

Resilience among nurses working at the Klerksdorp/Tshepong hospital in the North West Province

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University

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DECLARATION

I hereby declare that this research study with the title: *Resilience among nurses working at the Klerksdorp/Tshepong hospital in the North West Province* is my own work. This study has not been submitted before for any other degree or examination at any other university. All the sources used in this study are indicated in the reference list.

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Date: 20 November 2015

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- Finally, special thanks to my parents and family who are always there to encourage me.



I, Mari Grobler, hereby declare that I have edited the research study with the title:

Resilience among nurses working at the Klerksdorp/Tshepong hospital in the North West Province

for **Morris Phyffer** for the purpose of submission as a postgraduate dissertation. Changes were suggested and implementation was left to the discretion of the author.

Yours sincerely

Mari Grobler

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ABSTRACT

Background: The primary reason for nurses to enter this profession is because of their caring nature. Pressure, work load, having to juggle multiple roles and staff shortages; however, make them vulnerable to emotional exhaustion, depersonalization and a feeling of reduced personal accomplishment – commonly known as burnout. Some nurses can work through these challenges according to literature, and remain in this profession. Literature further indicates that, when faced with adversities, nurses possess the ability to bounce back and continue to provide quality patient care. Although a lot of research has been done on the concept of resilience abroad there is a paucity of information regarding this phenomenon among nurses in South Africa. This makes it thus vital to explore and describe the incidence of resilience among the nurses working at the Klerksdorp/Tshepong hospital in the North West Province.

Objective: The objective of this study was to explore and describe strengths that contribute to the resilience of nurses working at the Klerksdorp/Tshepong hospital, to determine the incidence of resilience in nurses working at the Klerksdorp/Tshepong hospital and to formulate recommendations to strengthen the resilience of nurses.

Design: A mixed method design approach was used to achieve the above-mentioned objectives.

Results: The results of the quantitative phase suggest that the group of nurses showed a high degree of resilience. This was evident when the score of 89 out of a total of 100 was achieved by applying the CD-RISC. The participants scored high on item 11 (*I believe I can achieve my goals, even if there are obstacles*) and 25 (*I take pride in my achievements*). The participants scored 77% ($m = 3.75$, $SD = 0.59$) for both items. In the same context the participants scored low on the following: items 18 (*I can make unpopular or difficult decisions that affect other people, if it is necessary*) which scored the lowest with 53% ($m = 3.22$, $SD = 1.1$) and item 6 (*I try to see the humorous side of things when I am faced with problems*) with a score of 54% ($m = 3.3$, $SD = 0.86$).

In the qualitative phase, the results of this study yielded four themes that nurses described as strengths that contribute to resilience, namely, *values, characteristics, skills and support*. The first theme *values* identified two sub-themes, *spiritual/religious* and *moral values*. The second theme *characteristics*, identified *professionalism* and *personal strengths* as sub-themes. The third theme *skills* brought forward *professional and personal skills* as sub-themes. The fourth theme *support* identified the following sub-themes: *professional and personal support*.

Conclusion:

It could be concluded that the nurses working at the Klerksdorp/Tshepong hospital are resilient as was evident when viewing the results obtained from the CD-RISC. The nurses believe they can achieve their goals even if there are obstacles and they take pride in their achievements. In the same context, they find it difficult to make unpopular or difficult

decisions that affect other people. From these findings the researcher proposed recommendations to strengthen the resilience of nurses. Recommendations were also compiled for nursing practice, nursing education and further research.

Key concepts: nurses, burnout, resilience.

OPSOMMING

Agtergrond: Die primêre rede waarom verpleegsters tot hierdie professie toetree, is omdat hulle van nature deernisvol is. Druk, werkslading, om 'n verskeidenheid van rolle te vertolk en 'n tekort aan personeel maak hulle egter vatbaar vir emosionele uitputting, depersonalisasie en 'n gevoel van verlaagde persoonlike verwesenliking – algemeen bekend as uitbranding. Sommige verpleegsters kan hierdie uitdagings hanteer, volgens beskikbare literatuur, en bly in hierdie professie. Literatuur dui verder aan dat wanneer verpleegsters aan teenspoed blootgestel word, verpleegsters oor die potensiaal beskik om terug te wip en te kan voortgaan om kwaliteit sorg aan pasiënte te bied. Ofskoon heelwat navorsing al in die buiteland oor die konsep van veerkragtigheid gedoen is, is daar 'n skaarste aan inligting wat hierdie fenomeen en verpleegsters betref in Suid-Afrika. Dit maak dit dus van kardinale belang om veerkragtigheid in verpleegsters wat by die Klerksdorp/Tshepong hospitaal in die Noordwes Provinsie werk, te bestudeer en beskryf.

Doelwit: Die doelwit van hierdie studie was om die sterkpunte te verken en te beskryf wat bydra tot veerkragtigheid in verpleegsters wat by die Klerksdorp/Tshepong hospitaal werk, om die trefwydte van veerkragtigheid in verpleegsters wat by die Klerksdorp/Tshepong hospitaal werk, te bepaal en om aanbevelings te formuleer wat die veerkragtigheid van verpleegsters kan versterk.

