery to the general public.

2.5. Knowledge management processes

Knowledge management processes are essential in the strategic objective and implementation of knowledge retention strategies in health care organisations. Although knowledge retention is the key subject of this study, the knowledge of other processes that forms part of KM is essential for this study. Senevirathna (2017) defines a process as a systematic approach through which activities, applications and procedures are put into practice in order to accomplish a precise task. In the context

of healthcare organisations, knowledge management processes are viewed as an established set of concepts, practices and procedures through which nurses and other healthcare professionals are able to develop, acquire, disseminate and retain valuable organisational knowledge with the views of accomplishing patient care objectives (Dietel 2017).

According to Stevenson (2015), KM processes are traditional practices that allows professional nurses and other healthcare practitioners to create, acquire, store, transfer, retain, and re-use knowledge in order to achieve the objectives of healthcare organisations. Abualoushrbid, Habes and masadeh (2018) asserts that, KM processes plays a fundamental role in the process of acquiring, managing, organising and retaining both tacit and explicit nursing knowledge of professional nurses in the ways in which other healthcare professionals will be able benefit and become efficient and productive to meet the objectives of healthcare organisations at large. According to Ayoub, McIlwraith and Uchegbu (2017) KM processes are integrative established set of processes that are closely associated with organising and handling the flows of knowledge with the motives of advancing the effectiveness to create, sustain and disseminate nursing knowledge in the pursued of quality patientcare. Fombad (2014) graphically portrays that KM processes are essentially inter-connected with one another to distinctively create, acquire, store and retain knowledge. Amongst these processes are knowledge codification, knowledge capture, knowledge storing, knowledge dissemination, knowledge reuse, knowledge transfer and knowledge retention.

According Zhua *et al.* (2017) these set of approaches are important in the process of attaining, managing, transferring and retaining the implicit nature of valuable nursing knowledge to achieve healthcare sector objectives. These different processes are discussed in the subsequent paragraphs

2.5.1. Knowledge codification

Codification of knowledge is the procedure in which knowledge is acquired from individuals, processing it, preserving it, and then later storing it in systems thereby retaining it for reprocess by anybody requiring it for future usage in the organisation (Lam 2000; Ibarra 2013). This particular knowledge that has been codified, becomes

the intellectual property of the organisation. Codification typically requires information communication technology systems for generating and preserving databases including proficient computerised information systems (Dalkir 2011). Knowledge is collectively transpired through interactions between workers and further capturing, preserving and reusing the know-how that is present in organisations and making it available to diverse co-workers. In organisations, knowledge is continually preserved in order to permit accessibility for future usage. Knowledge specialist should be devoted in capturing, storing, and disseminating knowledge throughout organisations (Lam 2000; Ghosh & Scott 2007; Meyer 2012).

Codification of nursing knowledge remains one of the most important features of knowledge management in the nursing profession. It remains vital and relevant in the sense that, it is only through knowledge codification that, valuable nursing can only be acquired, processed, transferred and later on be store through a variety of systems which will than later provide access to retrieval. In order to retain valuable nursing knowledge in healthcare organizations, knowledge codification is not subject for omission precisely because, it forms part of the basic elementary processes of knowledge retention in healthcare organizations.

2.5.2. Knowledge capture

Capturing knowledge comprises of preservation of appropriate documents and transcripts thereby consolidating them in an expressive manner (Daghfous, Belkhodja, & Angell 2013). Regrettably, in numerous organisations, features of knowledge are not documented in a formal manner (Shongwe 2016). Capturing knowledge also requires additional procedural practices such as conducting interviews with individual employees or groups (Kianto 2012). According to Shah and Hussin (2018) subsequently, workers obtain knowledge and develop new ways of conducting and undertaking procedures. Organisational knowledge requires to be captured in order to advance organisational competency. Grant (2013) highlights that, if procedures for capturing organisational knowledge are overlooked, prospective organisational knowledge could be lost when staff members depart or retire. Organisations should make available prospects for workers' knowledge to be captured and stored for retention purposes.

In order to ensure and maintain the success of retaining nursing knowledge in healthcare organizations, the process of capturing valuable knowledge becomes critical in all aspects of the endeavor. Knowledge capture provides all healthcare organizations across the globe with the capabilities to retain and preserve important nursing knowledge in order to sustain the business operations of rendering healthcare services to the patients. The objective to retain nursing knowledge cannot be achieved without the integration of knowledge capture as process of knowledge management.

2.5.3. Knowledge storing

Subsequent to knowledge codification and knowledge capture, organisations must organise and store the knowledge into institutional memories through the use of knowledge storing and preservation tools (Daghfous *et al.* 2013). In the context of healthcare organisations, knowledge storing refers to the process whereby which nursing knowledge is organised and stored in institutional repositories for preservation purposes (Shongwe 2016). According to Dewah (2014) knowledge storing is the process through which valuable organisational knowledge is documented and stored in knowledge repositories and databases for the purposes of future retrieval. Kaufmann (2015) asserts that, knowledge storing involves the implicit nature of interpretation, evaluation, clarifying and categorisation of knowledge before the process of storing occurs. Chilton and Bloodgood (2013) highlights that, for the purposes of retrieval, knowledge must be managed, organised and structured in order to be accessible whenever it is required. Shongwe (2016) accentuates that, knowledge storing is primarily concerned with the formalisation procedures of knowledge for the purpose of re-integrating it into knowledge repositories to be easily accessible. Wan Fakeh *et al.* (2015) graphically portrays that, there are varieties in which knowledge can be stored manually, these includes manuals, minutes of meetings, policy implementations and other means through which employees are able to refer to paper-based knowledge sharing platforms. In the case of professional nurses in healthcare organisations, these includes paper clip boards and instruction manuals.

In order to ensure a successful strategy for retaining nursing knowledge in healthcare organizations, the process of knowledge storing becomes central to the development of such a strategy in the sense that, it allows knowledge to be preserved for retrieval whenever it is required. The storing of nursing knowledge in healthcare organizations

remains relevant by virtue of its importance in the delivery of healthcare service to patients.

2.5.4. Knowledge dissemination

Knowledge dissemination refers to the process in which knowledge is shared, communicated, converged and transferred across organisational boundaries by means of knowledge sharing platforms (Alavi & Leidner 2001; Bou-Llusar & Segarra-Cipres 2006; Wan, Fakeh 2015). According to Jeenger and Kant (2013), knowledge dissemination is mainly carried out through demonstration of research documents, contributing perceptions in newsletters, allocating occupied papers, charitable discussions in conferences, learning-platforms, and through the use of computerised information communication tools such as email, virtual webinars, knowledge portals, intranet and extranet. Shah and Hussin (2018) are of the view that substantive modes of disseminating organisational knowledge are propagated in actions through employees are encouraged to participate in knowledge dissemination and sharing platforms.

The dissemination of nursing knowledge plays an important role in the nursing profession because it allows nursing professionals to share knowledge on patient care. Healthcare organizations can only sustain and maintain the healthcare service delivery to patients by virtue of nursing knowledge dissemination amongst nursing professionals. When nursing knowledge is disseminated it provides an opportunity for healthcare organizations to develop strategies on the basis of knowledge being disseminated.

2.5.5. Knowledge transfer

Knowledge transfer is defined as activities that assist in the process of knowledge flow in organisations (Alavi & Leidner 2001; Bou-Llusar & Segarra-Cipres 2006; Wan, Fakeh 2015). According to Khalil (2015), Knowledge transfer processes involves progression development, communities of practice, knowledge repositories, mentoring, coaching, phased retirement, job rotation, storytelling and orientations as motive platforms for knowledge transmission. Kaufmann (2015) agrees that knowledge transfer is an implement for resolution of problems and operational enhancement. Such knowledge flows may involve interactions of individuals referring

to codified knowledge (Ibarra 2013). From the literature reviewed by Nonaka (1991); Boisot (1999); McElroy (2004); Jeenger and Kant (2013), it appears that scholars interested in the transmission of knowledge possess diversity of opinions concerning the precise meaning of knowledge transfer.

Knowledge transfer is relevant in the nursing profession precisely because it allows critical nursing knowledge to be transferred from one nursing professional to the other. This process is significant as it provides greater culpability in the process of strategy development in the retention of critical nursing knowledge across healthcare organizations.

2.5.6. Knowledge reuse

Knowledge reuse refers to the process in which valuable organisational knowledge is that has been retained is retrieved, and later put in practices for organisational purposes (Dewe & Wright 2007; Wan Fakeh 2015). According to Kaufmann (2015), knowledge reuse is a composite proceeding with diverse devotions that plays a critical role in the concept of data mining. Jeenger and Kant (2013) asserts that, knowledge reuse comprises of two intentions to achieve desired operational objectives of organisations, namely duplication and advancements. Knowledge reuse for duplication purposes emphasize on the acquisition of knowledge where organisational standard operating procedures are collectively distributed and transmitted to rally behind enactments. For the purpose of advancement, knowledge reuse places a thorough focus on the assimilation of knowledge through which individual knowledge is integrated into a single existing knowledge that can later be transferred, shared, retained, and later retrieved to be put into practice in order to achieve organisational objectives (Ibarra 2013).

The retention of valuable nursing knowledge in healthcare organizations is sustained by the ability of nursing professionals to re-utilize existing nursing knowledge in order to meet the objectives of healthcare organizations. Re-utilization of existing nursing knowledge in healthcare organizations provides an opportunity for nursing professionals to identify which of the nursing knowledge is valuable for retention purposes.

2.5.7. Knowledge retention

Knowledge retention is the major process adopted in this study and will be discussed extensively. Dalkir (2011) defines knowledge retention as the process of capturing valuable knowledge and capabilities of employees that are at risk of being lost when they leave the organisation. According to Dewah (2014), knowledge retention is the actions to maintain and prevent knowledge loss that is in the minds of employees for organisational operational efficiency. Peterson (2012) is of a view that, the aims of knowledge retention in organisations is to retain as much knowledge and expertise of employees as possible for future usage. He further argued that, it is a common executive exercise to ensure that knowledge is preserved and sustained before employees in various fields of expertise depart from organisations.

Ghahfarokhi and Zakaria (2015) asserts that, knowledge retention places a thorough focus on organisational knowledge that is at risk of being lost and implementing measures to retain the knowledge in order to prevent the impact that may arise with the loss. Doan, Rosental-Sabroux and Grundstein (2011) accentuates that, knowledge retention involves systematic procedures that includes activities of capturing and preserving knowledge, thereby retaining it in the organisation for future usage. Shah and Hussin (2018) agree that knowledge retention, as one of the fundamental process of knowledge management is implemented in organisations to capture the knowledge and experience of departing and retiring employees. In the case of healthcare organisations, where nurses decide to leave the organisation via numerous forms of abrasions, knowledge retention enables continuous sustainability and preservation of knowledge within the organisation (Daghfous, Belkhodja & Angell 2013). Senevirathna (2017) essentially portrays that, a vital feature of knowledge retention is to determine what valuable knowledge is highly at risk of being lost when employees depart organisations. Levy (2011) observes that through the process of retaining valuable organisational knowledge to achieve the fundamental aspects of knowledge retention practices in organisations, expert employee's knowledge befits into organisational property. Employee abrasion is unavoidable, and massive knowledge accompanies retiring and leaving employees due to age and many other related employee attrition factors (Peterson 2012; Zhua *et al.* 2017). In most cases, these are expert employees whose valuable knowledge requires to be captured (Kim 2005; Dietel 2017). According to Ngulube (2013), retaining the know-how of expert

employees is a fundamental economic strategy to enhance and achieve the competitive advantage and objectives of organisations. Jeenger and Kant (2013) agree that the process of retaining the know-how of expert employees is critical to achieving the objectives of organisations. Dewah (2014) argues that, not all organisational knowledge requires to be captured and retained, but only that which has characteristics of scarcity, accuracy and heterogeneity. In healthcare organisations, most professional nurses depart organisations with critical nursing knowledge valuable for patient care, and treatment of rear diseases and virus (Wan Fakeh *et al.* 2015).

The implications of knowledge loss are inevitable and can results in replicating work procedures, exclusive exploration for expertise, and employees not learning from the experienced (Kim 2005; Daghfous 2013). When expert employees depart from various organisations without sharing and administering guidance to replacements, work routines and organisational procedures of replacements is often not equivalent to that of transferee (Flick 2014). Stevenson (2015) accentuates that Knowledge retention does only place emphasis on the transmission from tacit knowledge or explicit knowledge personified in the knowledge management system, but also involves an employee's interacting collectively and acquiring more profound understanding to then learn and improvise to advance organisational performance. Knowledge retention, therefore, reassures a multifaceted conversation on what knowledge an organisation needs to retain.

Jain and Jeppesen (2013) contend that, the knowledge reserved has to be decisive to allow categorisation and sense-making. Garner (2014) advocate that, conservations of pertinent knowledge in numerous organisational should assist in creating a setting that will allow shared knowledge processes and social amalgamation mechanisms for absorptive capability. Jenkins (2016) is of the view that numerous healthcare organisations, hospitals in particular have recognised the fundamental significance of initiating the process of capturing and retaining the knowledge and expertise of professional nurses. He further explained that, the knowledge and expertise of professional nurses are critical for patient care, and thus requires to be sustained, preserved and retained for future usage. According to Thomas (2014), for organisations to implement successful knowledge retention practices, the following mitigating knowledge retention initiatives requires to be put in place; "interviews,

videotaping, structured use of subject matter experts, repositories, mentoring and apprenticeship, knowledge maps, recruiting strategies, storytelling, leveraging retirees, in-house training functions, and knowledge sharing platforms”.

Through the process of transferring and sharing, knowledge is retained in the organisation’s employees (Ayoub 2017). In almost all healthcare organisations, the process of transferring and sharing knowledge for the persistence of retaining it has its own implications and challenges. Fombad (2014) is of a view that, such challenges include but not limited to “mistrust, politics, reluctance to share knowledge for the fear of losing individual power, hoarding knowledge and the absence of strong group affiliation”. According to Dan (2008), knowledge retention is a discipline that devotes much emphasis and attention on valuable knowledge that is vulnerable to loss when employees leave organisations through attrition, and to develop critical measures to retain that knowledge.

Stevenson (2015) accentuates that not all the knowledge of professional nurses requires to be retained through the process of capturing for future references and usage, except that of which is valuable and critical for patient care. Numerous studies conducted on healthcare professionals, nurses in particular attest to the fact that, massive knowledge is lost due to employee retirements and staff departure (Ramadan 2017). Studies conducted by South African Council of Nurses (2017) on professional nurses graphically portrays that, professional nurses experience job displeasure and occasionally feel expressively overloaded; subsequently, they choose to quit the nursing profession. When nurses depart from healthcare organisations, voluntarily or not, employers lose the institutional knowledge or history that the employees take with them. The inability to retain experienced professional nurses in healthcare sectors threatens patient care precisely because the institution loses knowledge or institutional memory that nurses take with them (Pena 2013).

Jane (2016) is of the view that when discussing the concept knowledge retention, much attention should be devoted around its prime apprehensions; and that is to venture into retiring employees’ intellectuality and fields of expertise to be captured for retention purposes. He further articulates that, knowledge sharing initiatives such as communities of practice, archiving knowledge, mentoring, coaching and data curative are necessary in the implementation of a successful knowledge retention strategy in

organisations. According Shongwe (2016), the greatest challenge of knowledge loss in organisations through retirement and movement of employees can be over come by documenting standard operating procedures, developing communities of practices and knowledge harvesting programmes. Wamundila and Ngulube (2011) posit that knowledge can be preserved through the implementation of numerous approaches such as education and training, thematic networks, using advanced software to capture and store operating procedures, and constant employee engagements through communities of practices. In various organisations knowledge exists as tacit knowledge acquired through years of experience (Peterson 2012). This particular knowledge requires apprehension and preservation in organisational repositories such as records and databases.

Through the process of reviewing literature on previous studies conducted in the subject of knowledge retention, it can be deduced according to Phaladi (2011); Wamundila and Ngulube (2011) that, there is an increase in the studies conducted in relation to knowledge retention. For example, a study conducted by Phaladi (2011) explored knowledge retention and transfer initiatives in the East Rand Water Company in South Africa. Conclusions derived from this particular research portrayed that, employees who took part in the study were hesitant to take part in the process of transferring knowledge for retention purposes. They alleged subordinates as likely to depart from the organisation, and most importantly, they felt that the organisation did not provision knowledge transfer and retention initiatives. In addition, the conclusions derived from a study conducted by Wamundila and Ngulube (2011) at the University of Zambia (UNZA) on knowledge retention enhancement, graphically portrayed that the university lack sufficient strategies for retaining knowledge. A study which involved numerous retirees in eight organisations conducted by Levy (2011) on knowledge retention projects depicted that, sufficient knowledge retention strategies could be constructed through the implementation of successful documenting procedures and the reintegration of knowledge back to the organisation for retention purposes. Kaufmann (2015) further reasoned that employee retirement contributes to the significant loss of knowledge by leaving critical knowledge outside organisations. This view indicates the fact that massive knowledge is held by retirees such as professional nurses which requires to be transferred, captured and retained for future usage.

In order to develop a successful knowledge retention strategy for implementation in organisations, Dan (2008) argues that the subsequent questions require to be taken in consideration:

- What actions can be taken to retain that knowledge?
- What actions can be taken to retain that knowledge?
- What knowledge may be lost?

In reference to Young's (2006) view of putting in place a step-by-step approach to intercept the challenge of knowledge loss in organisations, DeLong's (2004) Knowledge Retention Strategy Framework concurs with the notion of developing a strategy to preserve knowledge that is inimitable, vital and tactical for future succession. Young (2006) further contents that, determination is required for the status of the retention strategy to consider whether or not the retention initiatives will be a once-off action or will continuously be part of the programme.

2.6. Knowledge of professional nurses in healthcare organisations

Having fully understood the meaning of knowledge, it is crucial to situate knowledge within the healthcare profession. Knowledge of professional nurses provides sequential data, information and records of numerous procedures involving patients from admission to discharge (Jane 2014). Siu (2015) agrees that, nursing knowledge comprises of detailed information regarding patient problems and mediations applicable for precluding patient problems. In all healthcare settings, nurses are the largest group of healthcare professionals and caregivers who play a key role in the provision of improved healthcare services to patients (Shaari, Bakri & Rahman 2015). Huges (2008) articulates that, the nursing profession is the backbone of healthcare organisations in the sense that, it ensures quality services are always rendered to patients. According to the Professional Nursing Standards (2016), nursing knowledge includes all traits of knowledge relevant in the nursing profession. To this end, nurse's knowledge provides the basis for daily decision-making in pursuit of quality patient care (Siu 2015). The benefit of nursing knowledge in healthcare organisations contributes to enhanced provision of services to patients, and most prominently, to carry out organisational daily operations efficiently (Tim 2013).

Nursing knowledge is generated through extensive nursing research regarding patientcare. Explicit nursing knowledge is the knowledge that possesses the most fundamental and critical aspects vital in the process of rendering services to patients, and most importantly generated through the encounter of various and diverse diseases (South African Nursing Council Assessment Report 2019). According to Shaari *et al.* (2015), it is the distinctive type of knowledge that takes into account the science of rendering services to patients accumulated through years of experience, it is the arena that draws a line apart from other health professionals. Siu (2015) and Tshitangano (2013) accentuate that, the explicit nature of nursing knowledge is commonly characterised by the sympathetic passion of the nursing profession in general, and the expect vital knowledge regarding patientcare that has been accumulate through years of practices including the techniques for providing services to patients to fitful the objectives of the healthcare sector.

Healthcare organisations around the world experience challenges in retaining the know-how of professional nurses and this has affects patient care (Bezuidenhout & Ross 2013). According to Tshitangano (2013), the provision of poor services rendered to patients is due to the incapability of nurses to access and apply relevant knowledge needed in patient care, fragmentation of medical knowledge, ineffective collaboration across organisational boundaries coupled with unfavourable healthcare environments. He further contends that; this has resulted in difficulties for nurses to utilise pertinent knowledge required for the provision of a high standard patient care services. In contrast to the explicit nature of nursing knowledge, Jane (2014) asserts that, the tacit nature of nursing knowledge is the type of knowledge that is deeply embed in being self-conscious. It does not originate from formal education but acquired synthetically through understanding rationale motives of the nursing profession. It is normally viewed as valid knowledge derived from justifiable actions. However, personal knowledge includes practical knowledge and nurses can be confident in using it. In support of Jane's view, George (2015) articulates that tacit nursing knowledge is the type of knowledge that includes motives to withdraw treatment, to resuscitate and when not to resuscitate patients. It serves as guidance to concerns, and to make accurate clinical decisions. It involves precautionary measure such as those of maintaining patient hygiene, changing attires and to assist patients with toiletry facilities.

Shaari *et al.* (2015) is of a view that, nursing knowledge is generated through nursing research. The generation of nursing knowledge is complex and requires nurses to go beyond traditional conducts in order to understand and redefine nursing knowledge (Professional Nursing Standards 2016). Siu (2015) effectually portrays that, the systems of healthcare organisations in numerous countries including South Africa are promptly changing their ways of operations: There are rapid continuous developments in innovation, technology, information systems and delivery of healthcare models such as the increasing prominence on same day surgery, prompt patient discharges and ambulatory care services. Tim (2013) agrees that all these first-hand developments in healthcare organisations require accurate knowledge of professional nurses to execute these operations effectively. Wang *et al.* (2014) identified four critical types of nursing knowledge in healthcare organisations which requires to be retained for continuous efficiency in patient care. According to the South African Nursing Council Assessment Report (2019), the identification of these types of knowledge graphically portrays that, nurse's relay on more than one form of knowledge. The report further articulates that no single form of knowledge is superior or sufficient from the other. The following are types of nurse's knowledge identified by the South African Nursing Council Assessment Report (2019).

- **Aesthetic knowledge:** These are expert practices and motivational care concerns. In this case, motivation refers to the desires and passion to take care of patients in order for the illness or disability to subside. It is also about sympathising about human experiences in general, including conditions of illness, suffering and dying. It is the type of knowledge that acknowledges the art of nursing; these are few practices that parts nursing from other healthcare professions.
- **Empirical knowledge:** This category of knowledge refers to empirical research, scientific analysis, reductionism and positivism. It is often referred to as "true" or "valid" knowledge in the sense that it is a subject of rigorous empirical examinations acquired through quantitative approaches. It includes theoretical knowledge harnessed through nursing books, journals and traditional conducts of nursing in general.
- **Personal knowledge:** This refers to the state of being self-conscious. It does not originate from formal education but acquired synthetically through

understanding rationale motives of the nursing profession. It is normally viewed as valid knowledge derived from justifiable actions. However, personal knowledge includes practical knowledge and nurses can be confident in using it.

- **Ethical knowledge:** in the nursing profession this type of knowledge includes motives to withdraw treatment, to resuscitate and when not to resuscitate patients. It serves as guidance to concerns, and to make accurate clinical decisions. It involves precautionary measure such as those of maintaining patient hygiene, changing attires and to assist patients with toiletry facilities.

Leadership in healthcare organisations must ensure the retention of professional nurse's knowledge, and most importantly to fully support the initiatives (Gupta 2008; Masango2013). The shortage of professional nurses is a worldwide challenge, and South Africa is no exception as nurses vacate the republic healthcare domain for higher salaries in developed countries (Masango 2013). Professional Nursing Standards (2016) agrees that, the shortage of professional nurses is a global challenge, the report further argues that the problem is intensified by the inability to retain well experienced professional nurses in healthcare organisations and to recruit a large number of graduate nurses in the sector. As a result, it is essential to ensure that knowledge transfer occurs from highly experienced to less experienced nurses to capture and retain the know-how of professional nurses for future purposes and to continuously improve patient care services (Bezuidenhoudt & Ross 2013).

2.7. Knowledge retention in healthcare organisations

Retaining knowledge is one of the fundamental aspects deeply rooted in knowledge management practices in healthcare organisations, as it serves various and diverse purposes with regards to patient care (Jane 2014). According to George (2015) the most fundamental aspect of retaining knowledge in healthcare organisations is to counter and sustain legal aspects of the rationale; the greatest undisputable witness above them all is to demonstrate documented healthcare interventions rendered to patients. For instance, 74% of cases reported in developed countries to judicial authorities as a result of medical negligence were terminally disputed by sustainable well documented retained patients records and nursing standard operating procedures (George 2015). Umamaheswari and Krishnan (2016) highlight that the fundamental

purpose of retaining knowledge in healthcare organisations is to demonstrate that, the sectors have the capacity to maintain widespread documented proof of its planning, service delivery, assessments and evaluations of patients.

Zhou and Nunes (2012) purport that, retaining knowledge in healthcare organisations is of vital significance precisely because it involves the process of retaining ownership, not losing, practising or recognising the importance of knowledge in healthcare organisations. (Mehta *et al.* 2014) observes that the process of retaining knowledge in any healthcare sector should also comprise of live scene or pictures of administration of care services to patients, including continuous fragments of information for effective advances for retention purposes. Umamaheswari and Krishnan (2016) further contend that, these types of evidence will graphically demonstrate procedures, care provided including negligence of what took place in unfortunate circumstances. Irshad (2014) asserts that, retaining knowledge in healthcare organisations adequately demonstrates actual evaluative clinical communication methods through which healthcare practices are transferred and retained via knowledge management and retention initiatives. Amongst other healthcare advancements, healthcare organisations should diligently employ retention intervention measures devoted on providing solutions to improve the content in which knowledge of healthcare professional is prioritised and valued (Mehta *et al.* 2014).

According to Mehta, Kurbetti and Dhankhar (2014) knowledge retention is important in healthcare organisations primarily because healthcare professionals are requisite to be resourceful in rendering patient care, and always be prepared to yield fresh curative know-how occasions that contributes in patient care. In this sense, the process of retaining knowledge should transpire through cooperative communiqué networks thereby ensuring that the knowledge of patients is constantly accessible and applied in order to expand excellence in patient care and satisfaction (Bezuidenhoudt & Ross 2013). To ensure a successful retention of knowledge in healthcare organisations, healthcare sectors must diligently advocate for retention practices both at an individual and organisational level in order to sustain moderate levels of accountability in relation to medical errors and high-quality patient care services (Wang 2014).

It is generally recognised that, relevant knowledge retention systems established on decent practices of creating knowledge, storing, transferring, and applications are essential in solving medical challenges and significantly improve eminent services in healthcare organisations (Zhou & Nunes 2012). Retaining knowledge through documentations practices in healthcare organisations creates explorative grounds for the development of first-hand data, information and knowledge which contributes to a great deal of advanced improvement in performance, adequate medical interventions and formulation of effective healthcare policies (Thoroddsen & Ehnfors 2007).

Knowledge retention in healthcare organizations plays an important role to ensure that valuable nursing knowledge is retained for continuity. In every healthcare organization across the globe, the retention of critical nursing knowledge becomes possible only through the implementation of strategies that are aimed at retaining knowledge that is of value to the organization. For the purpose of this study, this subject remains relevant as it seeks to provide guides in terms of outlining the primary objectives of knowledge management in healthcare organization which calls for the retention of nursing knowledge in healthcare organizations.

2.8. Challenges experienced in retaining nursing knowledge in healthcare organisations

The inability to retaining critical nursing knowledge in healthcare organisations has become one of the rising concerns, and emerges from numerous factors (Decker, Howard & Holdread 2016). McEwen and Wills (2014) factually portray that, the challenge of retaining the know-how of professional nurses stems from numerous factors amongst others including employee's resignations, retirement, company restructuring and employee's layoffs, employees reluctant to engage in knowledge transfer platforms and daily employee's workloads. Fawcett and Madeya (2013) highlight that, in numerous healthcare organisations the challenge of retaining nursing knowledge arises from the inability to employ technological measures such as share point knowledge portals, databases for managing documents, utilisations of emails and various communication methods such as video-conferring as motive platforms for transferring and retaining valuable nursing knowledge.

According to Fawcett and Madeya (2013), factors such as unproductive organisational routines amongst professional nurses, unsustainable institutional memories for preserving nursing knowledge and employee turnover's within the nursing profession in healthcare organisations has contributed in building a barrier in the process of preserving and retaining valuable nursing knowledge. In any healthcare organisation, it is important to entirely understand the implications of losing valuable nursing knowledge, and the inability to retain such knowledge (Ray, Grove & Sutherland 2016). Kim (2010) purports that, challenges relating to employee competencies and proficiency in applying the know-how, and the integration of multiple nursing knowledge resources in healthcare organisations has resulted in numerous barriers in the preservation of valuable knowledge.

Chinn and Kramer (2015) alert that communication is a barrier in the process of retaining valuable nursing knowledge in healthcare organisations. They assert that, the variety of languages used by professional nurses sometimes makes it difficult to transfer knowledge from one healthcare professional to the other for retention purposes as misunderstanding may take its toll. Cultural diversity plays a vital role amongst professional nurses and sometimes can be the main factor preventing the implementation of a successful strategy for retaining nursing knowledge (Kim 2010). According to Chinn and Kramer (2015), cultural diversity in healthcare organisation negatively affects interactions between professional nurses, and some if not most may be reluctant to share and transfer for the purpose of retention and preservation. Smith and Lyles (2011) emphasise on the aspect of trustworthiness as one of the fundamental barrier in the implementation of a strategy for retain nursing knowledge in healthcare organisations. Smith and Lyles (2011) further alleges that, if there is a lack of trustworthiness between workers, it is mainly difficult to share and transfer knowledge for the purpose of implementing knowledge retention measures.

The implementation of a knowledge retention strategy in healthcare organizations comes with a lot of challenges. For the purpose of this study, challenges experienced in retaining the knowledge of professional nurses at Philadelphia Hospital will be identified with possible solutions. For instance in most healthcare organizations in South Africa and abroad, professional nurses are not inducted and educated on the

importance to participate in knowledge retention practices, thus, this makes it difficult for their knowledge to be captured, stored and retained for future usage.

2.9. Strategies for retaining nursing knowledge in healthcare organisations

A strategy is defined by Ruschcliffe Borough Council (2005) as a highly regarded approach to issues that intends to bring about change in organisational practices by reintegrating a policy. One of the goals of knowledge retention in healthcare organisations is to maintain the efficient circulation of existing critical nursing knowledge and information within the organisation through the integration of a strategy (Yeomans & Reich 2017). The intended goal is to reduce the impact of knowledge attrition within the healthcare sector by employing strategies that will play a significant role in ensuring that, critical nursing knowledge and information regarding patient care that has been acquired through years of experience is not lost through various forms of employee attrition, and many other factors that contribute to knowledge loss (Grant 2017). This section will discuss different effective strategies for retaining nursing knowledge in healthcare organisations.

2.9.1. Knowledge retention Policy

The role played by policy-based interventions in organisations has remained vigorous over time and is regarded as an instrument for instigating organisational management and control (Shah & Hussin 2018). Policies and strategies are formally adapted to developed guidance for organisational decision-making and governing purposes (Yeomans & Reich 2017). Correspondingly where policies may not be applicable, numerous organisations consider the implementation of strategic plans in order to attend to similar purposes rendered by a policy. A policy is defined by Kaufmann (2015) as ethics, directions or principles implemented at an organisational level to guide decisions and procedures influencing everyday practices in an organisation; while a strategy is a highly regarded approach to issues that intends to bring about change in organisational practices by reintegrating a policy. Shah and Hussin (2018) provides a detailed variation between a policy and a strategy by demonstrating that, “policies differs from strategies in that they are statements, rather than high level plans delivering change”. According to the Municipal Research and Services Centre (1999) policy development and integration activities includes the following:

- The literal construction of a vision
- The adoption of goals and objectives
- The adoption of inclusive plans, and decisions through which services will be rendered
- The integration of budgets and funding facility plans

Wang and Ko (2012) expressively purports that strategies are derivative products of policies. He further posits that it is also possible to derive a policy from a strategy. In most healthcare organisations the unique understanding of the concept strategic plan is literally used intertwined with the idea of a policy in the sense that they are both regarded as serving guidance and departures in numerous operative actions (Sinha & Sinha 2012). Mehta *et al.* (2014) argues that, the implementation of knowledge retention practices in organisations can only be achieved through the development and integration of a policy derived from a strategy or vice versa. Kurbetti and Dhankhar (2014) contend that the implementation of a knowledge retention policy in organisations through knowledge management initiatives expressively depicts critical knowledge which requires to be retained for future references to achieve organisational objectives. Shah and Hussin (2018) elucidate that, a knowledge retention strategy developed through knowledge management initiatives, provides guiding principles and encourages organisations to support knowledge baseline assessments of current knowledge situations to pursued and apply lesson learned from the efforts made by knowledge workers. This argument is further maintained by Mehta, Kurbetti and Dhankhar (2014) who articulate that, bilateral grounds should be acknowledged when developing a knowledge retention strategy in organisations. The bilateral grounds determined by Mehta *et al.* (2014) are presented as follows:

- The knowledge retention strategy to be implemented must be decisively embedded in organisational competencies of knowledge workers and firmly entrenched to the main services of the organisation.
- Hardware and computerised information systems to capture, store and retained knowledge are essential, but the crucial initiative to achieve a successful

knowledge retention strategy originates from organisational culture of knowledge sharing and knowledge transfer practices.

Knowledge retention policy is the starting point of adopting a strategy to retain nursing knowledge in healthcare organizations. It provided guidelines, objectives and the purpose of implementing such strategies. For the purpose of this study, knowledge retention policy remains relevant as it seeks to provide guidelines and standard operating procedures on how and why the precise policy should be implemented.

2.9.2. Succession Planning

According to Lee (2016), succession planning is the most common practice of knowledge transfer in organisations. Knowledge management at an organisational level is the core-centre of succession planning Salisbury (2014). Lee (2016) further contends that organisational knowledge acquired through succession planning depicts a proactive approach in order to re-enforce newly appointed employees to increase productivity in work performance, and to combat the challenge of organisational knowledge losses. Succession planning is a vigorous practice of acquiring organisational knowledge amongst employees in the sense that, it places a great deal of focus on transferring knowledge compelled by the challenges of the ageing workforce, death of employees, employee attrition and most significantly to determine skills and enhanced performance of employees throughout the organisations (Stovel&Bontis 2002; Jugdev, 2012; Strang 2017). George (2015) deduces that numerous organisations are failing to use the capacity of succession planning for their own advantage due to the increased adoptions of day-to-day challenges.

Along with other strategies for retaining nursing knowledge in healthcare organizations succession planning remains one of the most important aspect in knowledge retention. It remains relevant for this study as it calls for successful planning guidelines for the purpose of retaining critical nursing knowledge at Philadelphia Hospital.

2.9.3. Communities of Practice

Communities of practice is defined by Skyme (1999); Kim, Lee and Oslon (2008) and Hong (2011) and Kossivi (2016) as a groups of people sharing common interests,

concerns, challenges and desires in a particular field of expertise interacting on a regular basis to share and transfer knowledge about precise phenomenon's. Lee (2016) is of a view that such people are united by similar purposes, problems and concerns in order to share knowledge and experience in their field of expertise to drive learning initiatives. According to Peterson (2012) for the purpose of retaining knowledge in organisations, institutions implement communities of practices to determine, capture and transfer critical knowledge for organisational knowledge succession. Peterson (2012) further argues that, although communities of practices united people to a common course of sharing experiences and knowledge in a particular field of expertise, the people are not formally united. Within organisations, the implementation of communities of practices as knowledge sharing, transfer and retention technique advocates the initiatives to share both tacit and explicit knowledge through which information and materials are refined to the level of corporate positions.

According to Nonaka and Takeuchi (1995) and Irick (2007) and Lee (2016), tacit knowledge is viewed as a significant form of knowledge in every organisation precisely because management, experts and executives rely on it to make critical decisions probable for organisational success. Ngulube (2016) substantiates that, although organisational knowledge success depends on retaining the tacit know-how of employees, its capture remains a critical challenge. Salisbury (2014) advocates that in most organisations, there is insufficient computerised technological advancements to capture the entire knowledge to drive organisational knowledge succession, communities of practices is an alternative influential tool to drive learning, sharing and retaining knowledge for intellectual purposes. Strang (2017) eloquently advocates that, although it is thoroughly agreed that the tacit know-how of employees is not easy to share and transfer from one employee to the other, communities of practice is a fundamental initiative that drives the transferring of knowledge from experts to less skilled employees.

Amongst other reasons for implementing the use of communities of practices in healthcare organisations include the following: connecting healthcare professionals and caregivers, it calls for a significant scale to enable knowledge survival in healthcare sectors, and it speeds up learning programmes for newly appointed employees (DeLong 2004; Ngulube & Mngadi 2007). Strang (2017) is of a view that

communities of practice provide the ways in which local knowledge is converged into global and collective know-how in order to assist employees to interact while exchanging ideas, knowledge, information, going beyond boundaries in creating work flows, driving innovations and marketing leadership.

Communities of practices are important in the adoption and implementation of a strategy that is aimed at retaining nursing knowledge in healthcare organization. In Philadelphia Hospital like any other healthcare organization the adoption of community of practices remains relevant as it makes it possible for knowledge to be shared, once knowledge is shared it can then be capture, stored and retained.

2.9.4. Coaching

Coaching refers to organisational intellectual interactions between employees and management, with the purpose of instilling guidance and specific training developments thereby bringing about new skills in employees (Kossivi 2016). Chigada and Ngulube (2016) observes that coaching assists employees to put in practice the knowledge they acquired through coaching; this knowledge includes practical observable organisational procedures in which expert employees are able to supervise and assess subordinate's performance. Salisbury (2014) further contends that coaching is regarded as a mutual relationship between expert employees and novices in the sense that, knowledge is shared equally amongst the two participants thereby driving equal learning activities. When subordinates continuously engage their daily operations under the supervision of expert employees, their obligation is to be hands-on, and apply the knowledge, information and ideas that they acquired through coaching to increase organisational efficiency and work performance. According to Strang (2017), through the process of knowledge sharing, coaching principles and advocates usually enhance project delivery modes in order to include lessons learned and best practices: In this way the fruitful interaction between expert employees and novices leads to the benefits of sharing insights and information to feed learning dynamics consistently. Poduch (2010) articulates that the significance of employee coaching initiatives at an organisational level is to improve work performance of novices through observed practices of expert's employees.

Coaching as a strategy for retaining nursing knowledge in healthcare organization remains relevant and necessary. For the purpose of this study coaching forms part of all the strategies of knowledge retention as it involves mentorships and trainings that are designed specifically to ensure knowledge transfer between professional nurses which then can be retained for future usage.

2.9.5. Creating knowledge repositories through documentation

Documentation of organisational knowledge is regarded as a method that assists in the transferring of knowledge with the motives of altering employee performance, demographics and concerns in retaining critical knowledge of expert employees (Salisbury 2014). Most organisations are confronted with the challenge of losing expert critical knowledge of departing employees, it is often difficult for newly appointed employees to apprehend and comprehend to organisational standard operating procedures without sharing, transferring and retaining critical knowledge of expert employees (Padilla, 2006:1; Chigada & Ngulube 2016). According to Hanes, Gross and Ayres (2001) and Lesley (2015), it is of vital significant for organisations to put in place measures to document organisational knowledge. Hanes *et al.* (2001); Lee and Yu (2011) further contends that, documentation of organisational knowledge is a strategy for transferring explicit knowledge, while important work procedures comprising of familiar knowledge amongst employees requires to be captured. DeLong (2004), Salis and Williams (2010) expressively elaborate that the documentation of knowledge with the valuable aims of retaining it, should be common practice implemented at all times, and not only to catch up with knowledge just before it is lost. According to Lockheed and Stephens (2004), knowledge transfer through documentation approach encompasses the use of computerised information technology tools which unfolds into two knowledge transfer activates, namely:

- The explicit documentation, archiving and provisioning knowledge.
- Facilitating sites for transcribed vivid contents. This allows employees to converge knowledge verbally on a face-to-face approach.

Lockhead and Stephens (2004) eloquently portrays that the two approaches to transferring knowledge enables the capture of discussions using databases including visual explanations on a permanent basis. For the purpose of this study creating

knowledge repositories through documentation remains relevant, as they provide an opportunities for nursing knowledge to stored and retained for future usage.

2.9.6. Storytelling

Storytelling as a technique used in knowledge transfer, includes sharing with employees' stories about work, the institution, expressive social interactions, indications of the past and future operations of the organisation (Tobin & Snyman 2008). LeBlanc and Hogg (2006) purports that storytelling is an approach of knowledge transfer in organisations in which tacit knowledge is uncovered as part of the learning process. Tobin and Snyman (2008) posit that storytelling sustains organisational unity and gives guidance to employees about information, organisational culture and assists employees to develop an element of organisational integrity. Storytelling as an effective strategy for transferring knowledge between employees and the organisation allows the capture of lessons learned, best practices and success stories about both the individual and the organisation (America Productivity & Quality Centre 2011).

This aspect remains relevant to the topic under study precisely because it emphasize on the importance of storytelling, which then makes it possible for knowledge to be shared amongst professional nurses for retention purposes.

2.9.7. Orientation

According to the Annetta and Bronack (2011), the concept orientation also referred intertwined to induction is a fundamental technique in the transferring of both explicit and tacit knowledge at subsidiary levels. This are mainly considered as general and job specific induction programmes (Carr 2008; CIPD 2008). Inter-American Development Bank (2012) identifies that, general orientation refers to the conducts of ensuring that newly appointed employees are equipped with organisational goals, policies and standard operating procedures. In contrast, the University of South Wales (2007) depicts job specific induction as programmes that seek to equip newly appointed employees with knowledge and skills required for operations to fulfil tasks efficiently and effectively. Orientation also plays an important role in this study specifically because; it calls for nursing knowledge to be shared, transferred and retained for future usage.

2.9.8. Mentoring and apprenticeship

Numerous healthcare organisations are involved in programmes of mentoring and apprenticeship as methods of transferring and sharing knowledge (APQC 2011). Bryant (2005) is of the view that mentoring and apprenticeship are utilised as strategies for converging tacit knowledge from expert employees to novice employees through organisational routines. APQC (2011) literally advocates that mentoring and apprenticeship calls for organisational interactions between experienced employees and junior employees in order to assist newly appointed employees including junior staff to acquire sufficient knowledge required to enhance their work performance. Healthcare organisations have foreseen these decisions by recognising that, even professional nurses and other healthcare professionals require guidance on vital processes regarding patient care. According to Beazley, Boenisch and Harden (2002), mentoring and tutoring through apprenticeship advocates the transfer of knowledge from senior staff to junior staff by sharing wisdom, precise perceptions and skills necessary for organisational efficiency, thereby leaving junior staff and newly appointed employees with applicable practices, knowledge, history and preserved knowledge culture. This aspect remains relevant to the study as it seeks to view mentorship and apprenticeship as two of the most valuable strategies to retain nursing knowledge.

2.9.9. Job Rotation

According to Kastelli (2006), rotating jobs amongst employees facilitates organisational practices that enable knowledge transfer. Job rotation involves employees being rotated through various schedules of assignments developed for the purpose of acquiring a variety of knowledge, standard operating procedures and deliberate ways of conducts for organisational succession. Koskinen and Pihlanto (2008) observe that job rotation enables the exposure of employees to deal with challenges in work activities. Kastelli (2006) further contend that for senior executives including management job rotation is relatively converged to success planning. According to Tobin and Snyman (2008), this practice allows the organisation to develop strings of succession planning to provide managers with accurate know-how and practical experience, in order to enable a step by step approach to the existing protocols for knowledge sharing and transfer programmes in the organisation. Job

rotation does not entirely call for the relocation of individual personnel from their initial work roles, field of expertise or location, but calls for projection rotation interventions across functional and part-time rotations (Koskinen & Pihlanto 2008).

An accurate knowledge retention strategy is deeply rooted in the ability to adopt job rotations as the most valuable resource in the transfer of knowledge amongst employees. For the purpose of this study, job rotation as a knowledge retention strategy remains relevant by virtue of its capabilities to transfer nursing knowledge amongst professional nurses for retention purposes.

2.9.10. Phased retirements

Lochhead and Stephens (2004) advocate that phased retirement is one of the fundamental techniques for transferring and retaining knowledge in organisations. The initiative is intently applied in work situations where institution experiences the challenges of losing knowledge due to the inevitability of employee attrition (Howard Community College 2007). Gale (2007) explains that, because healthcare organisations have been long established, they are prime employers to encounter the challenge of organisational knowledge loss which calls for the advocacy of adopting phased retirements as a practice of transferring patient knowledge and treatments. The Department of Premier and Cabinet (2004) provides various reasons for the adoption of phased retirement programmes for the purpose of knowledge transfer, this reason includes:

- Phased retirements prevent the shortage of skills, especially for those occupying managerial positions.
- Phased retirements allow the efficient process of retaining knowledge of retired expert employees.
- Phased retirements enable the development for effective succession planning and development.
- It increases return on investments in the area of human capital.
- Responsive to ageing customers and their requirements.
- It allows and encourages the funding of retirees.

The utilization of retirees in the nursing profession remains one of the fundamental aspects of retaining knowledge amongst professional nurses, it allows the transfer of knowledge from one professional nurse to the other. Thus, this knowledge can then be preserved for future usage.

2.10 Tools and technologies for retaining nursing knowledge in healthcare organisations

Technologies are configurative electrical means comprising of computerised information system, hardware, software, networking and digital analogues to capture, process, store and transmit information via televisions, radios and telephones (Boh& Wong 2013). When new knowledge is generated, captured, processed and stored, it is later made available to others by means of information technology systems (Janus 2016). Iglesias-Pradas (2017) avers that the information communication technology revolution developed advanced methods through which knowledge is shared, captured and made accessible through the utilisation of IT systems and applications. The application of IT systems is a significant aspect in the development of knowledge retention strategies in any organisation to integrate and facilitate a culture of knowledge sharing, transferring and retention (Trögl& Maier 2011). DeLong (2004) and Janus (2016) warn that, leaders of organisations should not only view IT applications as the only resolution to knowledge retention challenges. He further contends that information communication technology applications cannot be viewed as the “only enablers as they cannot meet knowledge transfer objectives alone”.

According to Amtzen and Ndlela (2008), the retention of organisational knowledge must be complicit to IT applications in order to comprehend the efforts in which change initiatives are driven by employee’s behaviour and standard operating procedures. Peterson (2012) asserts that information communication technologies have been applied in almost all organisations to substitute old methods of retaining knowledge and most importantly to concurrently deal with the issues of organisational knowledge loss. Information communication technology for knowledge management comprises of hardware, software and persware components. Persware systems includes human resource management practices in the application of information technology, where as hardware involves media applications transmitted through the use of computers, printers, telephones and fax machines (Trögl & Maier 2011). Albers (2009) observes

that information technologies are influential aspects and enablers for efficient KM practices to capture, share and reintegrate critical knowledge of expert employees.

In order to prioritise the efficiency of valuable organisational knowledge, organisations must diligently apply apposite computerised information communication technology measures to facilitate a culture of knowledge sharing, capturing and dissemination. Ajimal, Helo and Kekale (2010) are of the view that, competent information technology applications are necessary for the derivations to collect, store and reuse knowledge in special projects-based initiatives. According to Ray (2008), knowledge management practices must facilitate knowledge sharing and exchange across organisational entities to capture, store and later on retrieve knowledge through the use of IT applications. This requires development of new innovative measures such as institutional knowledge repositories that will allow the utilisation of best practices to maintain competitive benefits such as the internet, intranet and knowledge portals to preserve, sustain and leverage institutional repositories (Dalkir 2005).

Information communication technology assists in the creation of knowledge repositories to preserve expert knowledge and experience of employees (Ray 2008). Dalkir (2005) acknowledges that institutional knowledge repositories play an important role in managing and locating the know-how of expert employees whenever is necessary. Trögl and Maier (2011) agree that the foundation of institutional repositories is based on the advance level in which information technology applications are able provide access to detailed knowledge of experts and most importantly how they are managed. Knowledge management practices through the application of IT systems provide social computational tools for enabling employees to take part in the process of knowledge creation and technologies to capture, share and transfer knowledge (O'Dell & Hubert 2011). O'Dell and Hubert (2011) provide appropriate technology applications for knowledge retention initiatives in healthcare organisations which include:

- Internet and Intranet
- Workflow
- Data warehousing

- Electronic mail (E-mail)
- Tele-conferencing and Videoconferencing
- Electronic workplace for collaborative work
- Groupware
- Blogs
- Wikis
- Database

2.10.1. Internet and Intranet

The internet is the most reliable source of connection for public communication that links people, individuals and organisations globally (Harden 2012). Saharabudhe(2001) is of a view that, the internet comprises of enormous computerised connections that connects individuals, employees and organisations through communication channels to share data, information and knowledge. Lesley (2015) observes that the internet delivers widespread methods through which knowledge sharing initiatives are made easier for clients, employees and organisations at large, through the use of the World Wide Web. Harden (2012) articulates that, organisations through client requests seek information from a specific Web server via the internet. In this way, healthcare organisations are able to share valuable information and knowledge about specific rare conditions of patients, and most importantly how nurses are guided to administer patient care.

Through the applications and the use of the intranet technology, many healthcare organisations are able to provide nurses with computerised tools to access data, information and knowledge from other healthcare sectors to deal sufficiently with issues pertaining to patient care (Laudon & Laudon 2007). Lesley (2015) is of a view that, many healthcare organisations are able to use the internet as a knowledge management tool to drive the sharing and retention initiatives of nursing knowledge. According to Debowski (2006), the application and use of the internet through the intranet technology is essential for healthcare workers, for nurses in particular to improve healthcare organisations knowledge sharing activities in order to provision knowledge dissemination, connections and publication of information. Debowski (2006) posits that the intranet provides advanced technological opportunities to record organisational knowledge.

The internet and intranet remains one of the most important tools used to retain nursing knowledge. The retention of nursing knowledge in healthcare organizations can only be possible through the use of knowledge portal through the use of the internet and intranet. Healthcare organizations relies mostly on the internet and intranet for the creation of knowledge repositories to preserve valuable nursing knowledge.

2.10.2. Workflow

Workflow refers to organisational process in which data, information and organisational knowledge of working employees are directed to senior personnel and work team members for reviewing and approval purposes (Saharabudhe 2001). Lesley (2015) argues that, immobile organisational knowledge does not transform and eventually becomes out-dated as it will no longer serve a valuable purpose for the organisation. They further contend that if organisations allow workflows, knowledge eventually grows through the process of being shared, exchanged and disseminated in order to generate new knowledge. According to Averwag (2008), the applications and implementation of workflows correlates with the usage of the internet and intranet to enhance efficiency in work practices, and most importantly to ensure knowledge transfer and sharing practices.

The adoption of standard operating procedures through workflows allows for knowledge to be transferred for retention purposes in healthcare organizations. It remains a diligent approach in which nursing professionals are able to instigate the programmes of knowledge retention in healthcare organizations.

2.10.3. Data ware housing

Numerous healthcare organisations store nursing knowledge, information and data through the use of a verity of databases; since it is quite a challenge to retrieve such data, information and knowledge (Fawcett & DeSanto-Madeya 2018). Information technology tools are able to assist in the searching and extraction of a vast data, information and knowledge that are crucial in achieving the objectives of the organisation (Trögl & Maier 2011). The maintenance of databases, hardware, and software's are done through information communication technology access points in

order to ensure the sustainability of information, data and knowledge flows (Jain 2009). According to O'Dell and Hubert (2011), data mining is one of the fundamental methods of acquiring information and knowledge to take critical decisions for the survival of information. Jain (2009) agrees that data mining is used as a method of discovering valuable organisational knowledge that can assist knowledge workers to harness knowledge advanced databases. Moreover, Jain (2009) deduces that, data mining converts explicit organisational knowledge found in databases into tacit practical organisational knowledge.

Rajalampi (2011) is of a view that sharing knowledge through virtual conferencing may be formed for a number of reasons; this includes the management of projects, networking professionals, and specialised collaboration between institutions, products, services and management. Debowski (2009) further elaborates that virtual teams are significant in the facilitation of generating new ideas, strategies, data collection and information sharing for the purpose of identifying appropriate solutions to mutual problems. According to Buckley and Carter (2001), Irani *et al.* (2017) virtual teams have their flaws as they are mostly unsuccessful in providing solutions to technical challenges, relational conflicts, poor communications and misunderstanding amongst employees.