Ontwerp: 'n Gemengde metode ontwerp-benadering is gevolg om die bogenoemde doelwitte te bereik.

Resultate: Die resultate van die kwantitatiewe fase stel voor dat die groep verpleegsters oor 'n hoë graad van veerkragtigheid beskik. Dit was duidelik toe 'n telling van 89 uit 'n totaal van 100 bekom is nadat die CD-RISC gebruik is. Die deelnemers se telling was hoog vir item 11 (*Ek glo ek kan my doelwitte bereik, al is daar struikelblokke*) en 25 (*Ek is trots op my prestasies*). Die deelnemers se telling was 77% ($m = 3.75$, $SD = 0.59$) vir beide van hierdie items. In dieselfde konteks was die deelnemers se telling laag vir die volgende: item 18 (*Ek kan onpopulêre of moeilike besluite neem wat ander mense kan affekteer wanneer dit nodig is*) met 53% ($m = 3.22$, $SD = 1.1$) en ook vir item 6 (*Ek probeer die snaakse kant van dinge raaksien wanneer ek met probleme gekonfronteer word*) met 'n telling van 54% ($m = 3.3$, $SD = 0.86$).

In die kwalitatiewe fase het die resultate van hierdie studie vier temas opgelewer wat die verpleegsters as sterkpunte beskryf het wat tot veerkragtigheid bydra, naamlik *waardes, karaktereienskappe, vaardighede en ondersteuning*. Die eerste tema *waardes* het twee sub-temas opgelewer naamlik *spirituele/religieuse en morele waardes*. Die tweede tema *karaktereienskappe* het twee sub-temas geïdentifiseer naamlik *professionele en persoonlike sterkpunte*. Die derde tema *vaardighede* het *professionele en persoonlike vaardighede* as sub-temas opgelewer. Die vierde tema *ondersteuning* het die volgende twee sub-temas geïdentifiseer: *professionele en persoonlike ondersteuning*.

Slotsom: Daar is tot die slotsom gekom dat die verpleegsters wat by die Klerksdorp/Tshepong hospitaal werk, veerkragtig is. Dit was duidelik vanuit die resultate

wat verkry is met die gebruik van die CD-RISC. Die verpleegsters glo dat hulle hul doelwitte kan bereik al is daar struikelblokke en hulle is trots op hulle prestasies. In dieselfde konteks vind hulle dit moeilik om onpopulêre of moeilike besluite te neem wat ander mense kan affekteer. Met hierdie resultate inaggenome, het die navorser aanbevelings voorgestel om die veerkragtigheid van hierdie verpleegsters te versterk. Aanbevelings is ook saamgestel vir verpleegsteronderwys en verderde navorsing.

Sleutelwoorde: verpleegsters, uitbranding, veerkragtigheid.

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ABBREVIATIONS

CD-RISC	Connor-Davidson Resilience Scale
α	Cronbach's alpha
<i>d</i>	relationship
EN	Enrolled Nurse
ENA	Enrolled Nurse Auxiliary
ICU	Intensive Care Unit
ENT	Ear, Nose and Throat Unit
f	frequencies
m	mean
MBI-HSS	Maslach Burnout Inventory - Human Services Survey
MDR	Multidrug-Resistant TB Wards
N	Population
n	sample size
ONCOL	Oncology Department
OPD	Outpatient Department
%	percentages
PN	Professional Nurse
SANC	South African Nursing Council
SD	Standard Deviation
SPSS	Statistical Package for the Social Science
WHO	World Health Organisation

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

The background, problem statement, research questions and objectives, paradigmatic perspective, research methodology and ethical considerations of this research will be discussed in this chapter.

1.2 BACKGROUND AND PROBLEM STATEMENT

Nursing is viewed as a nurturing profession and caring is an essential component in practice (Peery, 2010:53). Hospitals are seen as stressful places of employment due to the increased complexity of the job description, the unpredictable changes in one's daily work routine, unrealistic expectations from patients and their families, and common encounters with ethical issues and life issues (Mealer *et al.*, 2009:1118). Nurses have a duty to compassionately care for the sick, wounded, traumatized, and the weak in their charge, which personally exposes to the pain, trauma and suffering of patients on a daily basis (Knobloch-Coetzee & Klopper, 2010:235). Within daily interactions with patients, nurses are confronted with deep emotions like fear, frustration, stress, anxiety and disappointment (Trewick, 2008:16). Nurses differ in their ability to work through these emotions. The majority of nurses can successfully work through them and carry on, but unfortunately some nurses are unable to carry on and they experience burnout (Trewick, 2008:16).

Engelbrecht *et al.* (2008:15) state that nursing is globally considered a stressful occupation because of the nature of the profession. According to Pienaar and Bester (2011:114), nurses are susceptible to burnout and approximately 25% of all nurses are affected by this syndrome. Moreover, Heyns *et al.* (2003:81) add that the prevalence of burnout among South African nurses in general is higher than their counterparts elsewhere in the Western world. According to Coetzee *et al.* (2013:162), more than 45,8% of South-African nurses on a national level report high levels of burnout. Burnout is a pervasive and costly syndrome in the human service professions with incidence estimates ranging from 15% to 30% and costs of nearly 150-200 billion dollars per year in America alone (Browning *et al.*, 2006:139).

Burnout is not a new phenomenon and extensive research has been done to describe this construct. Although burnout has been defined by many authors, the most widely used definition is Maslach's (2001:607). Maslach defines burnout as emotional exhaustion due to depleted emotional resources, usually occurring among people who work with people, where they are no longer able to give of themselves at a psychological level. Extensive research and testing by Maslach (2001:607; 2003:189; 2015:929) has come up with three principal dimensions of burnout namely, emotional exhaustion, depersonalization and a feeling of reduced personal accomplishment.

Emotional exhaustion, representing the individual stress dimension of burnout, refers to feelings of depleted physical and emotional resources and prompts actions in workers to distance themselves emotionally and cognitively from their work – presumably as a way to cope with work overload (Van der Colff & Rothmann, 2009:3). Research done by Sherring and Knight (2009:1239) among nurses in the United Kingdom has found that 41% of these nurses experience emotional exhaustion, whereas as in a study done in Malawi by Thorsen *et al.* (2011:1) it was found that 72% of nurses reported emotional exhaustion. Nurses with a high level of emotional exhaustion are more likely to quit the nursing profession, according to Sherring and Knight (2009:1240).

Depersonalization refers to a negative, callous or excessively detached response to other people (Maslach *et al.*, 2001:399; Schaufeli & Buunk, 2003:386). Cooper (2009:264) states that nurses suffering from depersonalization see patients as objects rather than as individuals. The third dimension, lack of personal accomplishment, refers to feelings of incompetence and a lack of achievement and productivity at work (Maslach *et al.*, 2001:399). According to Schaufeli and Buunk (2003:386) nurses believe that they do not achieve their objectives and a feeling of insufficiency and poor professional esteem develop. Changes in attitude and behaviour such as a tendency to treat patients in a detached and mechanical fashion are two symptoms that are common when a lack of personal accomplishment is experienced (Schaufeli & Buunk, 2003:387).

There are many contributing factors to the high incidence of burnout among nurses such as undesirable schedules and work hours; daily confrontations with pain, loss, death and traumatic illnesses; higher acuties and patients to nurses ratio; diverse roles of nursing; verbal abuse from physicians; staff shortages and inadequate medical supplies (Cook, 2006:11; Engelbrecht *et al.*, 2008:16; Gustafson *et al.*, 2010:24; Sherring & Knight, 2009:1234). It is clear that burnout does not just affect nurses, but also other health care workers. Nurses, organizations and the patients are paying the price at the end of the day, ultimately leaving patients unsatisfied and leading to a decline in the safety of patients (Cook, 2006:11).

In South Africa nurses form the backbone of the health care system (Engelbrecht *et al.*, 2008:15). Since the launching of a democratic political dispensation in South Africa, the health care system in particular, has been under heavy pressure (Heyns *et al.*, 2003:81). According to Heyns *et al.* (2003:81), the perception exists that working conditions in some state hospitals are mostly unsatisfactory. A larger section of the population with no previous access to health care are now eligible for free health care due to the rapid pace of transformation of the South African health care sector into a unified health care system (Pienaar & Bester, 2011:17). As a result, the workload of the existing nurse corps in the public sector has increased dramatically. Research done by Pienaar and Bester (2011:113) to determine the level and the potential impact of burnout among professionals nurses and their intentions to quit in the Free State region, has found that nurses indeed experience high levels of burnout. Pienaar and Bester (2011:113) furthermore state that thousands of qualified nurses are leaving the South African health sector on an annual basis due to various reasons – including burnout. The South African

public health service are “crippled by these severe staff shortages due to a flight of skills” from the public service to the private service sector and to other countries abroad (Engelbrecht *et al.*, 2008:15). Although nurses are leaving the health care system because of issues associated with workplace adversity, others remain (Jackson *et al.*, 2007:7). Nurses who remain, are more likely to make use of negative coping strategies such as distancing or avoidance in relationships with patients and colleagues (Grafton *et al.*, 2010:699). According to Koen *et al.* (2011a:1), some of these nurses; however, survive, cope and even thrive despite these workplace adversities and continue to provide high quality care. The ability to move on despite these negative stressors according to Tugade and Fredrickson (2004:320), does not demonstrate luck on the part of these nurses but demonstrates a concept known as resilience.