Data ware housing refers to knowledge retention strategies that are aimed at storing valuable knowledge in reliable ware-houses that later allows for retrieval. Nursing knowledge are mostly stored at in data-ware houses were later are retrieved for referrals. Data ware housing remains an important subject for this study precisely because it seeks to store knowledge in ware houses that are most reliable.

2.10.4. Electronic mails (Email)

Electronic mail is a computerised information system designed for the purpose of ensuring that, nurses and other healthcare professionals are able to document, transcribe, share, receive and manage messages that are send electronically through the use of networks from one computer to the other (Lesley 2015). According to Harden (2012), through the use of this computerised technology software, messages are distributed and shared with one or more employee, individuals and organisations by forwarding and routing. Laudon and Laudon (2007) observe that emails allow

thematic networks and knowledge sharing platforms through communities of practices to disseminate and share organisational knowledge through the use of the internet worldwide. Most professional nurses in healthcare organizations communicate through the use of electronic mails in rendering services to patients. Emails are the most effective way of storing and retaining knowledge across a variety of professions. For the purpose of this study, emails are relevant tools in the retention of valuable nursing knowledge in healthcare organizations. Once an email is shared across nursing professionals about patient care, it remains in the storage system until otherwise it is deleted; hence emails are viewed and seen as the most effective way of retaining valuable nursing knowledge in healthcare organizations

2.10.5. Tele-conferencing and Video conferencing

Tele-conferencing provides organisations; healthcare professionals in particular to be able substantially view each other through video screens. Teleconferencing provides community of practices to share organisational knowledge through visual communication with one another without distance being a barrier (Bexci& Subramani, 2013). Kamakari and Drigas (2010) eloquently posit that tele-conferencing is an elementary method of conferencing through which telephones, groupware and emails are utilised to share information and knowledge. Panahi *et al.*(2013), substantiate that telephones with the assistance of the internet allows organisations to converge and transmit voices through the use of private network. Telephones and cell phones remain basic methods of transmitting voices, videos, graphics and other media constructs for knowledge sharing and transfer purposes (Laudon &Laudon 2007).

Video conferencing is a crucial tool for knowledge sharing amongst nurses and healthcare professional through which collaboration, communication and interactions about patient care can be discussed. It provides an opportunity for documents, transcriptions, videos and slides to be shared without distance being a barrier (Laudon & Laudon 2007). Video conferencing requires different innovative technological advancements such as emails, teleconferencing, electronic brain storming, group display screens, discussions and other forms of electronic medium for communication, collaboration and interactions (Debowski 2006). Communicating virtually requires co-workers, nurses and other healthcare professionals to interact regularly in order to

share and sustain group interactions and collaboration through which knowledge will be kept flowing.

The Fourth Industrial Revolution through the introduction of disruptive technologies has brought about advancements in the ways in which healthcare organizations operate. In the nursing profession, teleconferencing and video conferencing are two of the most prominent ways in which modern nursing professionals rely on for the purpose of knowledge transfer and retention purposes. It is in this regard that teleconferencing video conferencing remains two of the most relevant knowledge retention tools of the purpose of this study.

2.10.6. Electronic workplace for collaborative work

Information communication technology provides an opportunity for electronic workplaces to be able to interact, communicate and collaborate for the purpose of ensuring that organisational activities are accomplished effectively. Through the application and use of information technology tools, Community of practices and thematic networks are able to share organisational knowledge with the reduction of face-to-face meetings and reduced travelling costs (Laudon & Laudon 2007).

Electronic workplace for collaboration in healthcare organizations are facilitated by the introduction of modern technologies for knowledge retention purposes. In the nursing profession as elsewhere, the adoption of electronic workplace for collaboration places an emphasis on the use of electronic collaborative platforms for the retention of valuable nursing knowledge in healthcare organization.

2.10.7. Groupware

Panahi *et. al.* (2013) posit that collaborative computing plays a fundamental role in enhancing the transfer of tacit knowledge amongst employees. Groupware plays a significant role in providing employees, teams and co-workers groups with opportunities to give incentives and comments on organisational projects in order to share ideas about how projects can be best executed (Laudon & Laudon2007). According to Apistola and Gottschalk (2011), groupware provides assistance to co-workers, teams and employees working on a particular project, this is mainly achieved through the creation of software for allowing employees to share knowledge,

information and ideas across any geographically location through networking. Abdullah and Selamat (2007) agree that groupware tools employees to discuss and share ideas through brainstorming electronically. Apistola and Gottschalk (2011) graphically portray that, organisational knowledge acquired in the form of both formal and informal trainings emerge as a result of employee interactions through the use of IT tools. According to Laudon and Laudon (2007), “social networks, emails, blogs, wikis, forums and virtual communities, chat systems, UseNet newsgroups and instant messaging allow employees to collaborate, share knowledge and ideas in an informal setting”.

The role played by groupware in the retention of critical nursing knowledge remains relevant in healthcare organizations. Groupware provides extensive possibilities in the transfer of knowledge amongst employees in the nursing profession; such knowledge can then be transferred for future references.

2.10.8. Blogs

Blogs are electronic modes of collaboration, interaction and communications that are numerous used for personal, commercial and for organisational purposes to capture, store, publish and disseminate stories, news, express and commentaries (Ramirez 2006). Community of practices prefer using blogs for posing questions, writing minutes, comments and sharing of knowledge, information and ideas. Ramirez (2007) avers that blogs are usually preferable means of archiving critical and valuable knowledge for departmental future usage; mainly, departments appoints a specific employee to manage blogs and ensure the sustainability of the information, data and knowledge. Ramirez (2007) further argues that, blogs provides organisations with the support when it comes to knowledge sharing and capturing, and it is much simpler to retrieve knowledge and information contained in blogs as compared to other organisational databases. In his conclusion based on his argument, Ramirez (2007) purports that, blogs have the capability to capture extensive range of knowledge, information, data and photographs including audio, videos and presentations. Atwood (2009) observes that blogs are difficult to maintain and regulate, however they require diligent technical care to avoid the problems of unprofessionalism and valuable knowledge of the organisations being share with external individuals without proper approvals. The implantation and application of blogs as a knowledge management

intervention calls for the formalisations of knowledge sharing strategies including blogs as one of them to promote a culture of knowledge sharing and transfer (Ramirez2006). Atwood (2009) articulates that blogging provides employees with the opportunity to make suggestions, comments, and corporative interactions about the organisation's valuable projects. Comments are usually preserved for future references, in this way knowledge is share and transferred (Atwood 2009). Blogs play an important role in the nursing profession, it provides opportunities for knowledge transfer which later can then be retained for future purposes.

2.10.9. Wikis

Wikis are interactive platform for discussions available online in order to share information, knowledge and wisdom about fundamental aspects ranging from personal, intellectual and professional (Tahlelo 2016). Wikis usually allow individuals to make comments and suggestions to provide their own perspective about a particular social, intellectual and organisational phenomenon. According to Perez and Ayres (2010), wikis are dissimilar from blogs in the sense that they allow interactions and engagements between those who make suggestions online and those who make comments to facilitate the generation of new knowledge. According to Ramirez (2007), formal tools for sharing knowledge such as video conferencing, teleconferencing, email, internet, web-based networks, internet and intranet are substantial to the implementation of knowledge management intervention for successful knowledge preservation. Fombad, Boom and Bothma (2009) are of the view that technological communications are regarded as sufficient methods and tools of knowledge sharing. Nold (2009) contends that technology agitates for information and knowledge sharing through which individual employees are able generates new knowledge.

2.10.10. Database

Databases are shared, collective and integrated logically connected designed software comprising of information preserved for organisational purposes. Narrative databases are constructed on the basis of verbal and commendatory purposes where one person interviews the other (Ramasami 2011). With the motives to capture historical data, work performance, comments of participants, narrative databases focus on preserving tacit knowledge acquired through years of experience. In this way, databases contain audio-visual files, transcript of discussions to ensure that

knowledge and information is carried is the verbal articulator's own perspective (Atwood 2009). Ramasami (2011) is of a view that, technology can make it easy for the organisation to acquire, preserve and disseminate the know-how of employees. Atwood (2009) agrees with Egan's (1998) view of regarding technological databases as means of possibly ensuring that, organisations are able to acquire, sustain, preserve, archive and share organisational knowledge. In the nursing profession, knowledge of professional nurses is stored in institutional databases for retention purposes. Institutional databases serve as a knowledge retention platform across.

2.11. Techniques for retaining nursing knowledge in healthcare organisations

This section will discuss the relevant techniques for retaining nursing knowledge in healthcare organisations. Healthcare organisations are inevitably vulnerable to the loss of critical knowledge brought about employee attrition (DeLong 2004). Senior personnel in management positions must be able to foresee and address this challenge in three appropriate ways: programmes for effectively re-utilising retirees; subcontracting lost abilities through knowledge re-generation and human resource processes and practices for knowledge retention. In a study conducted by Jostad and Nowocin (2012) the subsequent methods for recovering knowledge were outlined and will be discussed in the subsequent section: effective utilisation of retirees, subcontracting, generating lost knowledge, card-storing, verbal protocol analysis, observations, brainstorming, expert systems, subject matter experts, after action and human resources practices and processes for knowledge retention.

2.11.1. Programmes for effectively utilising retirees

DeLong (2004) has been instrumental in the advocacy of usurping retirees back to the organisations either as contracts or consultants. He further purports that, the skills and know-how of retired employees are critical in driving a culture and history of organisational success. In his contextual argument in the reutilisation of retirees back in the organisations, DeLong (2004) observes that retirees have vast social and thematic network capabilities to ensure that their operations are fulfilled even though they might differ from those they have left. DeLong (2004) further expresses that the most critical aspects in healthcare sectors especially in the nursing profession is to bring back retired nurses are knowledge consultants about various chronic disease.

Reutilising retired nurses as consultants assists healthcare organisations to retain critical knowledge of professional nurses regarding patient care.

The utilization of retirees in the nursing profession is crucial in the transfer of critical nursing knowledge from experienced to inexperienced professional nurses. Knowledge retention in the nursing profession stems from the transfer of nursing knowledge from retirees to active professional nurses in healthcare organizations.

2.11.2. Outsourcing lost capabilities

According to Sancheti (2007), outsourcing is a technique used to recover and transfer organisational frequent interior activities and decisions to outside providers for the purpose of organisational efficiency. A study conducted by Sancheti (2007) depicts that outsourcing is a method of recovering and regenerating lost knowledge of retirees in which reputable organisations are able to sustain acceptable levels of work performance. DeLong (2004) diligently portrays that outsourcing non-essential abilities has been an inclination in this segment both at private and public organisations.

The role played by outsourcing lost capabilities in the nursing profession remains crucial in healthcare organizations. The retention of critical nursing knowledge is reliant upon healthcare organizations in outsourcing experienced nursing professionals for the purpose of transferring their knowledge; once their knowledge is transferred it can later be retained for future purposes.

2.11.3. Regenerating lost knowledge

For management to recognise and reconcile the importance of regenerating lost knowledge, it is of vital significant to anticipate the recovery of knowledge through hiring previous employees in order to outsource their expertise (DeLong 2004). DeLong (2004) further elaborates that, organisational knowledge is sometimes lost through the process of decision making by executives to reduce or relocate sectors, consequently, expert employees with expendable skills and knowledge may depart the organisation. Abkian *et al.* (2007) highlight that knowledge is often permanently lost due to insufficient documentations and storage for retrieval purposes or may also result due to the retirement of expert employees who does not see the need to engage in knowledge sharing and transferring initiatives. Abkian, *et al.* (2007) continue to warn that, the regeneration process of lost knowledge is entirely costly and frustrating.

DeLong (2004) argues that numerous organisations employ different knowledge retention methods that are uniquely embedded to necessitate the combination of both the critical elements of preserve knowledge of expert employees, and the ways of retaining and retrieving that knowledge. DeLong (2004) deduces his contention by outlining that, the most vulnerable mistakes that organisation commit in the process of retaining critical knowledge of expert employee, is to only employ computerised information systems for the purpose of combating the challenges of losing knowledge.

Regenerating lots nursing knowledge in healthcare organization remains one of the most important crucial aspects in knowledge retention. Knowledge retention in healthcare organizations is aimed at implementing programmes that are designed specifically to regenerate the precise knowledge that has been lost through employee attrition factors

2.11.4. Verbal protocol analysis

Wagner and Zubev (2005) expressively elaborates that, verbal protocol analysis involves the process through which employees think aloud when solving problems and making decisions. During this process, employees are usually requested to verbally articulate their perceptions while attempting to solve a problem or a precise challenge. The views of this technique are deeply rooted in the aspects of transcribing the approach of solving problems (Liou 1990). Wagner and Zubev (2005) argue that, verbal protocol analysis is often placed under thorough critics on the basis of “forcing the experts to express actions in words”. According to DeLong (2004), documentation of employee’s knowledge is viewed as an alternative to converging and translating tacit knowledge into explicit knowledge, which can then be preserved in knowledge-based repositories for future references by other employees in the organisation.

Induction through verbal articulations plays a significant role in the transfer of knowledge in healthcare organizations. In the nursing profession verbal protocol analysis allows nursing professionals to share knowledge through verbal articulation for nursing knowledge transferring purposes. Practical demonstrative approaches through verbal articulation provides opportunities for nursing professionals to be able to retain explicit knowledge about patient care which then can be retained for future usage.

2.11.5. Card Storing

Wanger and Zubev (2005) are of a view that, card storing is a type of knowledge acquisition technique in which experts' knowledge is structured and later on stored in institutional knowledge repositories. Through the process of converging expert knowledge into structured knowledge, familiar objectives, employees experience, rules and procedures are documented on cards; experts are later on required to sort the preceding into subject categories (Wanger & Zubev 2005). Milton (2003) elaborates that the use and categorising of storing methods leads to the classification of knowledge and differentiation of knowledge propagation amongst other challenges. A vast majority of taxonomy for organisational classification of knowledge exist, this encompass; inclines, hierarchy, matrix, facets, maps and systems (Lambe 2007).

2.11.6. Observation

According to (Lambe 2007) this technique of acquiring knowledge involves educating newly appointed employees through visual artefacts the ways in which standard operating procedures are carried out. DeLong (2004) further illustrates that, this method of acquiring knowledge is accurately applicable in a beginner-expert engagement. DeLong (2004) highlights that, in order to ensure that the beginner masters the tasks to be performed, expert recordings are essential in the application of this technique and is usually applied in expert-novice relationships.

Knowledge retention through observations is also one of the most important practices in healthcare organizations, it provides a diligent approach in which professional nurses are able to share and retain knowledge through observations for future references.

2.11.7. Brain storming

As a method of acquiring knowledge in organisations, brain storming refers to techniques of creating thoughts, principles and ideas thereby deriving their meaning for implementation purposes (Wamundila 2008). The application of brain storming at an organisational level is instigated upon introducing a sequence of events for the purpose of generating new ideas and strategies (Wamundila 2008). Wamundila (2008) further posits that in social instances, brainstorming is a session of interaction that take

place under closed doors in meetings via boardrooms to generate ideas and minutes amongst other by-products.

In the nursing profession, the role played by brain-storming remains one of the crucial aspects in the transfer and the retention of critical nursing knowledge in healthcare organisations. Brainstorming allows professional nurse to develop new approaches to patient care through sharing and transferring knowledge for retention purposes.

2.11.8. Expert Systems, Subject Matter Experts and After-Action Reviews

Wamundila (2008) elucidates that elicit knowledge techniques for the purpose of preservation of institutional memory places its focus on interacting with employees in order to convert their tacit knowledge acquired through years of experience into explicit tangible knowledge. Wamundila (2008) argues that the objectives of this category of acquiring knowledge involves subject matter experts and after-action reviews in order to allow the knowledge to be preserved in institutional repositories. There is a mutual interaction that exists between subject matter experts and after-action reviews which chorally relates to verbal protocol analysis (Wamundila 2008). According to Mumford (1995), after action reviews are similar to retrospective knowledge acquisition approaches in the sense that they place a great deal emphasis on converging tacit knowledge into explicit knowledge.

Expert systems, subject matter experts and after-action reviews are valuable knowledge retention practices in healthcare organizations more especially in the nursing profession. It is the most common practices in the nursing profession for the facilitation of knowledge transfer and retention across all healthcare organisations.

2.11.9. Human resource processes and practices for knowledge retention

Storey (2001) portrays a paradoxical articulation in relation to the benefits of knowledge management and the application of human resource interventions to capture, store, preserve, and retain critical organisational knowledge of departing employees. Doan, Rosenthal and Grudstein (2011) argue that the implementation of knowledge management in organisations entirely depends upon human resource interventions to successfully capture, store and retain knowledge of departing employees. The authors further observe that, human resource interventions for the

application and implementation of knowledge management initiatives are often neglected in previous studies conducted on knowledge management in healthcare organisations (Doan, Rosenthal & Grudstein 2011).

According to Storey (2001) and Dona *et al.* (2011), Human Resource (HR) specialists and analysts have not been impactful in marking their territory in the emerging field of KM. In a study conducted by Pickard (1998) which provides a detailed examination of numerous challenges and methods to KM illustrated that, a handful senior personnel responsible for the instigation of policies and strategies assumed that, it was the problem of junior employees to put in place measures necessary for the assurance of capturing, storing and retaining critical knowledge vulnerable to loss. Pickard (1998) further argues that while organisations value the need to capture, manage and transfer knowledge, they have diligently unable to convert the requirements into strategies that seek human resource interventions.

Chew (2004) reveals that, progressive human resource approaches to knowledge management relies on advancements which are above critics in the Information Technology (IT) capabilities which are currently dominant in the area of KM. Scarbrough (2003) calls for technological approaches applied by HR practitioners for the successful implementation and advocacy of KM initiatives. Devastatingly, Scarbrough (2003) further points out to the biased approaches to the improper technological interventions for the purpose of storing, capturing and retaining critical organisational knowledge.

According to Gramn and Schnell (2001), there is an escalation in the evidence that depicts human resource management as a major role player in the retention of high-quality work performance. Numerous studies conducted on advance human resource management interventions such as training and development, compensation and accurate reward systems have shown that, these systems when applied properly leads to reduction turnovers, absenteeism, increased performance and improved financial performance (Arthur 1994). According to Doan *et al.* (2011), the application of human resource in the management of organisational knowledge involves five major paradigms: staffing, job design, performance appraisal systems, rewards and compensation systems, training and development. Cabrera and Cabrera (2005) define

staffing as the process whereby which organisations extensively ensure that, the values and goals of both the employees and organisation enables the sharing of knowledge amongst employees when recruitment and selection process are carried out. Kelloway and Barling (2000) expressively denote that, the gradation in which employees are appointed for a particular position with respect to their skills and capabilities places a great influence on the motivations of the workers and the opportunistic motives of reutilising organisational knowledge. Organisations are embroiled with the responsibilities of initiating team-based employee designs that are capable of increasing social enactment between employees and most importantly to facilitate a culture of knowledge sharing. Doan *et al.* (2011) define performance appraisal as the systems that are expressively implemented in organisations to assess individual work performances when considering knowledge sharing platform. Doan *et al.* (2011) calls for reward and compensation systems as motive platforms to encourage employees to take part in knowledge transfer and retention activities in organisations to facilitate a culture of knowledge sharing. Training and development is considered by Doan *et al.* (2011) as the degree to which workers are given adequate opportunities to develop themselves both personally and professionally.

From DeLong's (2004) perspective, knowledge management framework, it is recommended that, the subsequent initiatives for knowledge retention through human resource practices call for the below interventions:

- Career and self-development training opportunities;
- Succession planning.

Numerous studies in the field of knowledge management provide a proper introduction and implementation of human resource intervention in knowledge retention practices. According to Jinchveladze (2009) the flow of knowledge cannot take place without human mediators. Yahya and Goh (2002) support the argument purported by Jinchveladze (2009) that, knowledge management is developed from the management of human resources. DeLong (2004) places a great deal of emphasis on the contributions made by human resource management in the application and identification of critical knowledge to be retained.

According to Somilan and Spooner (2000), human resource management is an area of expertise that should intervene in the vital aspects of monitoring, measuring, developing, disseminating and reutilisation of organisational knowledge. Hislop (2002) advocates that, due to the lack and understanding of the vitality and necessity to converge tacit knowledge into explicit knowledge, numerous organisations are constantly faced with the challenges of retracting such knowledge from the minds of departing and retiring employees. According to Hansen, Nohria and Tierney (1999), it is recommended for organisations to place a great deal of focus in implementing human resource management strategies designed for the successful planning of KM initiatives. Jinchveladze (2009) is of a view that, human resource management strategies can be aligned systematically to drive forces and guiding approaches for the effective management of organisational knowledge.

Jinchveladze (2009) purports that, the implementation and practical applicability of human resource practices for the management of organisational knowledge, increases the capacity to effectively and efficiently use the capacity to achieve organisational objectives. They encourage workers to engage and facilitate in a culture of knowledge creation and sharing platforms in order to construct an atmosphere of transforming, motivating and boosting employees' commitment to value knowledge management initiatives in organisations (Lopez-Cabrales 2009). Boxal and Purcell (2008) contends that, human resource practices directly impacts employees work performances by influencing their capabilities, skills and enthusiastic expertise in a field. Within the human resources processes and practices for knowledge retention, the following themes are discussed as techniques for preserving critical nursing knowledge in healthcare organisations:

- Interviews
- Career development and training
- Performance appraisal
- Reward systems
- Building a culture of retention

The role played by HR in knowledge retention remains relevant in the nursing profession. It provides a clear articulation on how knowledge retention practices should be advocated through the adoption and implementation of KR tools as provided below.

2.11.10. Interviews

According to Wamundila (2008), interviews are common practices applied in organisations to acquire knowledge through the use of human resource expertise. They are often applied when recruiting new employees, developing knowledge repositories and through the process of employees' attrition applicable as exit interviews (Kelleher 2006). In various organisations interviews are applicable when employees are departing the organisations due to a variety of reasons ranging from retirement and switching careers, the process typically focuses on human resource aspects in terms of what employees deemed as unfavourable in the organisation (Kelleher, 2006). In the process of creating knowledge repositories experts are interviewed while engaging their daily operational duties (Wanger & Zubev 2005). Kelleher (2006) contends that organisations must not focus on losing employees through attrition, but rather worry about the critical knowledge that might be lost throughout the endeavour.

Interviews should place a great deal of focus on the knowledge that is lost when employees leave the organisation (Kelleher 2006). There are different categories of interview applied as methods or techniques of acquiring knowledge in organisations, namely structured and unstructured interviews (Wanger & Zubev 2005).

Interviews are knowledge retention practices which advocate knowledge to be shared, transferred and retained before employees leave organisations through a variety of employee attrition factors. In the nursing profession, exit interviews are crucial in the sense that, they allow those responsible for knowledge retention to capture best practices and lessons learned about patient care for continuity.

2.11.11. Career development programmes

DeLong (2004) is of a view that, the implementation of portfolio skills development systems, professional growth, and success planning initiatives to retain expert knowledge of employees are necessary in the building of team workforce abilities and

to slow turnover in employee attrition. Career development programme assists organisations to construct a culture of knowledge transfer and retention to enhance competency of expert employees and executive management for future purposes (DeLong 2004). In numerous organisations, professional development programmes involve training, mentoring, job rotation and succession planning (DeLong 2004).

In the nursing profession, career development programmes are common practices that are adopted for the purpose of knowledge sharing and transferring purposes. It forms part of rotational basis where nursing professionals are rotated across different wards on a regular basis to share and transfer knowledge on patient care, hence when such knowledge is shared and transferred it can then be retained for future usage.

2.11.12. Performance appraisal

Organisation values the diffusion of creating knowledge, and most importantly to increase efficiency of employees through the implementation of appraisal and reward systems. The purpose of Performance Appraisal (PA) in organisations is to enhance work performance and competency of employees (Jinchveladze 2009). Jinchveladze (2009) further observes that the application of PA in organisations thoroughly leads to incentives, training, development, and the transfer of enhanced abilities, skills and capabilities for sanctioned operational procedures. According to Shipton (2006), the implementation of PA for the crucial determination of training programmes and measures for effective follow-up practices, advocates for evaluative measure to encourage employees to acquire knowledge from collective sources. Hansen, Kang and Snell (2009) proclaim that, PA also provides possibilities for clarifying higher levels of responsibility amongst employees. According to Yahya and Goh (2002), PA is a bilateral approach in the sense that, it facilitates the provision of feedback to acquire extensive knowledge from assessed employees.

PA emphasise a great deal of focus on evaluative errors that could be avoided in the single loop-learning process (Kang & Snell 2009). Jinchveladze (2009) agrees that a great deal of concentration is devoted to the results derived from employee assessments through PA, to clearly facilitate the obstacles of achieving the goals and objectives of the organisations. The process evaluation of employees often leads to the provision of information and knowledge to elaborate the depiction of explorative learning; this category of evaluation and assessment is often based on the enhanced

quality of employee work performance (Kang & Snell 2009). PA is mostly beneficial for specific expert employees with critical and valuable knowledge to facilitate knowledge domains and re-organised performance (Kang & Snell 2009). Jinchveladze (2009) elaboratively expresses that, given the motives to increase work performance amongst employees, PA allows for the persistent diligence of stimulating employee's responsibilities through placing thorough concentration on providing rewards and incentives systems. Kang and Snell (2009) agree that, this ensures continuous enhanced performance and responsibilities of employees. According to Yahya and Goh (2002), the process of learning forms part of the knowledge transformation agenda. Deduced from this analysis, it can be concluded that performance appraisal based on evaluative assessments of employees work performance, tolerance for errors and assimilation of teamwork can enhance the promotion of bilateral-loop learning. The rationale behind the flexibility of employee's capacity to apply their own strategies to bring about efficient results, will ultimately lead to the development of new ways in which collaborative measures between employees are taken.

Nursing professionals are continuously evaluated on the basis of their performance in healthcare organisations. The role played by performance appraisal in KR allows healthcare organisations to tap into the tacit nature of nursing knowledge in order to evaluate whether or not professional nurses are able to apply the theoretical knowledge into practice while performing their tasks.