Masten and Reed (2002:75) refer to resilience as a phenomenon characterized by positive adaption in the context of significant adversity or risk. It is the capacity of individuals to adapt to change and stressful events in healthy and flexible ways (Goldstein & Brooks, 2006:358). Resilience is a multidimensional construct (Gillespie *et al.*, 2007:965) that concerns exposure to adversity and the positive adjustment outcomes with regard to adversity. Adversity can be evaluated according to negative life circumstances and adaption can be defined as successful performance (Pooley & Cohen, 2010:31). The concept of resilience has been extensively explored in the domain of developmental psychology but according to Tusaie and Dyer (2004:3), the concept of resilience has increasingly found its way into nursing literature.

Grafton *et al.* (2010:700) identify resilience as a set of characteristics, namely hardiness, coping self-efficacy, optimism and self-esteem. These characteristics help people cope and recover from adversity. Hardiness, according to Semmer (2003:92), is perceived as containing of three components: commitment, challenge and control. Control refers to the tendency to believe and act as if one can influence the course of life. Commitment is the ability to believe in the truth, importance and interest value of who one is and what one is doing. Challenge is based on the belief that change, rather than stability, is the normative mode of life. Semmer (2003:92) furthermore states that people high on hardiness should be able to deal better with stressful aspects of life. The above-mentioned components could be very important characteristics among nurses and could help, if cultivated among them, to strengthen resilience. Optimism, according to Semmer (2003:94), refers to the belief that things are likely to turn out reasonably well. Optimism has shown to influence stress appraisal, well-being and coping strategies. According to Koen *et al.* (2011a:3), this characteristic can help nurses to maintain optimism regarding difficulties. Coping self-efficacy and self-esteem according to Semmer (2003:93), are very important for dealing with negative feedback and failure in terms of distress as well as persistence. Maddux (2002:278) refers to self-efficacy as “what I believe I can do with my skills under certain conditions”. Furthermore, Maddux (2002:278) states that people with low self-efficacy will respond with increased anxiety to difficulties which will lower or disrupt performance. A sense of coherence refers to the extent to which individuals see life issues as manageable, understandable and meaningful (Koen *et al.*, 2011a:3). These researchers

state that this characteristic can help nurses in the workplace to view demands as challenges, finding meaning in them and cope successfully with stressors.

According to Connor and Davidson (2003:77), Greeff (2005:10), McAllister and Lowe (2011:11) and Semmer (2003:96) people who are resilient tend to interpret their environment as benign, that is, they expect things to go well and they do not intend to get hurt. Moreover, these authors state that resilient people accept setbacks and failures as normal. They tend to see life as something that can be influenced and acted upon. Nurses bear witness to tragedy, suffering and human distress as part of their daily working lives and, because of the stressors associated with assisting others to overcome adversity, resilience is identified as essential for nurses in their everyday work and particularly amidst current nursing shortages (Tusaie & Dyer, 2004:3). McGee (2006:45) states that nurses work within communities and with individuals whose daily lives are defined by circumstances of extreme adversity and for whom resiliency is a way of life. The author furthermore mentions that the importance of resilience among nurses is not recognized. It is thus important to cultivate resilience in nurses because nurses cannot give to their patients what they do not possess themselves. For this reason, resilience in nurses is now recognized as an important factor in helping them to remain caring and focused on the needs of their patients (Dean, 2012:1).

It was concern about the resilience of nurses working at the Klerksdorp/Tshepong hospital that prompted the researcher to explore this phenomenon. The aforementioned state hospital, with 791 active beds renders level 1 and 2 and partial level 3 services to the whole of the North West Province. In this context, nurses from this hospital have been leaving in large numbers which left the nursing department with a huge shortage. However, despite this massive shortage others remain and continue to provide quality care.

From the above discussion it is clear that nurses may experience high levels of job burnout in their workplace. These adversities experienced by nurses in their workplace can demotivate them. Some nurses; however, survive and even thrive within very demanding organizational situations and succeed in the face of the same on-going challenges and constraints that are associated with problems that the nursing profession is currently facing. A recent study completed by Koen *et al.* (2011a:1) among South African nurses, by making use of a cross-sectional survey design to determine the prevalence of resilience, has found that nurses in the public sector have significantly lower levels of resilience than their counterparts in the private sector. The aforementioned authors state that there is a scarcity of information concerning resilience among South African nurses. This raises the question of why some nurses are able to thrive and continue to find satisfaction in their careers despite the current challenges and problems, while others seemingly cannot.

1.3 RESEARCH QUESTIONS

Against the background of the previous discussion and problem statement, the research questions are as follow:

- What are the strengths that contribute to the resilience of nurses working at the Klerksdorp/Tshepong hospital to manage workplace adversities?
- What is the incidence of resilience among nurses working at the Klerksdorp/Tshepong hospital?
- How can resilience be strengthened among nurses working at the Klerksdorp/Tshepong hospital?

1.4 OBJECTIVE OF THE STUDY

The objective of this study was to:

- Explore and describe strengths that contribute to the resilience among nurses working at the Klerksdorp/Tshepong hospital.
- Determine the incidence of resilience among nurses working at the Klerksdorp/Tshepong hospital.
- Formulate recommendations to strengthen the resilience among nurses working at the Klerksdorp/Tshepong hospital.

1.5 PARADIGMATIC PERSPECTIVE

The paradigmatic perspective of this study comprises of meta-theoretical, theoretical and methodological assumptions.

1.5.1 Meta-theoretical assumptions

Meta-theoretical assumptions reflect the researcher's views on man, the environment, health and nursing. Mouton and Marais (1996:192) state that it is generally accepted that in philosophy of science scientific findings cannot be proved on the basis of empirical research data. The researcher is compelled to make assumptions to justify theories and strategies. These strategies will be discussed in the following paragraphs.

1.5.1.1 View of human beings

In this research nurses are seen as a unique creation, created in the image of God with physiological, psychosocial and spiritual dimensions. Human beings are ever changing organisms in constant interaction with their environment - constantly striving to maintain their integrity (Meleis, 2007:417).

The physiological dimension of the nurse refers to the physical needs that must be met in order to deliver quality health care, for example: adequate resting hours.

The psychosocial dimension of nurses refers to the interpersonal and intrapersonal aspects, for example with adequate communication patterns and coping strategies, burnout can be minimized and can assist nurses in delivering quality health care.

The spiritual dimension of nurses refers to their grounded belief in God, which might help them in cultivating a different and positive attitude towards their working conditions. In this study, human beings specifically refer to the nurses working at the Klerksdorp/Tshepong hospital.

1.5.1.2 View of health

The researcher agrees with the definition of health provided by the World Health Organization (WHO). The WHO (2001:8) defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. This definition implies that physical, mental and social health is inseparable and also defines health positively. In this study it is assumed that nurses may be emotionally and psychologically strained, and that their resilience needs to be strengthened.

1.5.1.3 View of nursing

The researcher agrees with the International Council of Nurses (2015) view that nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Botes (1992:40) adds that nursing is a systematic process, where patients are assessed in a scientific nursing process to improve well-being. In this study, nursing refers to providing support to nurses to strengthen their resilience.

1.5.1.4 View of environment

The researcher agrees with (Meleis, 2007:417) view that the environment consists of internal and external aspects which is in constant interaction with each other.

The internal environment refers to the body, mind and spirit. The external environment refers to physical, social and spiritual dimensions.

In this research the internal environment refers to the discomfort nurses may experience due to exposure to a heavy workload and negative conditions. The external environment refers to the heavy workload in the work place nurses are exposed to on a daily basis. Interaction between the discomfort experienced and heavy workload can influence the attitudes of nurses. In this study the internal environment also refers to the strength of nurses and the external environment also refers to support systems to help nurses to strengthen their resilience.

1.5.2 Theoretical assumptions

The theoretical assumptions of this research study include the central theoretical statement as well as the theoretical definitions of key concepts.

1.5.2.1 Central theoretical statement

The exploration and description of the strengths that contribute to the resilience of nurses working at the Klerksdorp/Tshepong hospital, and determining of the incidence of resilience in nurses working at the Klerksdorp/Tshepong hospital will enable the formulation of recommendations on how resilience among these nurses can be strengthened to promote the delivery of quality health care.

1.5.2.2 Theoretical definitions of key concepts

The theoretical key concepts in this study are nurses, burnout and resilience displayed in Table 1.1 for more clarity.

Table 1.1: Theoretical definitions of key concepts

Nurses	<p>The Nursing Act (No 33 of 2005) defines nurses as persons who are registered under Section 31(1) and are qualified and competent to independently practice comprehensive nursing in the manner and to the level prescribed and who are capable of assuming responsibility and accountability for such practice.</p> <p>For the purpose of this study, nurses (professional, enrolled and assistant) refer to a person who meet the above-mentioned criteria and are working in the Klerksdorp/Tshepong hospital. Male and female nurses are included.</p>
Burnout	<p>According to Maslach <i>et al.</i> (2001:397), burnout is a prolonged response to chronic emotional and interpersonal stressors on the job. Burnout has three dimensions: emotional exhaustion, depersonalization and reduced personal accomplishment.</p> <p>Burnout in this study refers to nurses who are not in the position to give any more of themselves. They feel emotionally and psychologically strained when working as nurses.</p>
Resilience	<p>Resilience can be defined as an innate energy or motivating life force that is present to varying degrees in every individual, exemplified by the presence of particular traits or characteristics that, through the application of dynamic processes, enable individuals to cope with, recover from, and grow as a result of stress or adversity (Grafton <i>et al.</i>, 2010:698). Pooley and Cohen (2010:30) offer a new definition for resilience and they define the phenomenon as “the potential to exhibit resourcefulness by using available internal and external resources in response to different contextual and developmental challenges”.</p> <p>Resilience in this study refers to the ability of nurses to cope, thrive and grow when experiencing adversities.</p>

1.5.3 Methodological assumptions

Methodological assumptions or statements explain what the researcher believes good science practice should be (Klopper, 2008:67). In this research study the Model for

Nursing Research developed by Botes (1992:36) will be used as a guiding tool. The researcher agrees with the central theoretical proposition of the Botes model, namely that research is undertaken with the view of improving clinical practices by providing prescriptions for actions. The three orders in nursing activities namely, nursing practice, nursing science and philosophy of nursing are described in this model.