2.11.13. Reward systems

Reward systems can be used as reinforcements to encourage employees to take part in knowledge sharing initiatives implemented by human resource management practitioners. According to Robertson and Hammersley (2000:43), "reward systems can be important predictors of knowledge sharing". Jinchveladze (2009) purports that, reward systems mainly adopt different methods such as recognising, promoting, autonomous, enablement and appreciation of valued organisational knowledge. The root of autonomy in the implementation of human resource management initiatives to drive reward systems enhances the creativity of employees in the construction of new ideas that will benefit organisations from time to time (Yahya & Goh 2000).

Jinchveladze (2009) argues that, the challenges with regard to the implementation of reward systems stems from the dissatisfaction for various employees and placing much focus on the contributions that are collaboratively made by individual employees. Similar consequences arise when looking at the approach from a teamwork perspective. As elaborated by Scarbrough (2003), teamwork is essential in the generation of new knowledge, but the contrary may result when employees may seek rewards and incentives on the basis of their unilateral contribution. According to Gupta and Singhal (1993), reward systems provides a balance in the notion of rewarding teamwork and individual employee contributions, this further provides guidelines in terms of whether or not to reward individual or the entire group of employees. Bartol and Strivastava (2002) purport that there is a supposition which supports the view that, rewarding teamwork contributes to enhanced performance, cooperation and instil a culture of knowledge sharing. Subsequent to the application of PA it is essential that, the reasons for the need to put in place reward systems are vivid and clear. In the case of healthcare organisations where there is a driven insensitivity of knowledge, reward systems can be slightly attached to the generation of knowledge to inspire the concept of generating new knowledge amongst employees, and most importantly, amongst healthcare professionals (Kang & Snell 2009). Implementing reward systems and providing incentives for the purpose of reinforcing the agenda of generating knowledge through ideas is beneficial for double-loop learning (Jinchveladze 2009). Jinchveladze (2009) further observes that providing incentives and rewards for employees in the form of fixed-term bonuses to enhance their norms, values and work performance usually contributes to single-loop learning. From the deduced analysis by Jinchveladze (2009), it could be concluded that monetary incentives are mainly appropriate for expert knowledge possessors.

Reward systems are integrated in almost all professions to reinforce desirable outcomes of employees. The role played by reward systems in the retention of critical nursing knowledge in healthcare organisations remain important more especially when it used to encouraged professional nurses to participate in knowledge retention practices.

2.11.14. Building a culture of retention

According to Storey (2011), the implementation of human resource management in the views of building a culture of knowledge management is central to enhanced organisational performance. Building a culture of knowledge sharing, transfer and retention is conducive in opening the flow of new ideas, innovation and generation of new knowledge (Davenport 1997). Storey (2011) agrees that organisational culture allows the flow of information within organisational boundaries to shape behavioural patterns of employees both internally and externally. Legge (1995) purports that there is an exponential significant amount of evidence which supports the view that inappropriate organisational culture can contribute to the building of barriers to innovation and the creation of new knowledge. He further argues that, the evaluation of employee's performance through appraisal modes of assessment is concurrently espoused to the degrees in which organisational culture prioritised (Legge 1995). Story (2001) elaborates that, where hierarchical categories are limited, organisational culture conforms to short-term profitability's in the risks and acceptance of failure, to comprehend practices that are necessary for shaping behavioural competences amongst employees.

The excellence of employee performance is a fundamental evidence which supports the view that, organisational culture influence knowledge sharing behaviours amongst employees in order to change the ideals in which valuable knowledge is sustained to reduce employee attrition and high turnovers (DeLong 2004). Davenport (1997) signifies that numerous organisations which placed a great deal of focus on the programmes of retaining knowledge are still struggling with culture problems. Organisational culture and knowledge loss are fundamental components that continuously confront organisational leaders, especially, and most importantly, with regards to how to change the culture of employees to necessitate the ideals of supporting retention of employees and their critical expertise (DeLong 2004). The motives of creating a conducive environment for organisational culture, stems from the measures of constructing appropriate practices for prioritising knowledge acquisition, sharing and reutilisation of knowledge to ultimately determine the rate in which knowledge issues are dealt with effectively.

In the nursing profession as else were, it is important to build a culture where employees are encouraged to participate in knowledge retention practices. In

healthcare organisation, the building of a culture of knowledge retention plays a significant role in the sense that; professional nurses are able to engage in principles of knowledge retention to prevent knowledge loss.

2.13 Summary

This chapter presented an overview of available literature on the subject of knowledge retention in healthcare organisations. The literature being reviewed recognized and acknowledged previous studies that were conducted on knowledge retention in the nursing profession, particular in healthcare organisations. Furthermore, the review of literature developed a background and contextual setting around the complex issue of knowledge retention practices amongst professional nurses at Philadelphia Hospital. However, in order to achieve the objectives of retaining critical nursing knowledge at Philadelphia hospital, a number of interrelated factors have to be taken into consideration. This includes: the tools and techniques for retaining critical nursing knowledge, strategies for retaining critical nursing knowledge, and the challenges experienced in retaining critical nursing knowledge. In order to develop an effective knowledge retention strategy for the purpose of retaining critical nursing knowledge, it is important to understand how the above-mentioned factors interrelated with one another. After engaging the literature, the study critically analyzed facts and factors presented to inform the current study, and to provide guidelines on which of the challenges require solutions to mitigate the problem of knowledge retention amongst professional nurses at Philadelphia Hospital. The next chapter of the study will discuss the relevant applicable research methodology, and most importantly how the study was conducted in order to achieve the objectives.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

The preceding chapter reviewed literature on the fundamental aspects relevant in the process of retaining nursing knowledge in healthcare organisations. These features provided a thorough elaboration on which of the type of nursing knowledge is most vulnerable to loss when professional nurses depart healthcare organisations through a variety of employee attrition reasons. The purpose of this chapter is to discuss and elaborate on the research methodology adopted for the study. According to Creswell and Poth (2018), a research methodology is the systematic scientific method of addressing research problems in academic research. Ngulube and Ngulube (2015) agrees that, a research methodology is the scientific approach on how research is conducted. Deliberating on research methods applied by a researcher in a precise study is fundamental to other researchers as it enables them to imitate and re-test the methods used in similar studies (Creswell2016). Ngoepe (2012) supports Creswell's (2016) view by conceding that through the application of research methods, researchers are able to study diverse steps that are mainly adopted by other researchers conducting similar studies with similar research problems.

The rationale motive for having conducted this study was to develop a knowledge retention strategy for professional nurses at Philadelphia hospital through the application of a qualitative research approach. The aim is to ensure that, when professional nurses depart the healthcare sector through various employee attrition factors, valuable nursing knowledge regarding patientcare is retained for future usage. The research method, research approaches, research design and applicable transcriptive data analysis techniques are discussed in this chapter. The subsequent discussions are founded in relation to the preceding literature being discussed in order to achieve the objectives of the study.

3.2. Research approach

There are three main research approaches, and the greatest prevalent used are quantitative, qualitative and mixed methods approaches. Bryman, Bell, and Teevan

(2012) assert that, there is a fundamental difference between these three approaches to research. Quantitative research method provides prominence on numerical assertion in the process of acquiring and analysing data (Ngulube 2015). On the other hand, qualitative research methods provide emphasis in terms of social articulation or words (Ngulube 2015). Mixed method approach is the application of both quantitative and qualitative research methods in the same research study in order to acquire understanding of the phenomenon under study (Creswell 2018).

A qualitative research approach is adopted for this study, the precise reason is that, the study will be constructed on descriptive data acquired through interviews to enable the researcher to accumulate a greater insight on how nursing knowledge is retained at Philadelphia hospital for future usage. Moreover, the qualitative nature of the study allowed the researcher to provide a thorough description and analysis of professional nurse's perceptions and view's regarding the retention of valuable nursing knowledge at Philadelphia hospital. This is to ensure that, when professional nurses depart Philadelphia hospital through various employee attrition factors such as retirement, resignations, lay-offs and rural demographics challenges, critical nursing knowledge regarding patient care is retained for future usage. The different research approaches are discussed in this section.

3.2.1. Qualitative research method

Creswell (2016) quantifies that; the fundamental component of a qualitative research method is essentially to associate significance to the practises of respondent's day to day operations. Haradhanis (2018) is of the view that, qualitative research methods involve descriptions, phenomenology, ethnographies, grounded theory and case studies as strategies of inquiry. Data is collected with the intent of developing themes, and to get a comprehensive point of view from part takers under study. The advantage of this method is that, it allows a diversity of responses, and it also possesses the capability to allow recent matters during the research process to be unearthed or recognised (Ngulube 2015). In addition, it provides a greater benefit in the sense that, participants are flexible in responding to questions the way they like. Qualitative depends on data acquired in the form of interviews, documents and even observations.

According to Sekaran, Bougie and Ivonne (2013), the motive platform for qualitative research methods is to effectively explore respondents' attitudes, behaviour and experiences in the application of interviews, observations and focus group discussions. Sekaran *et. al.* (2013) further emphasises that, the major determinant of qualitative research methods is to attempt to acquire significant insights of participants under study. The advantage of qualitative research methods is deeply rooted in its capability of allowing respondents to provide a variety of responses in the articulation of new issues raised in relation to addressing research problems (Langkos 2015). Gopaldas (2016) agrees that, the advantages of applying qualitative research method in a study is that, during interviews, the interviewer has an opportunity to pose questions that are complicated. Moreover, qualitative research is advantageous in the sense that, it provides participants with an opportunity to narrate a particular phenomenon as board as the question may require expressive articulation, thus, this provides the research with an opportunity to harvest data from multifaced angles (Bryman 2015).

According to Viswambharan and Priya (2016), qualitative research method is characterised by small quantity of samples while its conclusion is immeasurable and not accurately quantified. Rahman (2017) asserts that, qualitative research methods provide a thorough evaluation, description and analysis of subjects without restricting the scope and nature of responses articulated by participants. Pistol and Tonis (2017) accentuate that, the effectiveness of qualitative research is heavily dependent on the skills and capabilities of researchers. Because qualitative research is mostly appropriate for small quantities of research samples, it is perilous for the outcomes to be considered as accurate and inclusive of a broader population (Shayb 2017).

According to Gentles (2015), qualitative research methods provide annotations and clarifications of participants' perceptions of different events, and it assumes the snapshots of people's insights from a natural point of view. Walia (2015) graphically portrays that, qualitative research methods examine common knowledge and perceptions of a particular program, participants' understandings, insights, interactions and background that disregard the contextualisation of other people's thoughts, morals and believes. In addition, Mohajan (2018) observes that, its structures are less descriptive in nature, and provides a greater formulation of new theories and ideologies. Walia (2015) further elaborates that, qualitative research methods observe

the origin of the world's natural perceptions by interpreting social phenomena in order to understand the meanings people attach to everyday encounters.

3.2.2 Quantitative research methods

Quantitative research methods use numbers to provide a detailed elaboration of findings (Kowalczyk2016). The research procedures are through experiential exploration with collected data being statistical (Gentles 2015). Through the utilisation of numerical data, the research has to possess advance knowledge of descriptive and inferential statistical measures of calculations and standard deviations. ANOVA, CRQ (2015) is of a view that the notion of quantitative research is to provide explanations, predictions, investigations and examinations of possible influences on specific outputs.

Shayb (2017) emphasise that, a good quantitative research method is one in which the researcher does not form part of the research instrument. Creswell (2018) is of a view that the phenomena under study are hypothetical; literally entailing that there is no absolute truth. A quantitative research method is commonly applied when the variables in the organisations which the researcher desires to conduct the study are directly proportional to one another in omission of other variables. According to Creswell (2016), when used in social science, the quantitative research method is used to test hypotheses. The advantage of quantitative research method is that the deductions are derived from a larger number of participants, it provides effectual analysis of data, it provides examination of possible cause and effect, preconception are controlled, and participants are usually taken as numbers. Its restrictions are that, the utterances made by the participants are generally not taken into considerations and there is less understanding of the background of respondents (Ngulube 2015).

According to Gopaldas (2016), quantitative research methods are designed precisely to test theories, devising actualities, demonstrating interactions between variables and most importantly envisaging results. Ngulube (2015) asserts that quantitative research methods are interested in applying strategies form the field of natural sciences that are implied to ensure objectivity, advocate generalisation and to reflect reality. It involves the process of randomly selecting research participants from the initial target population in manner with less biased elements for the use and application of standardised questionnaires and statistical techniques.

Quantitative research methods refer to the experimental and application of statistical phenomenology through the use of computerised techniques in the analysis and presentation of data acquire for the purpose of research (Hunter & Leahey 2008; Neuman 2013). Langkos (2015) agrees that the objectivity of quantitative research methods is deeply rooted in its capability to construct mathematical models, theories and concepts of the phenomena under study. According to Creswell (2014), quantitative research methods seek to examine the objectives of derived philosophies, theorise and models in the pursued of studying relationships between variables. The variables under study can be measured through the use of computerised systems designed precisely to derive meaning using statistical procedures (Bryman 2012).

3.2.3. Mixed methods

Creswell (2018) is of a view that, mixed methods are new and emerging especially in the field of health and social sciences and encompasses the process of merging both numerical developments and stories to conduct a clear and accurate research on human and social challenges. The central hypothesis is that, when an inquirer joins both quantitative and qualitative methods, it provides a clearer perception of the problem than using either of the methods alone (Walia 2015). A mixed method thus, is a combination of both quantitative and qualitative methods with sole purpose of getting a precise thought of the phenomenon under study. Mixed research method typically results in greater research because of its operational diversity or extensiveness (Creswell 2016). Mixed methods research approaches is considered as a third methodological approach in which both quantitative and qualitative approaches in a single study are applied (Ngulube & Ngulube 2015). According to Creswell (2014:38), MMR is defined as the “approach to inquiry, involving collecting quantitative and qualitative data, integrating the two forms of data by using distinct designs that may involve philosophical assumptions and theoretical frameworks”. Creswell (2014) further asserts that, the motive of combining both qualitative and quantitative research methods is to provide a deeper understanding of the research problem under study than either of the approaches alone.

Quantitative methods	Mixed Methods	Qualitative methods
Predetermined	Both predetermined and emerging methods	Emerging methods
Instrument-based questions	Both open- and closed-ended questions	Open-ended questions
Performance data, attitude data, observational data, census data	Multiple forms of data drawing on all possibilities	Interview data, observation data, document data, and audio-visual data
Statistical analysis	Statistical and text analysis	Text and image analysis
Statistical interpretation	Across databases interpretation	Themes, patterns interpretations

Table 1. Features of qualitative, quantitative and mixed methods research

Source: Sarantakos (2013)

3.3 Research paradigm

Research depends on major philosophical assumptions regarding what establishes effective research and which research method(s) are relevant for the development of knowledge in each study. To conduct research, it is vital to have in-depth insight into these assumptions. Various paradigms exist that may influence how research may be executed. These may include positivism, post-positivism, interpretivism, critical realism and pragmatism to name but a few (Yin 2015). The interpretivism paradigm was identified as the most relevant applicable philosophical assumption within which to conduct this research. A research paradigm is defined by Kumar (2011) as theories underpinned by philosophical assumptions which influence and determine the way in which reality is perceived by the researcher. The views of Kumar (2011) align with those of Ngulube (2017), who explains that research paradigms constitute basic systematic beliefs, theoretical frameworks and assumptions that are made by the researcher in the execution of the research. Within the context of a research paradigm, various dimensions influence the perceived view of the researcher. Du Plooy-Cilliers *et al.*

al (2014) refers to these dimensions as the ontology, epistemology and methodology of the research, while Du Plooy-Cilliers *et. al* (2014) explain that the dimension of a paradigm is influenced by the ontology, epistemology, axiology, methodology and meta-theory that may inform the research. Kumar (2011) further accentuates that research paradigms depict all the encircling systems of consistent practices and thinking that determine the origin of enquiry. Research paradigm refers to the structures and patterns of scientific academic ideologies, values, beliefs, and assumptions which signify the influence perceived in the aspects of reality (Kumar 2011:26). To select the most appropriate research paradigm or philosophy for this research, it is important to take into consideration the different types of research paradigms. In Social Science Research the most prominent research philosophy includes positivism, pragmatism, realism and interpretivism (Du Plooy-Cilliers *et al.* 2014). According to Du Plooy-Cilliers *et al.*(2014), each research paradigm has a precise ontology (in which assumptions are made about reality), an epistemology (how knowledge is generated/created and what reality can be established from it) and axiology (which speaks to how values impacts/influence the interpretation of reality).

Bryman and Bell (2015) note that interpretivism is a research paradigm that is related to qualitative studies with the aim of understanding reality from the view of an individual, group of people or community perspective. Du Plooy-Cilliers *et al.* (2014) explains that interpretivism follows an approach that focuses on interpreting and understanding the way people think and express the meaning of a specific situation related to a unique context. Thus, the application and adoption of the interpretivism paradigm in this study will assist the researcher to understand what assumptions are being made regarding the retention of critical nursing knowledge at Philadelphia Hospital.

3.4. Research designs

Bryman (2015) defines research designs as maps, plans and procedures for the purpose of research that involves insights, perceptions and decisions from extensive assumptions relating to methods of data collection and analysis in a particular study. Ullah and Ameen (2018) define a research design as a comprehensive plan that guides researchers on which of the important aspects of the study requires extensive

observation and analysis. According to Leedy and Ormrod (2014), a research design refers to the category of inquiry within the different research approaches e.g. qualitative, quantitative and mixed methods approaches. The authors further elaborate that research designs provide a precise direction of procedures to be applied in a particular study. Creswell (2014) emphasise that, research designs provides the context and framework for data collection and analysis. According to Leedy and Ormrod (2014:151), “there are five commonly used qualitative research methods, namely case study, ethnography, phenomenology, grounded theory and content analysis”. Creswell (2016) elaborates that, it is advisable for researchers adopting qualitative research methods in their studies to select amongst the possibilities such as descriptions phenomenology, ethnography, case study, and grounded theory. This study is aimed at developing a knowledge retention strategy for professional nurses in Philadelphia Hospital. For the persistence of this research, case study is the appropriate design to apprehend the actions of the organisation for the purpose of retaining critical nursing knowledge that is vulnerable to loss when professional nurses leave the organisation.

3.3.1 Case study design

This study adopted a case-study research design. Case study design is a trans-paradigmatic and trans-disciplinary experiential approach that includes vigilant description of the phenomena for which empirical indications are being collected (Creswell & Plano 2018). Creswell (2016) defines case study designs as a formative in-depth investigation that seeks to explore particular instances in order to generate new knowledge. The researcher examined the knowledge retention strategies for professional nurses at Philadelphia hospital with the views to retain critical nursing knowledge that is vulnerable to loss when professional nurses leave the hospital through a variety of employee attrition factors. The case study design enabled the researcher to interpret data collected from the unique context of professional nurses in order to develop an effective strategy to retain valuable nursing knowledge.

3.5. Population

Bryman (2015:26) defines population as a “group of people about which the study wants to draw conclusions and which the researcher would like to be able to generalise a specific sample study to”. Creswell (2016) defines a target population as a precise

category of groups that researchers want to study. According to Polit and Beck (2012), population is the entire collection of cases which researchers are concerned with. Burns and Grove (2011) are of a view that, the available population is the some of the aspects of the targeted populace which researchers have equitable access to. Philadelphia hospital has a total number of 310 nursing staff in which 90 nursing staff are professional nurses and 220 of the nursing staff members are enrolled nurses (South African Nursing Council 2016). Thus, for the persistence of this study, 310 nursing staff are the population of the study.

3.6. Sampling

According to Sarantakos (2013), sampling refers to the systematic approach of strategically choosing a portion, category of participants or segments for research purposes. Creswell and Plano (2018) define sampling as a method in which selected participants or portions are selected by virtue of the unique dimension they possess. Ngulube (2017) is of a view that, a sample is a collection of components with the purpose of decisively deriving a meaningful aspect out of the population from which they are acquired. Members taking part in the research are usually denoted to as participants (Burns & Grove 2011). Sampling is a concept used in research to refer to the procedure of choosing samples from populace with the purpose of obtaining reliable data about occurrences that are representative of the entire populace under study (Ngulube 2017). Leedy and Ormrod (2014) graphically portray that, the motive assertion of qualitative research is to acquire access to cases or components that illuminate communal aspects that are appropriate to a research study. Bryman (2015) emphasises that, qualitative researchers place limited focus on the representation of the entire population, but rather places an extensive focus on deriving deeper meaning of the units under study. According to Creswell (2016), qualitative research is commonly associated with non-probability sampling. Sarantakos (2013) provides the commonly used sampling techniques as convenience sampling, quota sampling, snowball sampling, purposive sampling and theoretical sampling.

In this study 20 professional nurses from the hospital having five or more years of experience form part of the sample size by virtue of the skills and experience they possess regarding patient care. According to Collins (2015), the selection of a sample is crucial in ensuring that research questions are adequately answered. The next

section will provide an extensive elaboration of the commonly applied categories of sampling methods used in qualitative research studies.

3.7. Sampling methods

There are two types of sampling techniques: probability and non-probability sampling techniques. This study adopted the non-probability sampling technique given that it is a qualitative study. There are numerous methods of non-probability sampling, including convenient sampling, quota sampling, snowballing, theoretical sampling and purposive sampling among others (Creswell 2016). The next section will provide an extensive elaboration of the commonly applied categories of sampling methods used in qualitative research studies.

3.7.1. Purposive sampling

In this study, purposive sampling, a type of non-probability sampling was employed. The choice was based on the judgement and ideas of the researcher, who pursued a certain kind of 'representative' sample (Vehovar, Toepoel & Steinmetz 2016). Creswell and Plano (2018) emphasise that, purposive sampling is a non-random sampling technique in which researchers select participants based on the characteristics and relevance they possess in a precise study. Bryman (2015) asserts that objectivity of purposive sampling is to strategically sample participants in a manner in which respondents are able to respond to questions by virtue of the characteristics they possess. He further articulates that the technique is used by researchers when choosing unique units of analysis that possess informative characteristics. Purposive sampling is commonly used in qualitative research studies to enable the researcher to select participants purposively in order to answer research questions pertaining to their unique characteristics (Yin 2014).

The application of purposive sampling in this study enabled the researcher to identify the interviewees who were in possession of suitable information which addressed the objectives of the study, this by assessing their characteristics, ingenuity and appropriateness in relation to the study's objectives. Prominence was placed on attaining as much information and data as possible from professional nurses who participated in the study. Out of 90 professional nurses, 40 professional nurses met

the desired criteria which are professional nurses having 5 or more years of experience in patientcare.

3.7.3. Convenient sampling

Convenient sampling is a type of non-random sampling method through which the researcher chooses participants by virtue of approaching without a precise criterion of exclusion (Neuman 2011). Sarantakos (2013) agrees that convenient sampling applies a non-systematic approach in the selection of participants. Sarantakos (2013) further elaborates that, the participants are usually accidentally selected by virtue of being in contact with the researcher. According to Babbie and Mouton (2011), Sarantakos (2013) and Neuman (2011), convenient sampling is dependants of the availability of respondents being chosen in a specific location. Neuman (2011) further asserts that, researcher justifies the application of convenient sampling in their studies by virtue of respondent's characteristics.

3.6.3. Quota sampling

Neuman (2011) defines quota sampling as a category of non-probability sampling in which the researcher selects a quota of respondents chosen from a specific population by identifying its size. Sarantakos (2013) agrees that, quota sampling is a type of non-random sampling in which researchers determine categories of participants to take part in the study in order to prearrange the numbers in each of the category of groups selected.

3.7.4. Snowballing sampling

According to Babbie and Mouton (2011), snowball sampling is a technique in which researchers selects a limited category of participants appropriate for responding research questions, the sampled respondents than identify other participants sharing similar experiences, knowledge and characteristics to take part in the study. Bryman (2015) accentuates that snowballing is normally applied in research study in which participants of the underlying study are difficult to locate.

3.7.5. Theoretical sampling

Theoretical sampling is a type of sampling method adopted in research studies as a process of collecting data in order to derive theories and concepts (Sarantakos 2013).

Bryman (2015) elaborates that the application of theoretical sampling is adopted by researchers in order to determine categories and properties of respondents, thereby aligning relationships and the theories being derived. According to Creswell and Plano (2018), theoretical sampling is normally chosen by researchers prior to the commencement of the study.

3.8. Data collection process

The data collection process took place in three-folds in the year 2021 in the province of Limpopo South Africa. The first visit to the field took a weeklong from the dates between 31st May to 4th June 2021. The second visit took place during the dates between 7 June to 12 June 2021. The last visit to the field took place during the dates between 19 June to the 23rd June 2021. Before the interviews were conducted, an interview guide was developed to assist and attain information from participants in a reliable method. The guide was developed in relation to the research questions of the study and was designed specifically to assist the researcher to cover important aspects by collecting data that addresses the research questions.

The interviews were conducted on a one-on-one basis with participants and were semi-structured to allow the interviewee to provide detailed elaborations on the topic under study. The semi-structured format guided the interviewer not to lose track of the interview. It took a month (June 2021) for the researcher to collect data. Appointments were scheduled with participants of the study through phone calls. Appointments were confirmed and secured by the researcher before the interviews to allow the interviewees to prepare for the interviews. Preparation by interviewees was deemed necessary by the researcher as a way to obtain well-thought-out responses. The sessions of the interviews were a minimal of one hour and were recorded with a voice recorder. The researcher collected data to a point of saturation. The researcher was content that data being collected enclosed all aspects and factors relating to knowledge retention practices amongst professional nurses at Philadelphia hospital

3.9. Data collection methods.

This study used a qualitative research approach through the application of interviews as a data collection tool in order to produce comprehensive results for the case study. Data collection remains the most fundamental aspect in any research project. Creswell

and Plano (2018) support the insertion by asserting that, data collection procedures provide a setting in which boundaries for collecting information and data through the application of unstructured, semi-structured, documentation and visual materials are established to instigate a protocol for recording information. Creswell and Plano (2018:56) elaborate that, “qualitative researchers tend to collect data in the field at the site where participants experience the issue or problem under study, through examining documents, observing their behaviour or interviewing participants.”

3.9.1. Interviews

As noted in the preceding section, this study has identified interviews as the appropriate method of collecting data. Interviews are the most prominent method of collecting data and factual information through face-to-face interactions. Sarantakos (2013) is of the view that, the potential of using interviews as instruments of collecting data lies in its prominent ability to provide exploration of subsequent multifaceted and indirect phenomena's. Creswell (2016) asserts that through the application of interviews as data collection methods, the researcher requires to gain a better understanding of participants' opinions, feelings, emotions and experiences. Creswell (2016) further elaborates that, in qualitative research studies, researchers normally conduct face to face interviews with participants, telephonic interviews and focus group engagements with six to eight respondents in each of the identified groups taking part in the studies. Creswell and Plano (2018) opine that, in qualitative research interviews, the researchers employ limited unstructured open-ended questions with the intend of eliciting participants' views and opinions.

Out of 90 professional nurses being potential interviewees from Philadelphia hospital, the researcher interviewed only 20 Participants because a point of saturation was reached. According to Msoffe (2015), saturation of data transpires when directing additional interviews would provide no new data but only confirm previously collected data. Msoffe (2015) indicates that researchers reach saturation point when adequate data have been collected from Participants and they have a sense of having fully covered the topic of study. Therefore, the researcher interviewed 20 professional nurses having five or more years of experience in patientcare. This aided the researcher to comprehend knowledge retention practices at Philadelphia hospital. The next section will provide a detailed explanation of three of the commonly used

qualitative research interviews which are structured, semi-structured and unstructured interviews.

3.9.1.1. Semi-structured interviews

For the persistence of this study, semi-structured interviews are adopted and a list of precise questions with relevant themes and topic are predominately determined, this assisted the researcher to pose all questions to respondents with similar phrases to all interviewees. Sarantakos (2013) and Creswell (2016) view semi-structured interviews as precise incline of issues to be addressed and questions that are provided to participants under study. The authors further indicate that, the interviewer is often flexible in the manner in which the themes are considered and allow the interviewee to construct concepts and articulate extensively on the issue raised by the researcher. Mohd-Noor (2008) supports Bryman's (2015) assertion by stating that semi-structured interviews provide a more flexible approach to a variety of respondent's articulations in numerous ways while extensively covering similar ways of collecting data. According to Creswell and Plano (2018), the advantage of using qualitative interviews is that, they provide the ability to produce data that is more reliable. Additionally, the researcher is most likely to acquire critical insights from respondents by virtue of their experience and knowledge about the phenomena under study.

3.9.1.2 Structured interviews

Structured interviews are the type of qualitative research interviews that comprises of tight control measures over the type of questions asked, and responses from participants (Bryman 2015). Likewise, Sarantakos (2013) designates structured interviews as questionnaires articulated verbally with responses recorded in the questionnaires by the researcher. He further opines that, when embarking on structured interviews, stringent adherence of the phrase and order of the questions and directives are required. Creswell and Plano (2018) elaborate that, the aim is to ensure that all participants are provided with similar context of the questions being asked. Bryman (2015) is of a view that, through standardisation of the questions asked and the record keeping of responses is followed, different responses may result in a true reflection based on the context of the interview.

3.9.1.3 Unstructured interviews

Sarantakos (2013) deliberates those unstructured interviews and questionnaire are constructed on the auspices of open-ended questions in which the phrasing and wording of the questions can be altered at the will of the interviewee to derive a more precise understanding of the phenomenon under study. Bryman (2015) literally elaborates that, the questions are commonly informal, and the nature of the questions vary from interview to interview. Bryman (2015) further advises that, during the course of the interview, the researcher should be as intrusive as possible. Creswell and Plano (2018) in their assertion of the nature, conduct and application of unstructured interviews in academic research, the researcher must introduce a theme and topic that will allow the interviewee to construct ideas and respond to questions more freely about the research issue under study.

3.10. Data analysis and presentation

According to Ngulube (2015), in academic research, it is a communal practice for data analysis to proceed subsequent to data collection. Data analysis is the stage in which researchers derive meaning and sense to the data being collected from participants (Maponay 2013). According to Sarantakos (2013:38), "Data analysis entails categorizing, ordering, manipulating and summarizing data to find answers to the research questions". Creswell (2016) defines the methods of collecting data as the procedure in which labeling and constructively breaking down of acquired data into meaning concepts, themes and propositions takes place.

After the process of data collection, the analysis and interpretation of data resumes. The researcher was answerable on how the research process was carried out including how data was analyzed and presented. Transcription of recorded interview sessions was only done for sections which were identified to be crucial for the study. The researcher limited data by removing repetition of statements and data not applicable to the study. Though the researcher was transcribing significant sections of the interviews, he was conscious of the position of delivering a reasonable examination of what the data entailed, instead of purely corresponding data with notions from the literature review. Moreover, transcripts of interviews were executed by the researcher in order to provide a creative prospect to replicate the interview process, remember particulars that might have been missed and potentially revise the

interview guide for the next interview. Furthermore, listening to the interview recordings permitted the researcher to replicate on his strengths and weaknesses as he was inexperienced at conducting interviews. This study used Microsoft Word® in the transcription of the interview sessions. The data attained from the interview sessions contained by means of transcripts was analyzed manually through the use of content analysis.

3.11. Content analysis

Bryman (2015), Lee and Ormrod (2010) define content analysis as an extensive systematic evaluation and examination of the content of a precise body of knowledge for the persistence of determining its patterns, themes and biases. Creswell (2016) and Sarantakos (2013) deliberate that, content analysis is a method in which documents and texts are analysed to quantify the content of the predetermined categories in a replicable manner. Bryman (2015) and Creswell (2014) identify that, content analysis is method systematically performed to analyse forms of human interactions and communication, books, newspapers, films, television programmes, art, music, transcripts and abroad range of internet blogs and entries. For the persistence of this study, professional nurses' opinions, views, insights, policies and procedures for retaining nursing knowledge are consulted to acquire the literal status quo of knowledge retention at Philadelphia Hospital.

In order to develop a thorough analysis of the data into presentable themes, the researcher first familiarized the data before distinguishing into thematic contents that are in line with the literature and the objectives of the study. Secondly, the researcher then prepared the collected data for coding purposes. After coding, the researcher then categorized the data into presentable themes for transparency purposes. Interview recordings provided a basis for transcription of data which then allowed the research to link the themes with the objectives of the study which then addressed the research questions of the study. Furthermore, themes were then developed in accordance to the data that was analyzed in order to derive sense and meaning out of the data. Data collected from interviews were solid and rich, although not all of it was included in the study. Thus, the researcher placed most of the focus on data and overlooked other parts of it. The motive on this process was to accumulate data into a smaller numbers of themes. Subsequent to content analysis, the use of Microsoft

Word made it simpler to cluster comparable themes collected by just copying and pasting related themes, after which the researcher analysed the data. The computer data analysis applied was limited to Microsoft Word. The researcher represented data using themes supported by direct quotations from interview transcripts.

3.12. Data quality and credibility

Bryman (2015) and Neuman (2011) instigate that the motive platform form and aim of qualitative research is to acquire reliable and extensive data gathered through systematic procedures. Trustworthiness of the data being acquired determines the quality and reliability of the data in qualitative research studies (Creswell 2016).

3.12.1. Trustworthiness

In academic research, trustworthiness is a constitute of four criteria's, namely credibility, transferability, dependability and confirmability (Babbie & Mouton 2010; Bryman 2015). According to Anney (2014) trustworthiness is made up of four criteria with each containing an adequate criterion. Bryman (2015) further assert that credibility as a determinant of data quality is parallel to internal validity. Validity refers to the literal assurance placed at the centre of research findings. Babbie and Mouton (2010) are of the view that transferability which is a concept parallel to validity refers to the extent in which qualitative research findings are located in relation to participants' responses.

The researcher ensured that, an interview guide was put to identical questions to each of the interviewee, this was done to certify that, the data being collected for the study is trustworthy. This entails that, the study applied a reliable resource of data collection from participants. Once the interview guide was developed and pre-verified on the sample of the population to assess the interview guide's feasibility. The pre-assessment also allowed the researcher to conduct checks on whether partakers of the study understood and would be able to respond to questions. Furthermore, participants were requested to provide suggestions for refining the questions from the interview guide. With 90 professional nurses having to be interviewed, the interview guide was pre-tested on 5 of them based at Philadelphia hospital. The pre-tests represented the entire population of the study. Participants who took part in the pre-

test were also interviewed by the researcher as part of the main study. Subsequent to the pre-test, no interview questions were changed.

The interview guides were directed face-to-face by the researcher. The interview questions were considered truthful as they were based on the study's objectives. The researcher also ensured that, interview questions underwrote to achieving the research objectives. The researcher certified the accurateness and trustworthiness of data being collected by means of recording all interviews through the use of a voice recorder and transcribing interviews. Due to the subsequent sentiments, the whole process of data collection was recorded. In addition, the researcher also reserved interview recordings and transcripts in order to be clearer.

3.13. Ethical consideration

As elaborated in chapter one of the study, specifically in section 1.1, the University of South Africa ethics policy (2007) calls for any research to be conducted in line with the ethical consideration principles. For the persistence of this study, the researcher applied for ethical clearance certificate which has been granted approval by the UNISA Postgraduate Ethics Committee and the National Department of Health before the study commenced in the process of acquiring data. Accordingly, this is in line with the 2007 UNISA policy on ethics which extensively elaborates that, researchers need to avoid embarking on secretive research, establish competitive measures and accountability, value for respect of human participants and exercise responsibility in the process of undertaking the research projects.

Neuman (2011) is of a view that, ethics refers to the legitimacy to conduct or exercise activities in line with the moral research obligations of the enforced norms. The motive is instigated on the aspects of protecting participants' disclosure of identify after sensitivity information has been acquired (Neuman 2011). Neuman (2011) further elaborates that, two important measures have to be taken inconsideration in order to protect the identity of participants, namely anonymity and confidentiality. Anonymity is the extent to which participants remains anonymous or unknow, whereas confidentiality refers to the extent to which information provided by participants remains confidential or not disclosed (Neuman 2011). In this study, the researcher strictly, without compromise, adhered to the principles and requirements of research ethics in which participants are provided with information about the purpose of the

study. In the obligation of fulfilling the objectives of the study, participants were made clear that, participating in the study is voluntary, in this accord, no one is obligated to exercise continuity if they feel they are no longer required take part in the study. Furthermore, the researcher assured both participants and the organisation confidentiality and anonymity. Guided by the UNISA principles of ethics in conducting research projects, the researcher must at all times protect participants' rights, anonymity and confidentiality. In this research study the subsequent moral deliberations were considered: confidentiality, informed consent and briefing and providing detailed clarity about the research under study.

3.13.1 Confidentiality

Confidentiality is centred on the notion that no one will be able to determine the identity of all participants who part took in the study including the responses they uttered throughout the process (Babbie2010). In order to sustain discretion in research, the personal details of all those who part took in the study will remain confidential. All those who voluntarily partook in the study were provided with assurances that the evidence they provided is to be preserved with confidentiality for the persistence of the study. Furthermore, the researcher made sure that participants of the study's information remained anonymous in order to protect their identity. The information contained in the recordings of the interview will only be used for the purpose of this study, which will then be disposed on electronically after a period of five years as per the UNISA Research and Intellectual Integrity Policy.

3.13.2 Informed consent

The researcher has the obligation to provide participants with the required information about the origin of the research study (Hofstee 2017). The researcher acquired conversant agreement from all those who partook in the study. Authority was granted to the researcher to conduct the research from the institution, University of South Africa (UNISA). The researcher produced a letter sheet containing information with the institution of higher learning to all the participants. This letter was used to inform participants about why the study is being conducted.

3.13.3 Institutional Approval

For the researcher to be granted permission to collect data from Philadelphia Hospital, ethical clearance must be granted by the Limpopo Department of Health through the National Health Research database. An application must first be forwarded to the National Health Research database. The application will be evaluated on the basis of the purpose of the study, research methodology, and ethical approval from the academic institution upon which the student has registered.

3.13.4 Provision of debriefing, counselling and additional information

All partakers should be broadly briefed about the common knowledge of the research (Hofstee 2017). The researcher provided partakers of the study with an overview of the phenomenon under study. The University of South Africa (UNISA) unilaterally developed its policy regarding ethics that provide a wider emphasis pertaining participants. The policy is constructed on the view that the privileges of participants must be preserved. It is of vital significance precisely because information acquired from participants might be leaked, thereby posing a greater threat towards the anonymity and dignity of those who partook in the study.

3.14. Research evaluation

This study adopted a qualitative research approach in which case study method was applicable. Interviews were adopted as a method of collecting data along with content or document analysis. The application of case study allowed the researcher to extensively explore and investigate the contextual settings phenomena. According to Descombe (2007), case study designs focus on precise phenomenon with obligations to provide in-depth explanations and accounting of events, relations, experiences and processes taking place in that account. The application of interviews as a data collection tool and document analysis allowed the researcher to acquire data from a variety of sources. Moreover, the researcher assured participants and the organisation confidential and data would be used for research purposes only.

3.15. Summary

This chapter provided a thorough discussion of the adopted research methodology, research approaches, target population, data collection procedures and instruments, measures of data quality, ethical consideration policy adopted by the study. The chapter also provided elaborations of the methodology adopted to address research

questions and objectives as portrayed in chapter one outline. Furthermore, the study used a qualitative research approach through the application of a case study design to address research objectives. Interviews and content analysis were used as data collection instruments. Population and sampling methods adopted by the study were also explained in this section. The next section will analyse, present and interpret data being collected.

CHAPTER 4

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

The preceding chapter provided a detailed elaboration of the research methodology applied in this study. The purpose of this chapter is to analyse, present and interpret data obtain from participants through the use of semi-structured interviews. The purpose of this study is to establish a knowledge retention strategy for professional nurses at Philadelphia Hospital, with the views to retain nursing knowledge that is vulnerable to loss when professional nurses leave the organisations through various employee attrition factors. To this end, the study also focused on identifying knowledge retention tools and technologies, challenges and barriers, as well as enablers and enhancers that influence knowledge retention practices for professional nurses at Philadelphia Hospital.

This study employed the use of semi-structured interviews to acquire data from participants. Before the interviews were conducted, the researcher provided participants with a detailed explanation of the aims and objectives of the study. The study resulted in qualitative data being obtained from participants. Furthermore, the researcher informed participants from the onset that, they have the privilege to withdraw their participation from the study if they felt in any way uncomfortable. Participants of the study being professional nurses were requested to identify the venues within the hospital in which they would be most comfortable to be interviewed, as well as the dates. The interview guide was divided into 6 sections. Data acquired from participants of the study was analysed, interpreted and presented into themes and discussed in relation to the objectives of the study as specified below:

- To explore the different knowledge retention strategies for nurses at Philadelphia Hospital.
- To explore the tools for preserving nursing knowledge at Philadelphia hospital.
- To explore the challenges experienced in retaining knowledge of professional nurses at Philadelphia Hospital.

- To develop a strategy for retaining knowledge of professional nurses at Philadelphia Hospital.

4.2 Background of participants

The first section of the interviews was to establish the characteristics of participants. The researcher saw it necessary to obtain the participants demographic details as these are important in understanding the factors influencing most professional nurses departing the hospital to relocate in urbanised healthcare sectors without their knowledge being capture or retained for future usage. These included their positions, gender, experience in years, educational qualifications including their age. This information was useful for the purposes of follow-up questions during interviews.

Out of 90 professional nurses, the researcher interviewed only 20 participants because a point of saturation was reached. According to Creswell (2016), semi-structured interviews require a minimum sample size of between 5 and 25 participants to be interviewed in order to reach saturation point. However, in a heterogeneous or mixed population, saturation point requires 25 or 30 interviews to be conducted with participants (Creswell 2016). The researcher obtained relevant data from participants pertaining knowledge retention practices for nurses at Philadelphia hospital with the views to retain nursing knowledge. Saturation of data transpires when directing additional interviews would provide no new data but only confirm previously collected data (Msoffe 2015). Msoffe (2015) indicates that researchers reach saturation point when adequate data have been collected from Participants, and they have a sense of having fully covered the topic of the study. Therefore, the researcher interviewed 20 professional nurses having five or more years of experience in patientcare. This aided the researcher to acquire data from Participants that fully covered the objectives of the study while simultaneously addressing the research questions of the study. Furthermore, data acquired from Participants enabled the researcher to develop a knowledge retention strategy for nurses at Philadelphia hospital depicted at the end of this chapter. The researcher also ensured that COVID-19 regulations were adhered to as outlined by the South African Government through the National Corona Command Team, this included 1m social distancing, hand sanitation and wearing of a surgical or cloth mask.

- In terms of positions, there were five nursing managers, five senior professional nurses and ten professional nursing specialists.
- In terms of occupation, five professional nurses were located at the maternity ward, five from the ICU ward, five from paediatric wards, three from oncology ward and two from psychiatric ward.
- with regards to gender, there were fifteen females and five males.
- In terms of experience, five nursing managers had ten years' experience; five senior professional nurses had between six to eight years of experience; ten professional nurses had between five to six years of experience.
- In terms of educational qualifications, five nursing managers are in position of master's degrees and two of them are studying towards their PhD, five senior professional nurses had Honour's degrees, ten professional nurses have bachelor's degrees.
- With regards to age, five nursing managers were in the ages between forty to forty-five, five senior professional nurses were in the ages between thirty-five to thirty-eight, ten nursing specialists were in the ages between thirty-one to thirty-four.

The findings of the study is presented in the next section in line with the different objectives

4.3 Explore the different knowledge retention strategies for nurses at Philadelphia Hospital

The first objective of this study was to explore the different knowledge retention strategies for nurses at Philadelphia hospital, with the views to retain nursing knowledge that is vulnerable to loss when professional nurses leave the organisation through various employee attrition factors. In order to explore the different types of nursing knowledge prominent amongst professional nurses, the following question was asked: Briefly establish the different types of knowledge that are available amongst professional nurses at Philadelphia hospital? The responses below were provided indicating a clear understanding of the different types of nursing knowledge prominent amongst professional nurses at Philadelphia hospital.

“General patient care knowledge, speciality patient care knowledge, Orthopaedic patient care knowledge, operations and ICU knowledge”.[Participant 1]

“General nursing knowledge, knowledge regarding critical patient care (ICU), Orthopaedic patient care knowledge”. [Participant 3]

“Management knowledge relating to solving problems in different wards, knowledge relating to dealing with difficult patients, general nursing knowledge”. [Participant 4]

“Orthopaedic nursing knowledge, community nursing knowledge, oncology nursing knowledge, trauma nursing knowledge, operating theatre knowledge, psychiatric nursing knowledge”. [Participant 5]

“Infection control knowledge, Nursing Administration knowledge, and knowledge of midwifery”. [Participant 6]

“Knowledge of ICU ward, general patient and midwifery knowledge, knowledge of managing staff in different wards, knowledge of managing patients at trauma ward.”
[Participant 8]

“Special patient care knowledge, Orthopaedic patient care knowledge, operations, community nursing knowledge and ICU knowledge”.[Participant 13]

“General knowledge of patient care, administrative nursing knowledge, knowledge of trauma cases, knowledge of making follow-ups on negligent cases against the hospital”. [Participant 15]

“Patient care knowledge, ICU patient knowledge, supervisory knowledge, knowledge for educating subordinates in medical negligent cases, knowledge for managing staff, knowledge for taking care of trauma patients”. [Participant 18]

“Knowledge for facilitating training staff members on OHS, community nursing knowledge, general patient care knowledge, knowledge of maternity, trauma, and ICU ward patients”. [participant 11]

“Nursing administration and education, community nursing knowledge, knowledge of infectious control, trauma nursing knowledge, psychiatric nursing knowledge”.
[Participant 19]

Being fully aware of the different types of nursing knowledge, participants provide a variety of knowledge prominent amongst professional nurses at Philadelphia hospital in accordance to the South African Nursing Council Assessment Report (2019). According to the South African Nursing Council Assessment Report (2019), the identification of these types of knowledge graphically portrays that, nurse's rely on more than one form of knowledge. The report further articulates that no single form of knowledge is superior or sufficient to the other. In view of this, the following types of nursing knowledge are identified by the South African Nursing Council Assessment Report (2019):

- **Aesthetic knowledge:** These are expert practices and motivational care concerns. In this case, motivation refers to the desires and passion to take care of patients in order for the illness or disability to subside.
- **Empirical knowledge:** This category of knowledge refers to empirical research, scientific analysis, reductionism and positivism. It is often referred to as "true" or "valid" knowledge in the sense that it is a subject of rigorous empirical examinations acquired through quantitative approaches.
- **Personal knowledge:** This refers to the state of being self-conscious. It does not originate from formal education but acquired synthetically through understanding rationale motives of the nursing profession.
- **Ethical knowledge:** in the nursing profession this type of knowledge includes motives to withdraw treatment, to resuscitate and when not to resuscitate patients. It serves as guidance to concerns, and to make accurate clinical decisions.

The different types of nursing knowledge provided by participants can directly or indirectly be categories in accordance with the different types of nursing knowledge provided by the South African Nursing Council Assessment Report (2019). In view of this, *Participant 1* provided the following types of nursing knowledge "General patient care knowledge, speciality patient care knowledge, Orthopaedic patient care knowledge, operations and ICU knowledge"; which differs in both concepts and rhetoric from the different types of knowledge provided by *Participant 13* which are "Special patient care knowledge, Orthopaedic patient care knowledge, operations, community nursing knowledge and ICU knowledge". Furthermore, *Participant 19*

provided distinctive nursing knowledge prominent amongst professional nurses which differs from the distinctions provided by *Participant 11*. From the responses provided by participants, it can be deduced that, different concepts are used by different professional nurses to refer to similar or diverse knowledge commonly used in patient care.

4.3.1 Knowledge as a strategic resource

Participants were further asked about the ways in which their organisation consider knowledge as a strategic resource. The following views were provided:

“Through sending staff members to attend knowledge sharing and retention seminars within and outside the hospital”. [Participant 3]

“The organisation values knowledge as a strategic resource because we give staff members an opportunity to attend provincial nursing workshops and seminars to share special knowledge regarding patient care, these nurses then share with us what they have learnt through attending the workshops”. [Participant 5]

“By providing professional nurses with special leaves to attend seminars relating to the retention of critical nursing knowledge of patient care”. [Participant 6]

“By encouraging professional nurses to share knowledge of patient care in order to retain it”. [Participant 9]

“By hosting meetings for the purpose of sharing and retaining knowledge of professional nurses”. [Participant 13]

“The organisation makes it available for knowledge retention and sharing tools such as video and voice recording of meetings, workshops and seminars held in order to improve patients care”. [Participant 17]

“By hosting special meetings, workshops and seminars for the purpose of improving patient care, we normally record the minutes of this particular sessions”. [Participants 19]

“The organisation captures best practices and practical nursing knowledge on the Limpopo Department of Health Nursing Knowledge portal which is then preserved by the National Department of Health”. [Participant 11]

“For nurses working at the ICU ward, we host bi-weekly meetings and workshops for the purpose of sharing and retaining knowledge on how to hold critical patients”. [Participant 18]

“We give staff members an opportunity to share knowledge on their difficult situations when dealing with patients and how to improve those situations, these workshops are held weekly in the presence of the Merton and Nursing Managers”. [participant 14]

Based on the responses provided by participants, it appears that the organisation considers knowledge as a strategic resource. This view is supported by *Participant 3* who alluded that, the organisation provides an opportunity for professional nurses to attend knowledge sharing and retention seminars within and outside the organisation, this shows the consideration the organisation has in relation to viewing knowledge as a strategic resource. According to Ramadan (2017), knowledge plays a fundamental role in the nursing profession as it provides greater culpability and evidence-based practices in health planning, policy making and strategy implementation in the pursuit of quality patient care. The benefits of knowledge in healthcare organisations contributes to enhanced provision of services to patients, and most prominently, to carry out organisational daily operations efficiently (Tim 2013). This view is further supported by *Participant 5* alluding to the fact that, the organisation considers knowledge as a strategic resource by providing an opportunity for professional nurses to attend provincial nursing workshops and seminars that are hosted precisely to share and retain knowledge regarding patientcare. In view of this, *Participant 11* further supports this notion by entailing that, the organisation consider knowledge as a strategic resource, this is demonstrated by the capturing of best practices and practical nursing knowledge on the Limpopo Department of Health Knowledge Portal. According to Ibarra (2013), the purpose of knowledge in healthcare sectors is to improve patientcare. Furthermore, Tim (2013) asserts that, the benefit of nursing knowledge in healthcare organisations contributes to enhanced provision of services

to patients, and most prominently, to carry out organisational daily operations efficiently. *Participant 17* is in support of these notions by alluding that, the organisations consider knowledge as a strategic resource because it provides resources at their disposal that are used and designed precisely to improve patientcare. Furthermore, *Participant 6* asserts that, the organisation provides professional nurses with special leaves to attend seminars relating to the retention of critical nursing knowledge, this sentiment is in support of the views that, the organisation considers nursing knowledge as a strategic resource. In view of the sentiments provided, it could be noted that participants view knowledge as a source in accordance to the literature provided by Ibarra (2013) who alludes that, the purpose of knowledge is to improve our lives, as it allows humans to define, prepare, shape and learn to solve a task or problem. In view of this support, Nonaka and Krogh (2009) accentuate that, knowledge comprises of definite skills and techniques for the persistence of accomplishing a task.