The first order describes the empirical reality: the nursing practice. In this order nursing research problems are derived from within the nursing practice. In the context of this study, resilience among nurses needs to be strengthened to enhance the nursing practice.

The second order of the model represents the nursing science and involves research and theory development. The researcher has identified a nursing problem, investigated the problem, described the problem and suggested solutions. For the purpose of this study, the strengths that contribute to resilience were explored and described among nurses as well as the incidence of resilience and recommendations were then formulated.

The third order describes the meta-theoretical assumptions of nursing and involves the analysis and evaluation of concepts, assumptions and methods that are found in the first and second order. The meta-theoretical assumptions relevant to this study are discussed in section 1.5.1.

Furthermore, in this study the research purpose was shaped by the methodological assumptions in their context and these assumptions it influenced the decision about the chosen research design. In this regard, it means exploring and describing strengths that contribute to the resilience of nurses working at the Klerksdorp/Tshepong hospital and determining the resilience of these nurses. Recommendations were formulated to strengthen resilience among these nurses.

1.6 RESEARCH DESIGN

The design used in this study is both exploratory and descriptive which is contextual in nature and the design is aimed at exploring and describing the phenomena in detail in order to answer the research question (Polit & Beck, 2012:226). A mixed method design approach was employed in this study to explore and describe strengths that contribute to resilience among nurses working at the Klerksdorp/Tshepong hospital and to determine the incidence of resilience among these nurses. A detailed discussion of the research design will follow in Chapter 2.

1.7 RESEARCH METHOD

Polit and Beck (2012:733) refer to research method as the techniques researchers use for gathering and analysing data in a study. The research method includes sampling, data collection and data analysis. The research method is outlined in Table 1.2 and will be discussed in detail in chapter 2.

Table 1.2 Overview of research method

<p>Population and sample</p>	<p>The population refers to all nurses employed at the Klerksdorp/Tshepong hospital in the North West Province.</p> <p>Purposive sampling technique was used to select the participants.</p> <p>The following inclusion criteria were met by the participants:</p> <ul style="list-style-type: none"> • The participants were nurses – registered, enrolled or assistant nurses. • The participants were registered with South African Nursing Council. • The participants worked at the Klerksdorp/Tshepong Hospital for a period of at least six month or longer. • The participants must understand, read, write and speak English. • The participants represented different racial groups (African, Coloured and White). • The participants were willing to sign consent forms to participate in the study.
<p>Data collection</p>	<p>Qualitative data were collected through the writing of a narrative (story) to an open-ended question, namely: What are your strengths that help you cope as a nurse?</p> <p>Quantitative data were collected by the use of the Connor-Davidson Resilience Scale (CD-RISC).</p>
<p>Data analysis</p>	<p>Qualitative data were analysed by the researcher by using content analysis.</p> <p>Quantitative data obtained by making use of the CD-RISC were analysed by the statistical consultation service of the North-West University at the Potchefstroom Campus using Statistical Package for the Social Science (SPSS Inc, 2013).</p>
<p>Rigour</p>	<p>Quantitative phase (phase 1) Reliability and validity.</p> <p>Qualitative phase (phase 2) The four criteria for establishing trustworthiness namely credibility, dependability, conformability and transferability were maintained throughout the study (Krefting, 1991:217).</p>
<p>Ethical considerations</p>	<p>The following ethical principles were taken into consideration during the research process (Grove <i>et al.</i>, 2013:162): Principle of self-determination Principle of beneficence Principle of justice</p>

1.8 CHAPTER LAYOUT

Chapter 2: Research design and method

Chapter 3: Literature review

Chapter 4: Research results

Chapter 5: Conclusion, limitations and recommendations

1.9 SUMMARY

In this chapter the background and problem statement, research questions and objectives, paradigmatic perspective and a description of the research design and method as illustrated in Table 1.2 were covered. Chapter 2 will deal with the research methodology in detail.

CHAPTER 2

RESEARCH DESIGN AND METHOD

2.1 INTRODUCTION

In this chapter an overview of the methodology used in this study will be covered. Attention will be given to the research design and method, population, sampling, data collection and the analysis of data. The ethical considerations that were followed while conducting this research as well as an explanation of the reliability, validity and trustworthiness of the study will be discussed.

Creswell (2009:4) refers to methodology as the framework that relates to the entire process of the research - a systematic way to solve the research problem. The methodology in this research refers to how the study was done and its logical sequence. The focus of this study was to explore and describe resilience among nurses working at the Klerksdorp/Tshepong hospital; and a mixed method research approach was used.

2.2 RESEARCH METHODOLOGY

The research methodology is presented by discussing the research design and the research method.