4.3.2 Strategies for retaining nursing knowledge

In order to explore the different strategies for retaining nursing knowledge, and to explore professional nurses understanding of the concept strategies for retaining nursing knowledge, Participants were asked to elaborate on the strategies used to retain nursing knowledge at their organisation. The following responses were given:

“In-service training programmes, Demonstrations, Standard operating procedures and business process mapping”. [Participant 2]

“Orientations, workshops, in-service training, policy development, development of SOP’s”. [Participant 4]

“By providing professional nurses with ICT skills, so that they can capture critical nursing knowledge on the Limpopo Department of Health Knowledge portal”. [Participant 5]

“By having weekly meetings whereby at the end of the meetings, in-service trainings are conducted; knowledgeable professional nurses present topics about patientcare”. [Participant 7]

“By sharing nursing knowledge through emails, video and voice recording whenever there are presentations, as well as through WhatsApp groups”. [Participant 12]

“Meetings, workshops, nursing community of practices, seminars, documenting of organisational nursing knowledge”. [Participant 15]

“Documenting and recording minutes of meetings and attending knowledge transfer and sharing seminars hosted by the health department”. [Participant 17]

“The organisation has a knowledge retention policy at hand which encourages nurses to attend seminars, community of practices, nursing forums etc.” [Participant 20]

Participants provided a variety of responses regarding the strategies that are used to retain nursing knowledge at their organisation. The responses above indicate that, there seem to be confusions on which of the strategies are used to retain nursing knowledge at their organisation. For instance, *Participant 2* has highlighted that, the organisation uses “in-service training programmes, demonstrations, standard operating procedures and business process mapping” as strategies for retaining nursing knowledge, whereas *Participant 5* has indicated that, the organisations provide professional nurses with ICT skills, so that they can capture critical nursing knowledge on the Limpopo Department of Health Knowledge portal. One of the goals of knowledge retention in healthcare organisations is to maintain the efficient circulation of existing critical nursing knowledge and information within the organisation through the integration of a strategy (Yeomans & Reich 2017). The intended goal is to reduce the impact of knowledge attrition within the healthcare sector by employing strategies that will play a significant role in ensuring that, critical nursing knowledge and information regarding patientcare that has been acquired through years of experience is not lost through various forms of employee attrition, and many other factors that contributes to knowledge loss (Grant 2017). In view of this *Participant 17* indicated documenting and recording minutes of meetings and attending knowledge transfer and sharing seminars hosted by the health department as strategies for retaining nursing knowledge. Furthermore, *Participant 20* alluded that “The organisation has a knowledge retention policy at hand which encourages nurses to attend seminars, community of practices, nursing forums etc.” Based on the

responses provided, it can be deduced that, participants are not aware of, or the organisation does not have specific documented strategies or policies for retaining nursing knowledge at their organisation.

As a follow-up question, participants were then asked to probe on how the identified strategies for retaining nursing knowledge were used and their effectiveness. The following responses were provided:

“By hosting weekly meetings, professional nurses than present topics to share, transfer and retain important knowledge they have attain through attending workshops and trainings”. [Participant 2]

“In-service training programmes are hosted and attended by selected staff members with high effective demonstrative skills, they are then able to share and transfer the knowledge to the rest of the staff members through meetings”. [Participant 4]

“By tasking professional nurses with ICT skills and trainings to capture important nursing knowledge in the form of reports, documents and minutes than circulate and share it with the rest of the staff members in different wards”. [Participant 5]

By sharing and making video’s and voice recordings of trainings being held to the rest of the staff members through the use of emails”. [Participant 15]

“By enforcing a knowledge retention policy in which nurses are encouraged to share best practices and lessons learned to be captured on the DHIS and also exit interview”. [Participant 20]

“In-service trainings are conducted after each and every meeting that was held; after professional nurses share presentations of their topic of choice, a question-and-answer session is provided, this helps a lot in terms of retaining knowledge about important factors in patientcare”. [Participant 7]

“Documentations and recordings of minutes of meetings are circulated and shared with the rest of the attendees of seminars hosted by the health department”.

[Participant 17]

It appears from the above responses that Participants have different perspectives on how the identified strategies above are used to retain nursing knowledge at their organisation including their effectiveness. For instance, *Participant 2* has alluded to the use of meetings as the most prominent and effective strategy for sharing, transferring, and retaining nursing knowledge at their organisation. While *Participant 20* has provided that, the organisation enforces a knowledge retention policy in which nurses are encouraged to share best practices and lessons learned to be captured on the DHIS, this included exit interview. On the contrary, *Participant 4* and *Participant 7* has mentioned the use of in-service training programmes as the most effective and prominent strategy for retaining nursing knowledge at their organisation. Most participants have in one way or another, directly or indirectly mentioned the use of community of practice as the most effective and identified strategy for retaining knowledge at their organisation.

According to Skyme (1999), Kim, Lee and Oslon (2008) and Hong (2011) and Kossivi (2016) communities of practice is defined by as a group of people sharing common interests, concerns, challenges and desires in a particular field of expertise interacting on a regular basis to share and transfer knowledge about precise phenomena. Lee (2016) is of a view that such people are united by similar purposes, problems and concerns in order to share knowledge and experience in their field of expertise to drive learning initiatives. However, it is important to note that, although it appears that team meetings and in-service programmes may constitute both community of practices, most participants do not explicitly recognise the use of meetings and in-service training programmes as a community of practice. These competing practices, as provided by participants, graphically depicts that there is a lack of understanding and awareness in terms of which of the precise strategies are used to retain their knowledge for future references and continuity.

The loss of knowledge can bring about important and massive performance implications for an organization (Kossivi 2016). Thus, to avoid this from taking place, it is required to execute curative actions and strategies to implement in order to retain

the knowledge of employees from being lost (Martins & Meyer 2012). In this view, Participants were asked who is responsible for implementing a strategy for retaining nursing knowledge at their organisation. The following responses were provided:

“Nursing Service Manager and Area Manager”. [Participant 3]

“Nurses in charge in various ward sections”. [Participant 9]

“Nursing Human Resource Director (HRD)”. [Participant 6]

“I am not sure”. [Participant 16]

“Nursing Communication Manager”. [Participant 13]

“Human Resource personnel”. [Participant 18]

“Nursing Director”. [Participant 4]

“Nurses reporting to the CEO”. [Participant 11]

“Office of the Ombudsman”. [Participant 1]

“Limpopo Department of Health”. [participant 15]

One of the goals of knowledge retention in healthcare organisations is to maintain the efficient circulation of existing critical nursing knowledge and information within the organisation through the integration of a strategy or strategies (Yeomans & Reich 2017). In this view, Participants provided different perspectives and views about who is responsible for implementing a strategy for retaining nursing knowledge at their organisation. For example, *Participant 15* has alluded that, the Limpopo Department of Health is responsible for implementing a strategy for retaining nursing knowledge at their organisation: Whereas *Participant 1* has articulated that, the Office of the Ombudsman is responsible for implementing a strategy for retaining nursing knowledge at their organisation. Contrary to the sentiments provided by *Participant 1* and *15*, *Participant 11* has portrayed that, nurses reporting to the CEO are responsible

for implementing strategies for retaining nursing knowledge at their organisations. *Participant 3* has alluded that the Nursing Service Manager and Area Manager are the ones responsible for implementing strategies for retaining nursing knowledge at their organisation. Moreover, *Participant 6* has alluded that, the Nursing Human Resource Director is responsible for implementing a strategy for retaining nursing knowledge at Philadelphia hospital. Based on the different perspectives, views and responses provided, it is important to note that, though participants may differ in their views, the hospital might have specific personnel responsible for implementing strategies for retaining nursing knowledge which they are not aware of. On the other hand, it can be noted that, it is possible that the organisation might not have a specialist responsible for implementing strategies for retaining nursing knowledge at their organisation.

Participants were then asked about how important knowledge retention strategies are in addressing the loss of critical nursing knowledge in their organisation. The following answers were provided:

“They are important though the organisation does not place enough resources for retaining nursing knowledge”. [Participant 1]

“Very important because it allows the organisation to retain critical nursing knowledge regarding patient care”. [Participant 5]

“I think they are important because we can’t afford to lose important knowledge of professional nurses”. [Participant 11]

“It is important because the organisation relies mostly on nursing knowledge to render services to patient, I think if such knowledge is lost, the hospital might have a lot of death reported in our statistics and this will harm our reputation as nurses.” [Participant 16]

“Very important because those in-charge of knowledge management in nursing remind us in weekly meetings to share our knowledge with casual nurses so that they are equipped on how to handle patients”. [Participant 8]

“I am not sure, but I think they are important because nursing knowledge is used as a strategic resource in our organisation”. [Participant 14]

“I think it is important because nurses are one of the most important healthcare workers in almost all health organisation, if nursing knowledge is not retained, the organisation won’t be able to function effectively”. [Participant 12]

“Well, I think it is important although the organisation only relies on Department of Health Information Systems to retain important knowledge, but I also think the organisation can do more regarding that”. [Participant 9]

To ensure a successful knowledge retention in healthcare organisations, healthcare sectors must diligently advocate for retention practices both at an individual and organisational level in order to sustain moderate levels of accountability in relation to medical errors and high-quality patient care services (Wang 2014). In view of this notion provided by Wang (2014), participants provided numerous, and a variety of responses regarding the importance of knowledge retention strategies in addressing the loss of critical nursing knowledge at their organisation. However, most responses pointed to the fact that, participants saw the importance of knowledge retention strategies in addressing the loss of critical nursing knowledge at their organisation. In support of this view, *Participant 16* asserts that, knowledge retention strategies are important in addressing the loss of critical nursing knowledge precisely because the organisation relies mostly on nursing knowledge to provide adequate healthcare services to patient, should the knowledge be lost, this could result in the increase in the death rate of patients triggered by medical errors. Furthermore, *Participant 11* has alluded to the fact that, knowledge retention strategies are important in addressing the loss of critical nursing knowledge because the organisation cannot afford to lose critical nursing knowledge regarding patient care. These views are further supported by the literature provided by Mehta, Kurbetti and Dhankhar (2014) who hypothesised that, knowledge retention is important in healthcare organisations primarily because healthcare professionals are requisite to be resourceful in rendering patient care, and always be prepared to yield fresh curative know-how occasions that contributes to patient care. *Participant 9* elaborated that, knowledge retention strategies are important in addressing the loss of critical nursing knowledge at their organisation, although the organisation does not place enough resources to prioritise the critical nursing knowledge. Based on the sentiments provided by participants, it can be recognised that, knowledge retention strategies are important in addressing the loss of critical nursing knowledge in their organisation.

4.4 Explore the tools for preserving knowledge at Philadelphia hospital

The second objective of this study was to explore the tools for preserving nursing knowledge at Philadelphia hospital. Organisations retain knowledge through the use of different tools such as the Internet and Intranet, workflow, data warehousing, electronic mail (E-mail), tele-conferencing and videoconferencing, electronic workplace for collaborative work, groupware, blogs, wikis, databases and knowledge repositories (O'Dell & Hubert 2011). Participants were asked to elaborate on which of the tools are used to retain nursing knowledge at their organisation, in addition, Participants were also asked probing questions on how the tools were are used and their effectiveness. The responses in this section identified which of the tools are used to retain nursing knowledge at Philadelphia hospital. They include E-mails, Internet and Intranet, video conferencing and databases.

4.4.1 E-mails

The following responses from Participants indicate the use of Emails as the most effective tools for preserving nursing knowledge at their organisation: Their sentiments are provided below:

"Emails are the most effective methods, although there is limited access to internet connectivity, we buy our own data to share and receive knowledge through emails."
[Participant 15]

"Well, am not quite sure about the tools, but what I do know is that we mostly use emails as a method of communication, so I think emails are the most effective tools because once an email sent, it could remain in the mailbox so long as I do not delete it." [Participant 13]

"The information management unit of the hospital uses emails as the most effective tool for storing nursing knowledge, which can then be retrieved whenever it is required." [Participant 12]

From the responses provided by participants above, it can be noted that, *Participant 15, 13 and 12* highlighted the use of emails as the most effective tool for preserving

nursing knowledge at their organisation. These views are in accordance to the literature provided by Lesley (2015) who articulates that, Electronic mail is a computerised information system designed for the purpose of ensuring that, nurses and other healthcare professionals are able to document, transcribe, share, receive and manage messages that are send electronically through the use of networks from one computer to the other. This view is further supported by the sentiments provided by *Participant 15* who articulated that, emails are the most effective method of preserving nursing knowledge at their organisation, however deterrence is brought about the limitations to network connectivity. Moreover, *Participant 13* highlighted that emails are the most effective tools for preserving nursing knowledge at their organisation precisely because, when an email is sent, it may remain in the mailbox unless otherwise is deleted. In support of this view, from the literature provided by Laudon and Laudon (2007) it is observed that, emails allow thematic networks and knowledge sharing platforms through communities of practices to preserve, disseminate and share organisational knowledge through the use of the internet worldwide. Lastly, *Participant 12* has mentioned the use of emails as an effective tool by the information management unit of their organisation to preserve critical nursing knowledge. Drawing reference from the responses provided by participants, and the literature in support of their views, it is observed that emails are used as the most effective tools for preserving nursing knowledge at their organisation.

4.4.2 Internet and Intranet

The following responses from participants indicate the use of internet and intranet as the most effective tools for preserving nursing knowledge at their organisation. Their responses are presented below:

The organisation relies on the intranet through the use of the internet to preserve important knowledge of professional nurses, the internet is effective because the knowledge can be made available to nurses any time irrespective of their geographic location. [Participant 16]

“We use the District Health Information System to retain nursing knowledge, the DHIS is accessed through the Limpopo Department of Health intranet portal.” [Participant 14]

“The nursing knowledge is preserved by using the intranet and internet, although most of the time we use our own data to retrieve reports which contains information and knowledge about important aspects of patientcare”. [Participant 19]

“The intranet has proven to be an important tool in preserving nursing knowledge at Philadelphia hospital, it is useful because the knowledge remains on the portal forever.” [Participant 17]

“Philadelphia hospital uses the internet through share-drives, and the Limpopo Department of Health Nursing Knowledge Portal.” [Participant 11]

From a portion of responses provided by participants, it appears that the organisation relies mostly on the use of the intranet and internet as the most effective tools for preserving nursing knowledge at their organisation. In view of this notion, *Participant 11* highlighted that, Philadelphia hospital relies mostly on the use of the internet through the application of share-drives and nursing knowledge portals advocated through the Limpopo Department of Health Intranet Portal. *Participant 17* is in support of this notion by asserting that, the intranet has proven to be one of the most fundamental aspect in preserving nursing knowledge at their organisation. Numerous literature findings concord with the views provided by participants, one of those being Debowski (2006) who asserts that, the application and use of the internet through the intranet technology is essential for healthcare workers, for nurses in particular to improve healthcare organisations knowledge retention practices in order to provision knowledge dissemination, connections and publication of information. Moreover, Harden (2012) is also in support of the view by hypothesising that, the internet is the most reliable source of connection for public communication that links people, individuals and organisations globally. However, although participants have alluded to the use of internet and intranet as the most effective tool for preserving nursing knowledge, it is important to note that, *Participants 19* has highlight that, the organisation does not provide them with adequate resources such as data to retrieve such knowledge for future references. Furthermore, in order to do justice to the subject, *Participant 14* has mentioned the use of DHIS as the most prominent figure in the preservation of critical nursing knowledge at their organisations. In support of

this insertion, literature provided by Lesley (2015) accentuates that, the internet delivers widespread methods through which knowledge sharing initiatives are made easier for clients, employees and organisations at large, through the use of the World Wide Web. *Participant 16* also elaborated that, “The organisation relies on the intranet through the use of the internet to preserve important knowledge of professional nurses, the internet is effective because the knowledge can be made available to nurses any time irrespective of their geographic location”. Based on the views provided by participants, along with extensive literature findings, it could be denoted that, participant felt that the internet and intranet are the most effective tools for preserving nursing knowledge at their organisation.

4.4.3 Videoconferencing

The following responses indicate the use of Videoconferencing as the most effective tool for preserving nursing knowledge at their organisation. Their responses are presented below:

“The Limpopo Department of Health encourages us to use video conferencing because it is the most effective tool for retaining nursing knowledge although it is very expensive for us because the organisation does not provide us with data.” [Participant 20]

“I am not sure about us, but mostly Nursing managers and Area managers often use videoconferencing for meetings and training purposes. The recordings of the meetings or trainings are than saved on the DHIS where they are shared with the rest of the nursing staff.” [Participant 18]

I think is videoconferencing, the last time I was not able to attend a workshop that was hosted virtually, but I was able to retrieve a copy of the training session on the Limpopo Department of Health Nursing Portal. So, I think videoconferencing is the most effective tool for preserving nursing knowledge. [Participant 10]

The responses illustrate the use of videoconferencing as the most effective tool for preserving nursing knowledge at Philadelphia hospital, this is in accordance with the views provided by *Participants 20, 18 and 10*. According to Laudon and Laudon (2007)

videoconferencing is a crucial tool for knowledge sharing amongst nurses and other healthcare professional through which collaboration, communication and interactions about patient care can be discussed, it also provide an opportunity for documents, transcriptions, videos and slides to be shared without distance being a barrier. In support of this conception provided by Laudon and Laudon (2007), *Participant 10* regards videoconferencing as the most effective tool for preserving nursing knowledge, the participant further provided an instance by alluding that, in the event where nurses are not able to attend meetings, trainings or workshops, the recordings are made available for to the rest of the nursing staff through the Limpopo Department of Health Nursing Portal. Furthermore, *Participant 18* asserts that Nursing managers and Area managers rely on the use of videoconferencing for meetings and trainings, the recordings are then made available to the entire nursing staff via the DHIS. This view is in accordance with the literature provided by Kamakari and Drigas (2010) who eloquently posit that, tele-conferencing is an elementary method of conferencing through which telephones, groupware and emails are utilised to share information and knowledge.

4ti/F3 Tm-n Databases

The following responses from participants indicate the use of Database and Knowledge repositories as the most effective tools for preserving nursing knowledge at their organisation. Their responses are presented below:

“Databases are the most reliable methods that we use because the organisation captures and retains most of the nursing knowledge on DHIS.” [Participant 9]

“District Health Information System is a database that is most effective because most of nursing knowledge are preserved on the system.” [Participant 6]

“Organisational repositories are the most effective tools for preserving nursing knowledge, although nursing staff are expected to use their own data to access knowledge preserved in those repositories.” [Participant 3]

Participants viewed databases as the most effective tools for preserving nursing knowledge at their organisation. Their views were in accordance to Ramasami (2011)

who hypothesised that databases are shared, collective and integrated logically connected designed software comprising of information preserved for organisational purposes. For instance, *Participant 6* demonstrated that, DHIS is recognised as a database that is most effective in preserving nursing knowledge at their organisation. This view is further supported by *Participant 3* who alluded to the fact that, databases are the most reliable sources of preserving nursing knowledge because the organisation captures and retain professional nursing knowledge on DHIS. Furthermore, *Participant 9* also recognised databases as the most effective tool for preserving nursing knowledge. The sentiments provided by participants accords with the literature provided by Atwood (2009) who agrees with Egan (1998) that, databases are technological means of possibly ensuring that, organisations are able to acquire, sustain, preserve, archive and share organisational knowledge.

As follow-up question, participants were asked to elaborate on whether they think is important to use such tools for the purpose of retaining nursing knowledge at their organisation. The following responses were provided:

“It is important, even if the organisation does not provide us with data to ensure that we are able to access such knowledge for future references.” [Participant 18]

“Important, but I also believe the organisation must train professional nurses knowledge retention strategies and systems.” [Participant 20]

“Not sure because I have limited knowledge of knowledge retention in health organisation.” [Participant 1]

“It is important, because I can access the District Health Information System database any time to make reference when I ever am not sure about how to handle a patient with a certain illness.” [Participant 6]

“It is important because am able to access emails from my mobile phone any time to refer to a specific solution towards a challenge I might be having.” [Participant 15]

“I believe it is important.” [Participant 7]

“I think it is important because it helps the organisation not lose important knowledge.”
[Participant 18]

“Nursing knowledge is a strategic tool that we use to save lives and we cannot afford to lose it in the organisation, so yes I feel the tool are important.” [Participant 15]

The responses provided by participants were in agreement with the fact that, they saw the importance of using the identified tools for preserving nursing knowledge at their organisation, such views were in accord with the hypothesis provided by DeLong (2004) who asserts that, healthcare organisations are inevitably vulnerable to the loss of critical knowledge brought about employee attrition factors. In view of this notion, Trögl and Maier (2011) eloquently portrayed that, the application of IT systems is a significant aspect in the development of knowledge retention strategies in any organisation to integrate and facilitate a culture of knowledge sharing, transferring and retention (Trögl & Maier 2011). *Participant 15* emphasised the importance of using such tools precisely because their organisation considers knowledge as a strategic resource, and most importantly cannot risk losing critical nursing knowledge. *Participant 18* further supports this notion by portraying that, the tools are important and effective because they help the organisation not lose knowledge that is valuable to the organisation. In support of this view, Peterson (2012) asserts that information communication technologies have been applied in almost all organisations to substitute old methods of retaining knowledge and most importantly to concurrently deal with the issues of organisational knowledge loss. *Participant 6* saw the importance of using such tools for preserving critical nursing knowledge precisely because they allow them to access the DHIS anytime without distance being. With reference to the sentiments provided, it also important to note that, Participants highlighted a number of impediments which they felt prevents the organisation from attaining the full operational scale of the tools to preserve nursing knowledge at their organisation. For instance, *Participant 20* has mentioned that the tools are important for preserving nursing knowledge, but however, the organisation must train nurses on the concept of knowledge retention. In accord to this incentive, *Participant 1* asserts that, they possess insufficient knowledge on the knowledge retention. Furthermore, *Participant 18* also elaborated that, the tools are important, but the organisation does

not provide them with data to access the required knowledge whenever they it is necessary.

Participants were asked to elaborate about who is responsible for ensuring that, the tools for retaining nursing knowledge are used at Philadelphia hospital. The following responses were provided:

“Operational Manager.” [Participant 20]

“Area Manager.” [Participant 9]

“Nursing service manager.” [Participant 3]

“Nursing Communication Manager.”[Participant 4]

“Human Resource personnel.” [Participant 18]

“Nursing Director.” [Participant 11]

“Office of the Ombudsman.”. [Participant 1]

“Limpopo Department of Health.” [Participant 18]

“All head of sections in different wards.” [Participant 15]

Based on the responses provided by Participants, it seems there is confusion or little knowledge about who is responsible for ensuring the effective utilisation of knowledge retention tools at Philadelphia hospital. In view of this support, *Participant 15* has alluded that, all heads of department in different sections of wards are responsible for ensuring the effective utilisation of tools for preserving nursing knowledge. On the contrary, *Participant 1* has alluded to the Office of the Health Ombudsman as the one responsible for ensuring the effective utilisation of tools for preserving nursing knowledge. Moreover, *Participant 18* has highlighted the Limpopo Department of Health as the champion for ensuring tools for preserving nursing knowledge are put to use. Furthermore, *Participant 20* has mentioned Area manager as the one responsible

for ensuring tools for preserving nursing knowledge are used. Whereas *Participant 3* has portrayed the Nursing Service manager as the one responsible for ensuring effective utilisation of tools for preserving nursing knowledge.

Participants were then asked to elaborate on whether they think their organisation could implement better tools for preserving nursing knowledge at their organisation. The following responses were provided:

“Yes, the tools and techniques that are used at the moment are not effective, the limitation is that, there is limited connectivity to the internet, and we are not being provided with data to access different platforms for sharing and retaining knowledge.”
[Participant 4]

“Not sure since I do not fully understand the concept of knowledge retention and its importance.” [Participant 1]

“Yes and the organisation must train nursing staff about the importance of retaining knowledge.” [Participant 20]

“Not sure, but nursing knowledge is important and must be kept in the organisation.”
[Participant 18]

“Yes, the organisation can do better, they must implement better tools and train professional nurses on the use of ICT skills to share, transfer and retain knowledge.”
[Participant 6]

“Yes, the COVID-19 has shown us that, the organisation does not do enough when it comes to implementing better tools for retaining knowledge, most nurses who were 50 years and above could not report to duty when COVID started, we lost a lot of patience in the hospital because most experienced nurses stayed home with their experience.”
[Participant 15]

“Yes, although the organisation just needs to host awareness programme to encourage professional nurses to share their knowledge so that it could be retained for future usage.” [Participant 16]

Participants provided their views on whether the organisation can implement better or alternative tools for preserving nursing knowledge at their organisation. However, most responses were alluding to the fact that, alternative tools that suits the nursing profession could be adopted or implemented to better preserve knowledge of professional nurses at Philadelphia hospital. To support this notion, *Participant 15* has mentioned that the COVID-19 pandemic has demonstrated that, the organisation does not place enough resource to ensure effective or full implementation for the adoption of better tools for preserving nursing knowledge at their organisation. In addition, *Participant 15* further elaborated that, nurses with the ages 50 and above could not report for duty due to their vulnerability of exposure to COVID, and these has resulted in most experienced professional nurses not reporting for duty along with their valuable experience in patient care. *Participant 16* has mentioned that the organisation must consider implementing better tools for preserving nursing knowledge at their organisation, to achieve this, the organisation must host awareness programmes that will encourage professional nurses to share their knowledge in order to be retained for future usage. *Participant 6* has elaborated that the organisation must implement better tools, and train professional nurses on the use of ICT skills in order to share, transfer and retain nursing knowledge for continuity. On the contrary, Participant 4 has mentioned that the tools that are currently used are not effective, however, the greatest deterrent is internet connectivity and the lack of resources such as data to access the preserved knowledge for future references. *Participant 18* has provided a different response amongst others but asserting that, they are “Not sure, but nursing knowledge is important and must be kept in the organisation”.

4.5 Explore the challenges experienced in retaining knowledge of professional nurses at Philadelphia Hospital

The third objective of this study was to explore the challenges experienced in retaining knowledge of professional nurses at Philadelphia hospital. Numerous healthcare organisations across the world encounter challenges in retaining the knowledge of professional nurses and this has affected patientcare (McEwen & Wills, 2014). In this regard, Participants were asked to elaborate on the challenges experienced in retaining knowledge of professional nurses at their organisation. The following responses were provided:

“Most professional nurses leave the organisation without sharing their knowledge for retention purposes.” [Participant 5]

“The organisation does not conduct exit interviews when professional nurses leave the organisation.” [Participant 6]

“The organisation does not encourage professional nurses to participate in knowledge sharing initiatives.” [Participant 3]

“Most professional nurses are reluctant to share their knowledge with the organisation and they end up leaving with the knowledge they have gained throughout their years of practice.” [Participant 10]

“Professional nurses have little information about knowledge retention, they seldom assume that, when they leave the organisation, someone else having the same knowledge will replace them.” [Participant 8]

“I am not sure about the challenges, what I know is that we are always busy with patients, and we are not given enough time to engage and participate in awareness programmes about the importance of knowledge retention.” [Participant 13]

“Most professional nurses are not aware of knowledge retention programmes; the hospital is not doing enough to educate nurses about knowledge retention.” [Participant 19]

“Those who are in charge of knowledge retention do not come to us and encourage us to share our knowledge in order to retain it.” [Participant 14]

Participants provided different views regarding the challenges experienced in retaining the knowledge of professional nurses at their organisations. The views of most Participants were in accordance with the literature provided by Anduaem *et al.* (2018) who articulated that, In South Africa Knowledge retention in healthcare organisation is hardly understood and practiced by numerous healthcare workers including executive leaders and managers. The views were also in accordance to the literature provided by Ray, Grove and Sutherland (2016) who hypothesised that, like in many healthcare

organisations across the globe, it has been found that, the lack of awareness programmes about the importance of sharing knowledge for retention purposes is a significant contributor. *Participant 8* is in accord with this view by asserting that, professional nurses have insufficient information about knowledge retention practices at their organisation, this has made it difficult for the organisation to retain nursing knowledge for future continuity. Moreover, *Participant 19* has alluded that most professional nurses are not aware of knowledge retention practices because the hospital is not doing enough to educate professional nurses on the importance of knowledge retention. Furthermore, *Participant 3* has elaborated that the organisation does not encourage professional nurses to participate in knowledge retention practices. *Participant 14* is in support of this notion by asserting that, “those who are in charge of knowledge retention do not come to us and encourage us to share our knowledge in order to retain it”. According to Fawcett and Madeya (2013), factors such as unproductive organisational routines amongst professional nurses, unstainable institutional memories for preserving nursing knowledge and employee turnovers within the nursing profession in healthcare organisations has contributed to building a barrier in the process of preserving and retaining valuable nursing knowledge. In view of the literature provided Fawcett and Madeya (2013), *Participant 6* has mentioned that, the organisation does not conduct exit interviews when nurses leave the organisation through various employee attrition factors. *Participant 5* has elaborated that preserving nursing knowledge is a challenge precisely because most professional nurses leave the organisation without sharing their knowledge. With reference to the responses provided by participants, it is important to note that, there are fundamental factors that the organisation does not have control over with regards to retaining nursing knowledge. For instance, *Participant 10* has mentioned that, most professional nurses are reluctant to share their knowledge for retention purposes. Furthermore, *Participant 13* has alluded to the intensive nature of healthcare organisations, and how it devotes its integrated mandate and SOPs in patientcare rather than knowledge retention practices. In view of this, Kim (2010) purports that, challenges relating to employee competencies and proficiency in applying the know-how, and the integration of multiple nursing knowledge resources in healthcare organisations has resulted in numerous barriers in the preservation of valuable knowledge.

As a follow-up question, participants were asked to elaborate on whether the organisation have sufficient measures and solution to address those challenges. The following responses were presented:

“The Limpopo Department of Health host annual seminars to educate professional nurses about the importance of knowledge and how to share it for retention purposes.” [Participant 19]

“I am not sure.” [Participant 8]

“I don’t know.” [Participant 10]

“Well, the organisation might have solutions, although am not aware of it.” [Participant 14]

“I think the organisation sometimes consult with those who were previously employed in the organisation to recover the lost knowledge.” [Participant 3]

“No I don’t think the organisation have solutions to the challenge.” [Participant 5]

“Healthcare organisations are not like many other organisations that place enough resources to retain knowledge, however, I think the solutions are there although we are not aware of.” [Participant 13]

Participants provided views regarding solutions to the challenges experienced in retaining the knowledge of professional nurses at their organisation. However, most participants were not aware of the solutions implemented by their organisation to counter the challenges experienced. For example, *Participant 8* has mentioned that they are not sure on whether there are solutions to the challenges encountered in preserving nursing knowledge at their organisation. Furthermore, *Participant 14* has elaborated that the organisation might have solutions to the challenge although they are not aware of them. *Participant 10* has mentioned that they do not know whether there are solutions in place to deal with the matter. *Participant 5* has totally agreed that the organisation does not have solutions to the challenges experienced in retaining the know-how of professional nurses at their organisation. On the contrary,

Participant 19 has mentioned that the Limpopo Department of Health often host seminars to encourage nurses to share their knowledge for retention purposes. Moreover, *Participant 3* alluded that “I think the organisation sometimes consult with those who were previously employed in the organisation to recover the lost knowledge”. In accord with the literature provided by Kim (2010) who purports that, challenges relating to employee competencies and proficiency in applying the know-how, and the integration of multiple nursing knowledge resources in healthcare organisations has resulted in numerous barriers in the preservation of valuable knowledge, it can be denounced that, there is insufficient efforts made by the hospital to derive and implement solutions towards the challenges experienced.

Participants were then asked to elaborate on whether does their workforce demographics in terms of location affect staff attrition. The following responses were provided:

“The hospital is located in a rural village, and there are limited resources such as access to clean water, electricity and availability of well standardized accommodations for renting, this has caused many professional nurses to take transfers to other workplace in townships.” [Participant 2]

“Yes, the hospital is based in a rural area, there are no nearby shopping malls, and everything seems to be far, as a result, many professional nurses have relocated.” [Participant 6]

“No, despite the hospital being rurally based, accommodation is cheap, and the environment is safer than in townships.” [Participant 5]

“Yes, I believe that if the hospital was based in a township or urban area, most professional nurses could have not relocated.” [Participant 9]

“Yes, there is limited accommodation within the premises of the hospital, professional nurses are expected to look for accommodation off camp, this has resulted in most professional nurses having less interest in working at Philadelphia hospital.” [Participant 11]

“I think it does because the living conditions in this area is not suitable for most of us who come townships, we struggle for conducive accommodations, water scarcity and shopping malls, I was also considering to the leave the hospital due to this factor.”

[Participant 16]

“Yes, it does affect staff attrition, most professional nurses am working with want to relocate because the hospital is located in a very rural area where there are lot of service delivery issues, there is no water, there is no accommodation and sometimes no electricity in the village.” [Participant 19]

Participants provided responses in accordance with the South African Nursing Council Assessment Report for Rural Nursing in South Africa (2018/2019). The report alluded that; because Philadelphia hospital is rurally based, were living conditions do not meet the standards of most professional nurses coming from Urban and formal settlements, professional nurses are departing this hospital while considering employment opportunities in urbanised environment. In support of this view, *Participant 2* has mentioned that “the hospital is located in a rural village, and there are limited resources such as access to clean water, electricity and availability of well standardized accommodations for renting, this has caused many professional nurses to take transfers to other workplace in townships”. Furthermore, *Participant 6* has agreed that, their workforce demographics affect staff attrition precisely because the hospital is based in a location where there are no nearby shopping malls, thus is makes it very difficult for most professional nurses to cope with their daily social needs. Moreover, *Participant 19* has alluded to the fact that, most professional nurses they are working with are actually considering taking employment opportunities elsewhere precisely because the hospital is located in a previously disadvantaged locality were there are massive service delivery issues. In support of this view, the Limpopo Department of Health Statistics for Professional Nurses (2020) has alluded that, there were 444 registered professional nurses at Philadelphia Hospital in the year 2017/2018. In the year 2019/2020 Philadelphia hospital is currently having 219 professional nurses. *Participant 9* has elaborated that; the workforce demographics affect staff attrition specifically because they believe if the hospital was based in a township locality professional nurses wouldn't have to relocate to urbanised environment. Moreover, *Participant 11* has eloquently portrayed that there is limited accommodation within the hospital premises, and professional nurses are expected to rent accommodation

outside the premises; this has resulted in most professional nurses to have less interest in working for Philadelphia hospital. Drawing reference from the responses provided by participants, the Limpopo Department of Health Statistics for Professional Nurses (2020), and the South African Nursing Council Assessment Report for Rural Nursing (2018/2019), it can be noted that, the workforce demographics of Philadelphia hospital does affect staff attrition.

Participants were asked to elaborate on what seemed to prevent professional nurses to be reluctant to participate in knowledge retention practises. The following sentiments were provided:

“The organisation does not take initiatives to encourage professional nurses to participate in knowledge retention practices.” [Participant3]

“Professional nurses have little or no information about knowledge retention.” [Participant 1]

“The organisation is not doing enough to educate professional nurses about the importance of knowledge retention.” [Participant 16]

“Because of the nature of the hospital being busy and very hectic, most professional nurses commit themselves to their daily duties and do not have time to participate in knowledge retention practices.” [Participant 13]

“The organisation does not place enough resources to train professional nurses on the concept of knowledge retention.” [Participant 6]

Participants provided a variety of responses regarding the reluctance for professional nurses to participate in knowledge retention practices, with some alluding to the intensive nature of healthcare organisation in general, which does not directly provide professional nurses with the necessary time, resources, and opportunities to participate in knowledge retention practices. In view of this notion, *Participant 13* has alluded that, healthcare organisations are intensive in nature, and most professional nurses devote most of their time in patientcare rather to attend or engage in knowledge

retention practices. *Participant 6* has highlighted that; the organisation does not place enough resources to train professional nurses on the concept of knowledge retention. Knowledge retention is relevant in the nursing profession as it provides greater accountability and evidence-based processes in structuring, strategy implementation and service delivery in healthcare organisations (Shaari *et. al.*,2015). In the nursing profession knowledge retention initiates, a significant role in making sure that the appropriate information reaches the relevant people, and it is used for precise determinations at the right time (Wang *et. al.*, 2014). *Participant 1* has elaborated that; most professional nurses are reluctant to participate in knowledge retention practices precisely because they have insufficient information or knowledge about knowledge retention practices. Furthermore, *Participant 3* has alluded that most professional nurses are reluctant to participate in knowledge retention practices because the organisation does not encourage professional nurses participate in knowledge retention practices. Moreover, *Participant 16* agrees that the organisation is not doing enough to educate professional nurses on the importance of knowledge retention. In view of the literature provided by the South African Nursing Standard (2017) it is observed that, knowledge retention is important in the nursing profession precisely because it involves the process of retaining ownership, not losing, practising or recognising knowledge in healthcare organisations. With reference to the responses provided by participants, it can be recognised that, Philadelphia hospital has placed minimal devotions to knowledge retention practices in the nursing profession.

Participants were asked to elaborate on the ways in which their organisation encourage professional nurses to participate in knowledge retention platforms. The following responses were provided:

“The organisation sometimes hosts meetings to encourage professional nurses to engage in knowledge retention practices.” [Participant 9]

“Through the Limpopo Department of health knowledge sharing seminars.”

“I don’t know.” [Participant 1]

“By training professional nurses through advance training sessions hosted by the organisations in partnership with the National Health Information Management Department.” [Participant 16]

I am not sure about that since I don't remember being encouraged to participate in knowledge retention platforms.”[Participant 3]

“Sometimes they encourage us during meetings, but it's very rare.” [Participant 4]

“They sometimes encourage us through nursing workshops and seminars.” [Participant 15]

“Through the Limpopo Department of Health annual nursing seminars.” [Participant 18]

Participants provided a variety of responses regarding the ways in which their organisation encourages them to participate in knowledge retention platforms. The responses provided by most participants were a clear indication that, the organisation does not do enough to encourage professional nurses to take part in knowledge retention initiatives. In support of this view, *Participant 3* has mentioned that they do not remember being encouraged to participate in knowledge retention practices in their organisation. *Participant 4* has elaborated that, they are “sometimes” encouraged during meetings to engage in knowledge retention platforms. The responses of most Participants were depicting that, they were either unsure or totally unaware of the efforts their organisation is contributing to encourage them to participate in knowledge retention platforms. To support this view, *Participant 15* has portrayed that they are often encouraged to participate in knowledge retention platforms through nursing seminars and workshops. Furthermore, *Participant 9* alluded that the organisation sometimes hosts meetings for the purpose of encouraging professional nurses to take part in platforms for retaining nursing knowledge. On the contrary, *Participant 18* has mentioned that the Limpopo Department of Health hosts seminars that are designed precisely to encourage professional nurses to participate in knowledge retention practices. According to *Participant 16*, Philadelphia hospital encourages professional nurses to take part in knowledge retention platforms “by training professional nurses

through advance training sessions hosted by the organisations in partnership with the National Health Information Management Department”.

4.6. Develop a strategy for retaining knowledge of professional nurses at Philadelphia Hospital

The fifth objective of this study was to develop a strategy for retaining nursing knowledge at Philadelphia hospital. Participants were asked to provide sentiments about the role their organisation plays in preserve critical nursing knowledge. The following responses were provided:

“The Limpopo Department of Health ensure that the knowledge of professional nurses is captured through the use of District Health Information System.” [Participant 4]

“The organisation sometimes host meetings were professional nurses are encouraged to provide views on how best their knowledge can be retained.” [Participant 11]

“The organisation enforces the use of Databases to capture best practices and retain most of the nursing knowledge on District Health Information System.” [Participant 9]

“I don’t know.” [Participant 16]

“I am not sure.” [Participant 7]

“The nursing manager coordinates trainings about the importance of knowledge retention, and staff members are encouraged to be participate in the programmes.” [Participant 13]

Participants provided views regarding the role their organisation plays to ensure that critical nursing knowledge is preserved for future usage. One of the goals of knowledge retention in healthcare organisations is to maintain the efficient circulation of existing critical nursing knowledge and information within the organisation through the integration of a strategy (Yeomans & Reich 2017). The intended goal is to reduce the impact of knowledge attrition within the healthcare sector by employing strategies

that will play a significant role in ensuring that, critical nursing knowledge and information regarding patientcare that has been acquired through years of experience is not lost through various forms of employee attrition, and many other factors that contributes to knowledge loss (Grant 2017).

In views of the notions above provided by several literatures, *Participant 4* has elaborated that the Limpopo Department of Health plays an important role in ensuring that critical nursing knowledge is captured through the use of the DHIS. In support of this view, *Participant 9* has alluded that, the organisation enforces the use of Database to capture best practices, lessons learned and critical nursing knowledge of the DHIS. Based on the responses provided by participants throughout the entire interviews of the study, DHIS is mentioned by most participants, this entails that it is the most reliable source of preserving nursing knowledge that professional nurses are aware of. *Participant 11* has alluded that the organisation sometimes host meetings through which professional nurses are encouraged to provide views on how best their knowledge can be retained.

Furthermore, *Participant 13* has elaborated that the nursing manager coordinates trainings about the importance of knowledge retention, and staff members are encouraged to be participate in the programmes. According to Mehta *et. al.* (2014), the implementation of knowledge retention practices in healthcare organisations can only be achieved through the development and integration of a policy derived from a strategy or vice versa. Drawing references from the views provided by participants, it is clear that the organisation requires a strategy for retaining nursing knowledge to be developed, it through this initiative that critical nursing knowledge might be preserved for future continuity.

Participants were also asked to provide strategies that could be appropriate to retain critical nursing knowledge at Philadelphia hospital, the following responses were provided:

“The strategy that can work, is to encourage professional nurses to participate in knowledge retention practices.” [Participant 14]

“I think the organisation must invest more in IT tools such as Microsoft teams, those systems will allow knowledge to be captured and retained more easily.” [Participant 7].

“I am not sure, but I think the development of a nursing portal will work.” [Participant 9]

“In addition to the District Health Information System (DHIS) I think the hospital must introduce disruptive technologies as alternative medium of storing knowledge because they are easily accessible.” [Participant 2]

“I am not sure about that.” [Participant 16]

Participants provided a variety of responses regarding what strategies would be effective in retaining critical nursing knowledge at their organisations. In view of the responses provided, it could be noted that, although most professional nurses are not well clued-up about knowledge retention practices, they still feel the organisation must enhance the current strategies used to ensure the accurate preservation of critical nursing knowledge. For instance, *Participant 2* has alluded that, in addition to the DHIS as a knowledge preservation strategy or tool, the participant feels that the hospital must implemented more disruptive technological elements that will allow the sustenance and retention of critical nursing knowledge. In view of this accord, although *Participant 9* was not sure about what strategies to propose, but has mentioned the development of a nursing portal as the most strategy that would be effective in retaining critical nursing knowledge at their organisation. *Participant 14* has mentioned that, the most effective strategy to be implemented that will ensure the successful retention of nursing knowledge in their organisation is to encourage professional to participate in knowledge retention practices. Information communication technology is the most effective and prominent tool used in the digital age, most importantly in the field of knowledge management to achieve knowledge retention objectives and practices (Adeyelure, Kalema & Motlanthe 2019). In support of this notion, *Participant 7* calls for the hospital to place more efforts and investments on Information Technology initiatives to achieve its knowledge retention objectives in the nursing profession.

Participants were then asked to elaborate on whether there is the need to implement accurate knowledge retention strategies for retaining nursing knowledge at their organisation. The following responses were provided:

“Yes, because nursing knowledge is very important when comes to patient care, the organisation must implement proper measures to retain nursing knowledge.” [Participant 15]

“Yes, the current strategies for retaining nursing knowledge are not properly implemented.” [Participant 6]

“No, because the Limpopo Department of Health has the District Health Information System that they use to capture nursing knowledge.” [Participant 12]

“I have very little knowledge of knowledge retention strategies that the organisation uses, so I believe they should implement a good strategy and educate nurses about sharing knowledge.” [Participant 10]

“Yes, because the current strategies are not effective.” [Participant 18]

“Yes, the organisation must prioritize retaining knowledge of professional nurses because it is necessary for business continuity.” [Participant 2]

Participants provided responses on whether there is the need to implement accurate knowledge retention strategies for the purpose of retaining critical nursing knowledge at their organisation. However, it is important to note that most responses were in agreement with the notion that, there is a need for the implementation of accurate knowledge retention strategies for the purpose of retaining nursing knowledge at their organisation. In accord to this notion, *Participant 2* has stated that the organisation has an obligation to prioritise the retention of critical nursing knowledge for effective business continuity. *Participant 18* has mentioned that the current strategies used for the purpose of retaining nursing knowledge are not effective. In order to do justice to that subject, literature provided by Shah and Hussin (2018) elucidate that, a

knowledge retention strategy developed through knowledge management initiatives, provides guiding principles and encourages organisations to support knowledge baseline assessments of current knowledge situations to pursued and apply lesson learned from the efforts made by knowledge workers. This argument is further maintained by Mehta, Kurbetti and Dhankhar (2014) who articulates that, bilateral grounds should be acknowledged when developing a knowledge retention strategy in organisations. *Participant 10* has elaborated that they have little knowledge about knowledge retention strategies, but they feel the organisation must ensure the integration and adoption of accurate knowledge retention strategies. *Participant 6* has agreed that there is the need for the implementation of adequate knowledge retention strategies for preserving nursing knowledge, since the current strategies are not accurately implemented. Furthermore, *Participant 15* considers nursing knowledge as a very important tool in patientcare, therefore the organisation must implement accurate strategies for retaining nursing knowledge at their organisation.

Participants were then asked to elaborate on the ways in which they think their organisation could enhance knowledge retention initiatives. The following responses were presented according to themes:

4.6.1 Succession Planning

Succession planning is the most common practice of knowledge retention and transfer in organisations (Lee 2016). Lee (2016) further asserts that, organisational knowledge acquired through succession planning depicts a proactive approach in order to reinforce newly appointed employees to increase productivity in work performance, and to combat the challenge of organisational knowledge losses. In view of this notion, *Participant 9* has stated the need for success planning as the most way to enhance knowledge retention initiatives at their organisation by stating that, “the organisation must host more training and awareness sessions about knowledge retention”.

4.6.2 Community of Practice

Participant 5 has mentioned that “Area Manager and Nursing Managers must send staff to attend modules for knowledge retention”. This notion indirectly calls for the need for community of practices as the most effective initiative to enhance knowledge retention practices at their organisation. Communities of practice is defined by Skyme

(1999); Kim, Lee and Oslon (2008) and Hong (2011) and Kossivi (2016) as a group of people sharing common interests, concerns, challenges, and desires in a particular field of expertise interacting on a regular basis to share and transfer knowledge about precise phenomena.

4.6.3. Coaching

Participant 7 has elaborated that “The Limpopo Department of Health must place more resources to nurses so that they can be able to attend seminars on knowledge retention”. This view calls for coaching as the most effective approach to enhance knowledge retention practices amongst professional nurses at Philadelphia hospital. Coaching refers to organisational intellectual interactions between employees and management, with the purpose of instilling guidance and specific training developments thereby bringing about new skills in employees (Kossivi 2016). Chigada and Ngulube (2016) observe that coaching assists employees to put in practice the knowledge they acquired through coaching; these knowledges include practical observable organisational procedures in which expert employees are able to supervise and assess subordinate’s performance. Salisbury (2014) further contends that coaching is regarded as a mutual relationship between expert employees and novices in the sense that, knowledge is shared equally amongst the two participants thereby driving equal learning activities.

4.6.4. Storytelling

Participant 11 has mentioned that “the organisation must constantly be in touch with professional nurses and remind them about why knowledge must be shared and retained”. This approach calls for the integrated mandate of storytelling as the most effective way to enhance knowledge retention practices at Philadelphia hospital. Storytelling as a technique used in knowledge transfer, includes sharing with employees’ stories about work, the institution, expressive social interactions, indications of the past and future operations of the organisation (Tobin & Snyman 2008). LeBlanc and Hogg (2006) purport that storytelling is an approach of knowledge transfer in organisations in which tacit knowledge is uncovered as part of the learning process. Tobin and Snyman (2008) posit that storytelling sustains organisational unity

and gives guidance to employees about information, organisational culture and assists employees to develop an element of organisational integrity.

Drawing reference from the ways in which the organisation can enhance knowledge retention practices, Participants were asked to elaborate on whether they think those measures will be effective. The following responses were provided:

“Yes, because if staff members are educated about knowledge retention, they will see the importance of participating in knowledge retention practices.” [Participant 5]

“Yes, because if professional nurses attend more trainings about knowledge retention, they participate in knowledge retention initiatives.” [Participant 9]

“If the Limpopo Department of Health make resources available to professional nurses, it will be simple for them to be interested in participating in knowledge retention.” [Participant 7]

“When professional nurses are reminded constantly about the importance of

way professional nurses will develop a conscious to share their knowledge for retention purposes. Moreover, *Participant 5* elaborated that it is required for professional nurses to be adequately educated on the notion of knowledge retention practices in order to remain conscious about the importance of sharing their knowledge for retention purposes. *Participant 7* has called for the Limpopo Department of Health to place enough resources available for professional nurses to engage in knowledge retention practices.

Lastly, participants were asked about the ways in which their might encourage professional nurses to participate in knowledge retention initiatives. The following responses were provided:

“By educating staff members about the importance of knowledge retention.”
[Participant 20]

“The organisation must host awareness session about knowledge retention.”
[Participant 13]

“The organisation must provide incentives for those participating in knowledge retention.” [Participant 10]

“The organisation must make enough resources available for knowledge retention initiatives.” [Participant 5]

“The Nursing manager must delegate a group of nurses to encourage the rest of the staff to participate in knowledge retention practices.” [Participant 8]

Participants provided a variety of responses regarding the ways in which their organisation might encourage professional nurses to participate in knowledge retention practices at their organisations. Most responses provided were depicting a clear indication of understanding the loopholes that existed as far as knowledge retention practices are concerned at Philadelphia hospital. For instance, *Participant 8* has alluded that, those who are in charge in the nursing profession must take charge by delegating a group of nurses that facilitate the culture of knowledge retention.

Participant 10 has mentioned the importance on introducing reward systems that will encourage professional nurses to participate in knowledge retention practices. Furthermore, *Participant 5* has appealed that the organisation must devote enough resource for professional nurses to participate in knowledge retention practices. Moreover, *Participant 20* and *13* have called for education and awareness training programmes about knowledge retention as the most prominent figure that will encourage professional nurses to participate in knowledge retention practices.

4.7 Knowledge retention strategy for professional nurses at Philadelphia hospital

The purpose of this study was to develop a knowledge retention strategy for professional nurses at Philadelphia hospital with the views to retain critical nursing knowledge that is vulnerable to loss when professional nurses leave the organisation through a variety of employee attrition factors. The inability to retaining critical nursing knowledge in healthcare organisations has become one of the rising concerns, and emerges from numerous factors (Decker, Howard & Holdread 2016). With reference to the research findings of the study, the researcher has developed a knowledge retention strategy depicted in figure 1 in the form of a flow chart below. The strategy developed by the researcher accentually addresses the last objective of the study, which is to develop a strategy to retain critical nursing knowledge at Philadelphia hospital. The strategy depicted below in figure 1 in the form of a flow chart will be explained in a broader detail, with each box being a sub-strategy on its own within the part of the larger strategy for retaining critical nursing knowledge at Philadelphia hospital.

4.7.1 Knowledge retention Policy

The role played by policy-based interventions in organisations has remained vigorous over time and is regarded as an instrument for instigating organisational management and control (Shah & Hussin 2018). Policies are formally adapted to developed guidance for organisational decision-making and governing purposes (Zieber & Monique 2018). A policy is defined by Levy (2011) as ethics, directions or principles implemented at an organisational level to guide decisions and procedures influencing everyday practices in an organisation. According to Zieber and Monique (2018), a knowledge retention policy is a document that proclaims knowledge that is critical to

an organisation. A knowledge retention policy does not determine or dictates the intellectual assets of organisations, but it derives a guideline on the critical steps to be taken in order to transfer, disseminate and retain critical knowledge for future usage (Zieber& Monique 2018).

Based on the research findings of the study, derived from the responses provided by participants, which has assisted the researcher to develop a knowledge retention strategy, it can be attributed that, in order to ensure successful strategy for retaining nursing knowledge at Philadelphia hospital, a Knowledge Retention Policy has to be developed. The policy will provide practical guidelines in which those responsible for decision making in the nursing profession, such as Nursing Managers and Matron Nurses would take charge in enforcing the policy that will be devoted in identifying critical nursing knowledge that is vulnerable to loss when professional nurses leave healthcare organisations through a variety of employee attrition factors. The knowledge retention policy will also allow the identification of knowledge gaps instigated by knowledge loss, and the possible solutions to recover the lost knowledge. If the knowledge retention policy is practically put into place across the entire nursing profession at Philadelphia hospital, then professional nurses will have extensive knowledge on the importance of knowledge retention in the healthcare profession, and most importantly they will develop the passion to participant knowledge retention initiatives.