2.2.1 Research design

The design of a study is the end result of a series of decisions made by the researcher concerning how best to implement the study (Grove *et al.*, 2013:214). It guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal. According to Grove *et al.* (2013:214), the research design also maximizes the control over factors that could interfere with the validity of the findings. Klopper (2008:69) agrees that the research design will influence the decision about the research method used.

To achieve the research objectives and to address the research problem, a mixed method research design was chosen because the research questions and the specific combination of questions were best and most fully answered through a mixed research solution. Burke-Johnson and Onwuegbuzie (2004:17) prefer to define mixed method research as the class of research where researchers mix or combine quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study.

According to Brockopp and Hastings-Tolsma (2003:20), qualitative research is an approach to structuring knowledge that utilizes methods of inquiry that emphasizes subjectivity and the meaning of experiences to individuals. In this study, data were collected by writing a narrative (story) guided by an open-ended question.

Quantitative research is a formal, objective and, systematic process in which numerical data are used to obtain information about the world (Grove *et al.*, 2013:23). In this study, data were collected by means of a structured questionnaire, the CD-RISC.

According to Ivankova *et al.* (2007:269), there are four reasons why researchers use a mixed method approach in their studies, namely to explain quantitative results with qualitative data; to use qualitative data to develop new instruments; to compare quantitative and qualitative data sets to produce well-validated conclusions and lastly, to enhance a study with supplemental data. In this research study the researcher used a mixed method approach to compare quantitative and qualitative data sets to formulate conclusions about the resilience of nurses in a specific context, namely the Klerksdorp/Tshepong hospital.

Furthermore, an exploratory and descriptive approach which is contextual in nature was also used to explore and describe resilience among nurses working at the Klerksdorp/Tshepong hospital. This approach will be described in more detail:

- **Exploratory**

Grove *et al.* (2013:370) define exploratory studies as research designed to increase the knowledge of phenomena and to explore a relative unknown field. An exploratory method was chosen because this approach met the criteria described by Uys and Basson (2005:37), namely that exploratory studies aimed at gaining insight and understanding – resilience among nurses working at the Klerksdorp/Tshepong hospital.

- **Descriptive**

Descriptive research, according to Brink *et al.* (2012:112), is used in studies where more information is required in a particular field through the provision of a picture of the phenomenon as it occurs naturally. It provides an accurate portrayal of the characteristics of a particular individual, event or group in a real life situation for the purpose of discovering new meanings (Polit & Beck, 2008:20). According to Polit and Beck (2008:20), quantitative description focuses on the prevalence, incidence and size of phenomena whereas qualitative description focuses on the other hand on in-depth methods to describe the dimension and importance of phenomena. Klopper (2008:66) states that descriptive knowledge includes data, facts, narratives and stories which can all provide truthful descriptions.

In this study a descriptive approach was used because it offered the researcher a way to discover new meanings, to describe what exists and to determine the frequency with which something occurs and to categorize the information. This approach was particularly appropriate because an accurate and authentic description was required of resilience among nurses working at the Klerksdorp/Tshepong hospital.

- **Contextual**

According to Klopper (2008:69), phenomena are studied in a contextual research strategy in terms of the intrinsic and immediate contextual significance of the phenomena. Polit and Beck (2008:28) state that some studies take place in naturalistic settings. Grove *et al.* (2013:373) refer to naturalistic settings as uncontrolled and real life settings where studies are conducted. This means that this study would be done where nurses are working in this case at the Klerksdorp/Tshepong hospital. The Klerksdorp/Tshepong hospital is the largest Provincial hospital in the North West Province with 791 active beds and serves as a referral hospital for the entire Province (Department of Health, 2013). This hospital renders level 1 and 2 services to the Matlosana region, the Dr Kenneth Kaunda district, the Dr R.S. Mompoti district and partial level 3 services to the whole of the North West Province (Department of Health, 2013). Approximately a thousand nurses are employed at this hospital.

2.2.1.1 Research strategy

A mixed method design can be divided into four different types of designs, namely an explanatory design, an exploratory design, a concurrent triangulation design and an embedded design (Polit & Beck, 2012; Grove *et al.*, 2013:209-212; Ivankova *et al.*, 2007:27; Creswell and Clark, 2007:59). A concurrent triangulation strategy was used for this study because of its suitability and advantages (Creswell & Clark, 2007:62). This design is the best known and the most popular of the four mixed methods. According to Ivankova *et al.* (2007:274) and Polit and Beck (2012:610) researchers use both quantitative and qualitative methods in order to best understand the phenomenon or phenomena of interest. Qualitative and quantitative data are collected at the same time and the results are mixed and compared (Creswell & Clark, 2007:64).

The advantage of using a concurrent triangulation strategy is that it ensures that comprehensive data are collected in a limited time period (Creswell & Clark, 2007:66; Ivankova *et al.*, 2007:275). The challenge of using a concurrent triangulation strategy when conducting research, according to Ivankova *et al.* (2007:275) is that this strategy takes a lot of effort to collect and analyse two complete but separate sets of data at the same time. Problems may also appear if the two sets of results do not agree (Creswell & Clark, 2007:66; Ivankova *et al.*, 2007:275). The researcher managed these two challenges through thorough planning. Figure 2.1 shows an illustration of the application of the concurrent triangulation strategy as applied in this research.