4.7.2 Awareness Training Programmes on Knowledge Retention

The knowledge retention strategy developed for the purposes of retaining critical nursing knowledge at Philadelphia hospital, calls for the development and facilitation of Awareness Training Programmes with specific reference to knowledge retention. Based on the research findings derived from the analysis of data provided by participants, it was noted that, most professional nurses were not aware of the concept knowledge retention and its importance in healthcare organisations. In order to ensure the successful implementation of the strategy, and most importantly to achieve its goals, those in charge of decision making in the nursing profession should facilitate programmes that are derived specifically to educate professional nurses on the concept of knowledge retention and its importance. A knowledge management expert should be brought in to assist in the planning and rolling out of the awareness training

programmes on knowledge retention. If awareness training programmes on knowledge retention are provided, professional nurses will have knowledge on the importance of knowledge retention in healthcare organisations, and thus, will develop the passion to participate in knowledge retention initiatives at Philadelphia hospital.

4.7.3. Reward Systems and Programmes for effectively encouraging professional nurses to participate in knowledge retention practices

When reward systems are introduced as reinforcements to encourage professional nurses to participate in knowledge retention initiatives, a positive outcome will be achieved. Those responsible for planning and advocating knowledge retention practices in the nursing profession at Philadelphia hospital, should introduce reward systems in the arena, this will encourage professional nurses to participate in initiatives that are designed specifically to capture and preserve critical nursing knowledge that is vulnerable to loss when professional nurses leave healthcare organisations through a variety of employee attrition factors. Reward systems are important factors that will positively influence professional nurses' participation in knowledge retention initiatives at Philadelphia hospital.

4.7.4. Programmes for recovering lost knowledge

In order to ensure the recovery of lost knowledge at Philadelphia hospital, the knowledge retention strategy demands that, those who are in charge of decision making in the nursing profession at Philadelphia hospital should derive programmes that are dedicated to recover lost knowledge through the planning and consultation of a knowledge retention expert. Through the integration of a knowledge retention policy, knowledge gaps will be identified, and knowledge lost will easily be recovered. This will involve the collaboration with the Human Resource Department of the hospital to identify previous experts in the nursing profession who left the organisation without participating in exist interviews. Should the previous experts be identified, then programmes should be implemented to recover the lost knowledge.

4.7.5 Conducting knowledge audits on the basis of lost knowledge

Knowledge audits are essential in determining the type of knowledge valuable for recovering. The strategy demands that through the identification of knowledge gaps instigated by knowledge loss, knowledge audits must be conducted in order to

determine the level of impact the lost knowledge might have in patientcare. The knowledge audit programme must be planned accordingly by Senior Nursing Managers and Knowledge Management Expert who will provide guidance in terms of how knowledge audits are conducted throughout the hospital.

4.7.6 Making resources available for utilising retirees to capture their expert knowledge

To achieve knowledge retention goals in healthcare organisations, adequate resources at an advanced level requires to be outsourced or utilised. For instance, software and hardware equipment requires to be utilised. In order to capture best practices and lessons learnt from retirees, exist interviews requires to conducted and recorded, either visually if it involves demonstrations, or through audio if its only verbal. This programme will require resources such as tape records, computer software's, cameras to capture motions and audio visuals. If retirees are utilised in the nursing profession, their expert knowledge can be captured, transferred and preserved for future usage.

4.7.7 Developing and Adopting tools for preserving nursing knowledge

The knowledge retention strategy developed, requires additional tools to be adopted in order to achieve its main purpose, and to function appropriately. The strategy requires additional tools such as emails, blogs, computerised information systems and software such as micro-soft teams, zoom, WhatsApp and other digital media platforms that have the capability to store, record and ensure extensive communication at larger scale without distance being a barrier. If the above mentioned tools are integrated in the strategy, then it becomes much easier to capture, transfer and retain critical nursing knowledge for future usage.

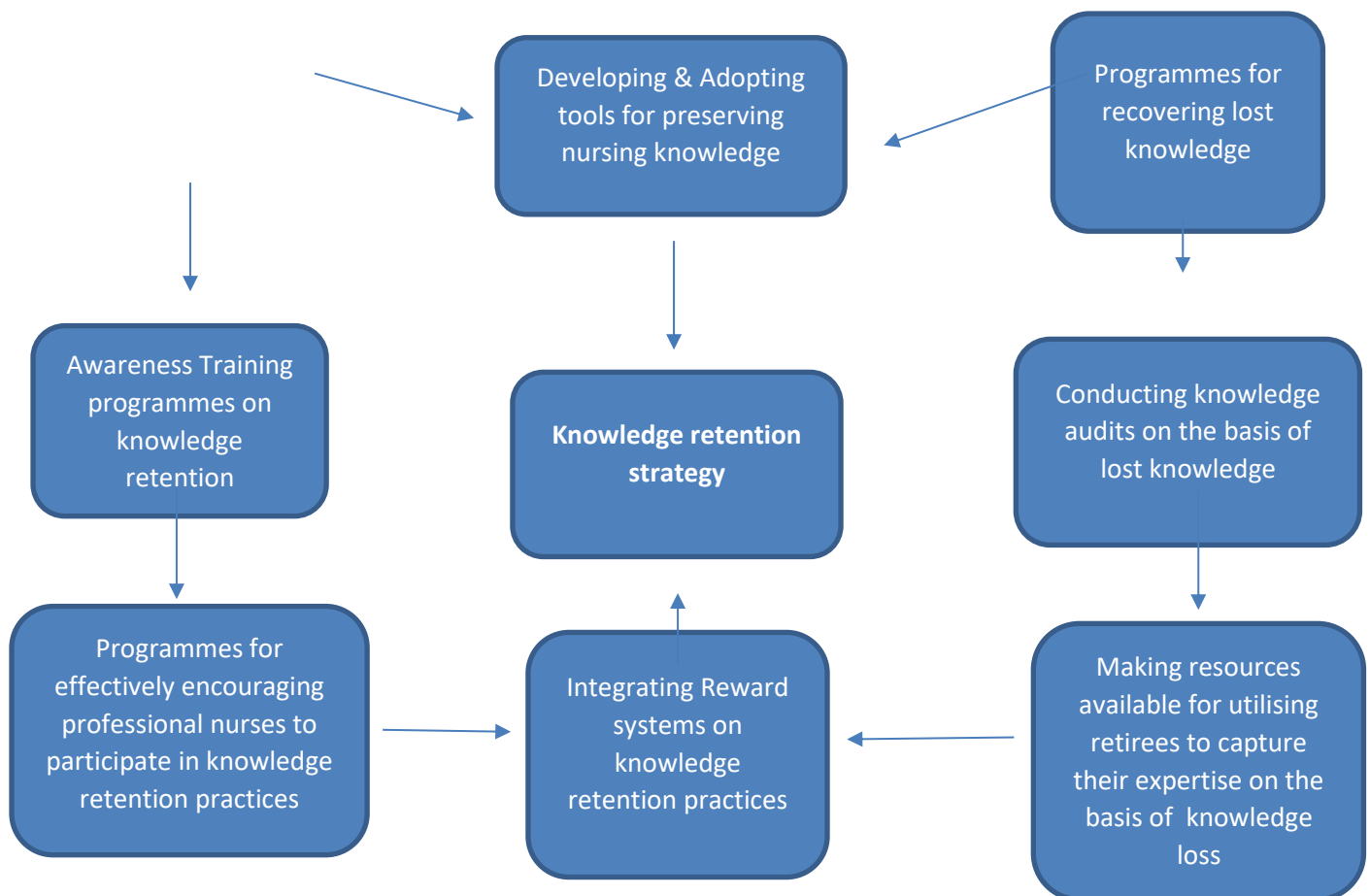


Figure 4.1 *Knowledge retention strategy*

4.9 Figure 2. Knowledge retention strategy explained

In a nutshell, the strategy that has been developed to retaining critical nursing knowledge at Philadelphia hospital, requires substantial measures to be put into place for the strategy to achieve its main objective. Firstly, a knowledge retention policy has to be developed, the policy will provide guidance in terms of which of the type of knowledge requires to be retained for future references. Secondly, awareness training sessions has to be conducted in order to educated and equip professional nurses about the importance of participating in knowledge retention practices. Thirdly, programmes for encouraging and reminding professional nurses to participate in knowledge retention practices has to be conducted, this will allow professional nurses to develop interest and passion to view knowledge as a valuable resource, and most importantly to engage in knowledge retention practices. Reward systems are considered to be the most effective reinforcement to encourage participation in any system. If reward systems are integrated as part of the strategy, professional nurses are most likely to participate in knowledge retention practices. The strategy further

calls for programmes for effectively utilising retirees, these programmes assist in the process of recovering lost knowledge. In this instance, professional nurses are able to identify knowledge gaps, and utilise retirees to effectively capture, transfer and retain their knowledge for future usage. The strategy also calls for those responsible for knowledge retention at Philadelphia hospital to conduct knowledge audits on a regular basis. This are important in order to identify or audit how much knowledge is lost when professional nurses leave the organisation through a variety of employee attrition factors. In order to assure successful implementation of the strategy, tools for knowledge retention requires to be outsourced. Knowledge retention is a practical field which requires both hardware and software tools in order to capture best practices and lessons learnt for future usage.

4.10 Summary

This chapter presented and analysed data obtained from interviews with professional nurses. Using semi-structured interviews, data were collected from 20 professional nurses from Philadelphia hospital. The main themes of the study were discussed in line with the research questions and subsequent research objectives. The next chapter contains a summary of the major findings, as well as conclusions, recommendations, suggestions for further research, and the final conclusions of the study.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the research findings, conclusions and recommendations of the study. The study was conducted with the purpose of developing a knowledge retention strategy for professional nurses at Philadelphia hospital with the views of retaining critical nursing knowledge that is vulnerable to loss when professional nurses leave the organisation through a variety of employee attrition factors. Thus, to this end, a knowledge retention strategy was developed in order to address the challenge of critical nursing knowledge loss which could compromise the objective of the precise healthcare sector to render services to the public. The strategy requires fundamental factors to be considered to put it into practices; for instance, important aspects to be considered in implementing the strategy are: to develop a knowledge retention policy; awareness training programmes; reward systems for effectively encouraging professional nurses to participate in knowledge retention practices; programmes for recovering lost knowledge; conducting knowledge audits on the basis of knowledge lost; making resources available for utilising retirees; and lastly developing; and adopt tools for preserving nursing knowledge.

As provided throughout the study, the objective was to address the following research questions:

- What are the current strategies used for retaining critical nursing knowledge at Philadelphia Hospital?
- What are the tools and techniques used for retaining critical nursing knowledge at Philadelphia Hospital?
- What are the challenges experienced in retaining critical nursing knowledge at Philadelphia Hospital?
- What are the strategies used to enhance knowledge retention practices amongst professional nurses at Philadelphia Hospital?

5.2 Summary of research finding and conclusions

This section provides a detailed summary of the research findings and conclusions that were derived during the course of addressing the research questions of the study. This section comprises of subsections that were arranged on the basis of research objectives of the study.

5.2.1 To explore the different knowledge retention strategies for nurses at Philadelphia Hospital

The first objective of the study was to explore the different knowledge retention strategies for nurses at Philadelphia hospital, with the views to retain nursing knowledge that is vulnerable to loss when professional nurses leave the organisation through various employee attrition factors. In this regard, participants provided a variety of responses alluding to the fact that the organisation have different knowledge retention strategies for retaining nursing knowledge. In view of this regard, nurses have different but similar understanding of the concept knowledge retention strategies. However, there seemed to be confusion on which of the strategies are used to retain nursing knowledge at their organisation.

5.2.2 To explore the tools for preserving nursing knowledge at Philadelphia Hospital

The second objective of this study was to explore the tools for preserving nursing knowledge at Philadelphia hospital. Organisations retain knowledge through the use of different tools such as the Internet and Intranet, workflow, data warehousing, electronic mail (E-mail), tele-conferencing and videoconferencing, electronic workplace for collaborative work, groupware, blogs, wikis, databases and knowledge repositories (O'Dell & Hubert 2011). The research findings suggest that Philadelphia hospital through the Limpopo Department of Health relies mostly on the District Health Information System (DHIS), Emails and Video-conferencing as three of the most effective or prominent tools for preserving nursing knowledge at organisation. However, it should be noted that participants used different terms to refer to the same tools that are prominent in retaining nursing knowledge. For instance, some participants used the term databases to refer to the DHIS portal.

5.2.3 To explore the challenges experienced in retaining nursing knowledge at Philadelphia Hospital

As numerous healthcare organisations across the world encounter challenges in retaining the knowledge of professional nurses, the third objective of this study was to explore the challenges experienced in retaining knowledge of professional nurses at Philadelphia hospital. The research findings revealed that the greatest challenge the organisation encounters with regards to retaining nursing knowledge is that, most professional nurses are reluctant to participate in knowledge retention practices because they are not aware of, and they are not encouraged to participate in knowledge retention practices. The research findings also suggest that most professional nurses still do understand the concept of knowledge retention and its importance.

5.2.4 Develop a strategy for retaining nursing knowledge at Philadelphia Hospital

The fourth objective of the study was to develop a strategy for retaining nursing knowledge at Philadelphia hospital. Based on the research findings derived from Participant's responses, it has been noted that the organisation does not have a practical strategy to be implemented in order to achieve knowledge retention objectives in the nursing profession. Research findings also revealed that, there are substantial knowledge gaps that exist in the nursing profession as a result of knowledge lost that transpired throughout the years. However, the research findings of the fourth objective of the study has assisted the researcher to develop a knowledge retention strategy that is aimed at retaining critical nursing knowledge at Philadelphia hospital.

5.3 Recommendations

This section of the study makes recommendations based on the conclusions provided by the researcher. The recommendations provided by the researcher are considered to be necessary in the implementation of the knowledge retention strategy that has been developed for the purpose of retaining critical nursing knowledge at Philadelphia hospital.

5.3.1 Recommendations on the different knowledge retention strategies for nurses at Philadelphia Hospital

Findings on the first research question of the study revealed that participants provided a variety of responses alluding to the fact that, they had different but similar understanding of the concept knowledge retention strategies. However, there seemed to be confusion on which of the strategies are used to retain critical nursing knowledge at their organisation. In this regard, based on the findings of the first research question, the researcher recommends that professional nurses should be made aware of the specific knowledge retention strategies that are used to retain critical nursing knowledge at their organisation. Furthermore, those in charge of knowledge retention practices in the nursing profession at Philadelphia hospital should purely establish alternative strategies for retaining nursing knowledge, should the proposed strategy fail to meet the objective of their knowledge management department.

5.3.2 Recommendations on the tools for preserving critical nursing knowledge at Philadelphia Hospital

Findings on the second research question of the study suggest that, Philadelphia hospital through the Limpopo Department of Health relies mostly on the District Health Information System (DHIS) portal, emails and video-conferencing as three of the most effective or prominent tools for preserving critical nursing knowledge. However, it was noted that, participants used different terms to refer to the same tools that are prominent in retaining nursing knowledge. For instance, some participants used the term databases to refer to the DHIS portal. In this regard, the researcher recommends that those who are in charge of knowledge retention in the nursing profession should determine additional alternative tools that might be effective in the process of retaining critical nursing knowledge. For instance, the use of Microsoft-teams, Zoom and creation of share-drives have proven to be most effective and prominent especially in the 4IR era.

5.3.3 Recommendations on the challenges experienced in retaining critical nursing knowledge at Philadelphia Hospital.

Findings on the third research question revealed that, the greatest challenge the organisation encounters with regards to retaining nursing knowledge is that most professional nurses are reluctant to participate in knowledge retention practices

because they are not aware of them, and they are not constantly encouraged to participate in knowledge retention practices. The research findings also suggest that, most professional nurses still do understand the concept of knowledge retention and its importance. In this regard, the researcher recommends that drawing reference from the strategy that has been developed, awareness training programmes on knowledge retention and its importance. This should be coupled with reward system must be fully integrated in the nursing profession in order to encourage professional nurses to participate in knowledge retention practices, and to understand its importance in healthcare sectors.

5.3.4 Recommendation on developing a strategy for retaining nursing knowledge

Findings on the fourth research question of the study revealed that, Philadelphia hospital does not have a definite or specific knowledge retention strategy that is aimed at retaining critical nursing knowledge. Moreover, research findings also suggested that there are substantial knowledge gaps exist in the nursing profession as result of knowledge lost that transpired throughout the years. In order to ensure the successful implementation of the proposed strategy developed by the researcher and to achieve knowledge retention practices in the nursing profession at Philadelphia hospital, the researcher recommends for the following fundamental aspects to be taken in consideration when implementing the strategy:

- Knowledge retention Policy.
- Awareness Training Programmes on Knowledge Retention.
- Reward Systems and Programmes for effectively encouraging professional nurses to participate in knowledge retention practices.
- Programmes for recovering lost knowledge.
- Conducting knowledge audits on the basis of lost knowledge.
- Making resources available for utilising retirees to capture their expert knowledge.
- Identifying and adopting tools for preserving nursing knowledge.

5.4 Suggestions for further research

The study placed extensive focus on nurses at Philadelphia hospital. The hospital falls within the jurisdiction of the Limpopo Department of Health, at the Sekhukhune District Municipality in the Limpopo Province of South Africa. It is suggested that additional studies on knowledge retention in the nursing profession should be conducted in the Limpopo province of South Africa, particularly surveys and quantitative research studies. Further studies should establish factors that influence knowledge retention practices in the nursing profession within healthcare organisations. The factors to be explored should also include knowledge retention tools, knowledge retention challenges, knowledge retention practice enablers and enhancers within healthcare sectors, particularly within the nursing profession. This will allow extensive comparison of research results with previous studies that were conducted with the similar topic, in order to bring about new results, to contribute to the existing body of knowledge in the field of information and knowledge management.

5.5 Final conclusions

The aim of the study was to establish a knowledge retention strategy for professional nurses at Philadelphia hospital, with the views of retaining critical nursing knowledge that is vulnerable to loss when professional nurses leave the organisation through a variety of employee attrition factors. The study explored the current strategies, tools, as well the challenges that were encountered in the attempt and process of retaining critical nursing knowledge at Philadelphia hospital. Philadelphia hospital encounters individual, organisational and technological challenges that affected their current knowledge retention practices in the nursing profession. However, challenges also occurred when professionals are reluctant to participate in knowledge retention practices due to the lack of awareness and educational training programmes on the importance of knowledge retention in the nursing profession. The precise solution for these challenges, is the strategy that has been developed and recommended by the researcher. Thus, the strategy will ensure enhanced knowledge retention practices in the nursing profession at Philadelphia hospital, with the views of retaining critical nursing knowledge in order to render accurate and exceptional services to the public without any compromise.

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APPENDIX A: Interview Guide

Dear Interviewee

My name is Josias Kgwadi Mamabolo (student no: 65189906) a master's student in the Department of Information Science at UNISA. I am conducting a research study with the topic "Knowledge retention strategies for professional nurses at Philadelphia hospital, Limpopo South Africa". The purpose of the study is to develop a knowledge retention strategy for professional nurses at Philadelphia hospital. Knowledge is a strategic resource that makes a difference between success and failure for most healthcare organisations. I consider nursing knowledge as a valuable resource that determines the wellbeing and efficient services rendered to patients. Through the challenge of staff attrition encountered by all healthcare organisations globally and locally, it is very important to implement knowledge retention strategies that are designed precisely to ensure that nursing knowledge is preserved for future usage.

Hence, I kindly ask to do an interview with you. The interview will not take more than 20 minutes of your time. I guarantee you that the information provided will be treated with confidentiality and anonymity. The results of the study will be used for academic purposes only. Your invaluable effort in answering the interview questions would be greatly appreciated.

Thank you in advance.

Yours sincerely,

Josias Kgwadi Mamabolo

Tel: 0607522314

Email: 65189906mylife@unisa.ac.za

TOPIC: Knowledge retention strategy for professional nurses at Philadelphia hospital, Limpopo South Africa

Date of interview.....

Place of interview.....

Designation of interviewee.....

AIM OF THE RESEARCH

To develop a knowledge retention strategy for professional nurses at Philadelphia hospital

SECTION A: Demographic information of participants

1. What is your title or position?
2. Gender?
3. How long have you worked for the organisation?
4. What is your highest education level?

SECTION B: Knowledge Retention Strategies

A strategy is defined as a highly regarded approach to issues that intends to bring about change in organisational practices by reintegrating a policy. One of the goals of knowledge retention in healthcare organisations is to maintain the efficient circulation of existing critical nursing knowledge and information within the organisation through the integration of a strategy.

Research objective

- 1. To explore the different knowledge retention strategies for nurses at Philadelphia Hospital;**
 - 1.1. Briefly establish the different types of knowledge that are available amongst professional nurses at Philadelphia hospital.
 - 1.2. What ways does your organisation consider knowledge as a strategic resource?
 - 1.3. What strategies are used to retain nursing knowledge at your organisation?
 - 1.4. For each of the identified strategies used to retain knowledge at your organisation, probe on how such strategies are used and their effectiveness?
 - 1.5. Who is responsible for implementing a strategy for retaining nursing knowledge in your organisation?

- 1.6. How important are knowledge retention strategies in addressing the loss of critical nursing knowledge in your organisation?

Section C: Tool for preserving nursing knowledge

Various tools and techniques are used by different healthcare organisations to retain the knowledge of professional nurses in healthcare organisations.

Research objective

2. To explore the tools for preserving knowledge at Philadelphia Hospital;

- 2.1. An organisation retains knowledge through the use of different tools and techniques such as the use of the Internet and Intranet, workflow, data warehousing, electronic mail (E-mail), tele-conferencing and videoconferencing, electronic workplace for collaborative work, groupware, blogs, wikis, database, knowledge repositories; for each of the tools and techniques used to retain nursing knowledge at your organisation, elaborate on how they are used and their effectiveness in retaining knowledge?
- 2.2. For each of the tools and techniques used to retain nursing knowledge in your organisation, do you think is important to use such tools and techniques for the purpose of retaining nursing knowledge in your organisation?
- 2.3. Who is responsible for ensuring that, the tools and techniques for retaining nursing knowledge are used at Philadelphia hospital?
- 2.4. Do you think your organisations could implemented better tools and techniques for retaining nursing knowledge in your organisation?

Section C: Challenges experienced in retaining knowledge of professional nurses.

Challenges experienced in retaining knowledge of professional nurses. Numerous healthcare organisations encounter challenges experienced in retaining the

knowledge of professional nurses in healthcare organisations which may arising from different factors.

Research objective

3. To explore the challenges experienced in retaining knowledge by professional nurses at Philadelphia Hospital;

3.1. What challenges does your organisations encounter when retaining critical nursing knowledge?

3.2. With reference to the identified challenges, does your organisation have sufficient measures and solutions to address those challenges?

3.3. Does your workforce demographic affect staff attrition? If yes, what knowledge retention measures does your organisations employ to ensure that critical nursing knowledge is not lost?

3.4. What prevents nursing professional to be reluctant to participate in knowledge retention practises?

3.5. In which ways does your organisations encourage professional nurses to participate in knowledge retention platforms?

Section E: strategy for retaining knowledge among professional nurses at Philadelphia Hospital.

Numerous healthcare organisations employ different measures to enhance the effectiveness of retain critical nursing knowledge. It is of fundamental significance for healthcare organisations to encourage professional nurses to engage and participate in knowledge retention practices in order to enhance strategies for retaining nursing knowledge.

Research objective

4. To develop a strategy for retaining nursing knowledge at Philadelphia Hospital;

- 4.1. What roles do you think knowledge retention strategies play in the preservation of critical nursing knowledge?
- 4.2. Do you think there is a need to implement accurate knowledge retention strategies for retaining nursing knowledge in your organisation and why?
- 4.3. In what ways do you think knowledge retention initiatives might be enhanced at Philadelphia hospital?
- 4.4. Drawing reference from the ways in which you think your organisations can enhance knowledge retention practices mentioned in question 4.1. do you think those measures will be effective and why?
- 4.5. Which ways do you think might encourage professional nurses to participate in knowledge retention initiatives at Philadelphia hospital?

Appendix B: Permission Letter



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

Department of Health

Ref : LP_2021-02-018

Enquires: Ms PF Mahlokwane Tel : 015-293 6028

Email : Phoebe.Mahlokwane@dhsd.limpopo.gov.za

Josias Kgwadi

PERMISSION TO CONDUCT RESEARCH IN DEPARTMENTAL FACILITIES

Your Study Topic as indicated below;

Knowledge retention strategies for nurses at Philadelphia hospital, Limpopo, South Africa

1. Permission to conduct research study as per your research proposal is hereby Granted.
2. Kindly note the following:
 - a. Present this letter of permission to the institution supervisor/s a week before the study is conducted.
 - b. In the course of your study, there should be no action that disrupts the routine services, or incur any cost on the Department.
 - c. After completion of study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
 - d. The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
 - e. The approval is only valid for a 1-year period.
 - f. If the proposal has been amended, a new approval should be sought from the Department of Health
 - g. Kindly note that, the Department can withdraw the approval at any time.

Your cooperation will be highly appreciated

Head of Department

Date 19/04/2021

Appendix C: Editorial Letter

University of Zululand Kwa Dlangezwa Campus

Faculty of Arts
Languages and Communication Studies
Department of English



RESTRUCTURED FOR RELEVANCE

Private Bag X1001, Kwa Dlangezwa 3886
Cell: 0614556808
E-Mail: rataun@unizulu.ac.za

13 October 2021

Editing

TOWHOMITMAYCONCERN

This letter serves to certify that I have edited the research dissertation titled: **Knowledge retention strategies for nurses at Philadelphia Hospital, Limpopo, South Africa**, by Mr. J.K Mamabolo (65189906). To my knowledge, the work has been thoroughly edited. Unless tampered with prior to your reception of the edited work, I trust you will find the editing quality in order.

Regards



nelson

MRNS RATAU(EDITOR)