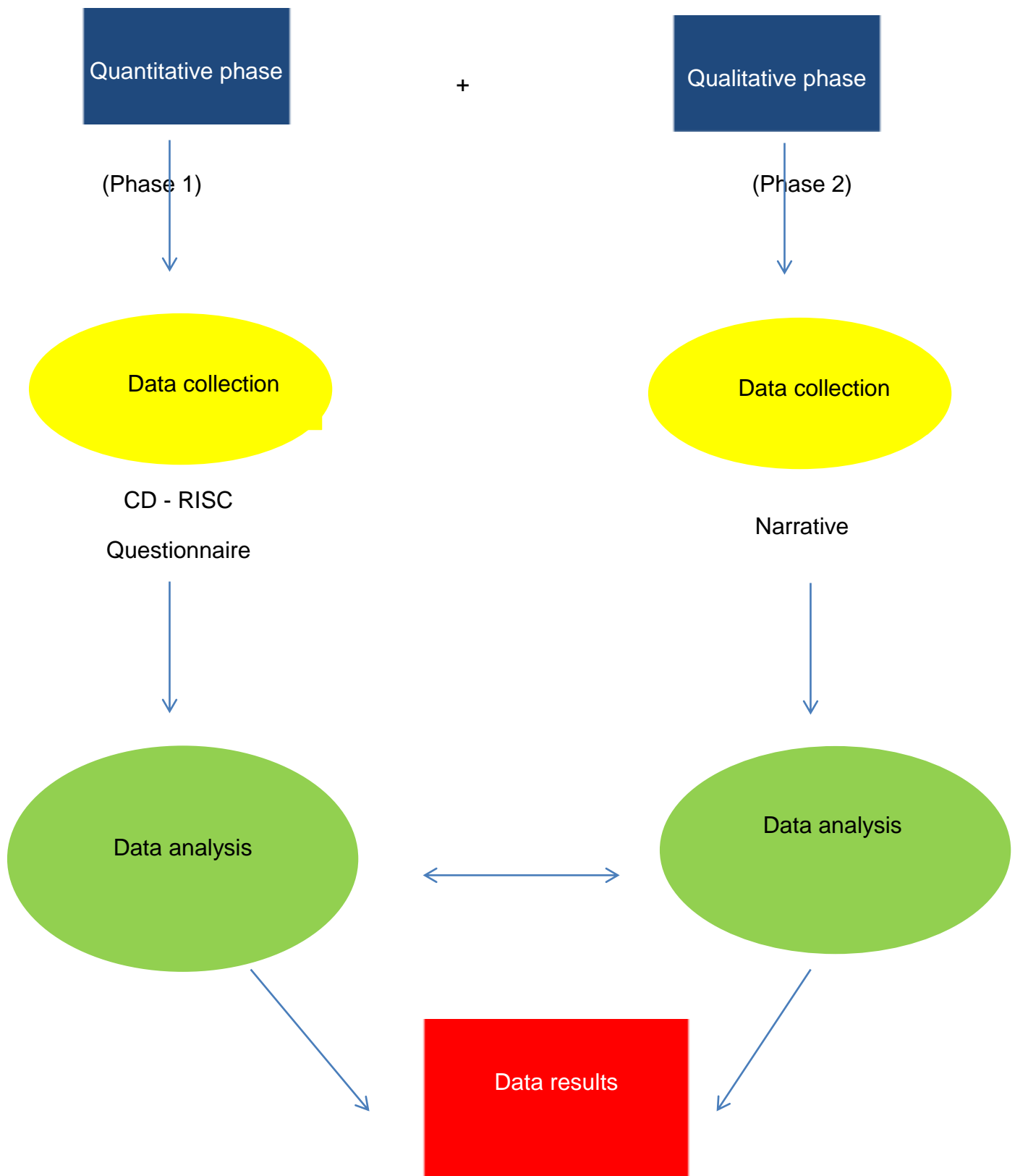


Figure 2.1: Application of the concurrent triangulation strategy (Grove *et al.*, 2013:211) in this research

2.3 RESEARCH METHOD

Polit and Beck (2012:12) describe research methods as the techniques researchers use to structure their studies and to gather and analyse information. The research methods used in this study will be discussed by referring to the population, sampling and sample size, data collection and data analysis. To reach the objectives of the study, the research methods occurred in two phases, quantitative phase (phase 1) and qualitative phase (phase 2) and will be discussed in separate sections.

2.3.1 Quantitative phase (phase 1)

2.3.1.1 Population and sample

Polit and Beck (2012:273) define population as the entire aggregation of cases in which a researcher is interested. In this study the target population was nurses (N=1000) working at the Klerksdorp/Tshepong hospital.

To identify a sample, purposive sampling was used. Purposive sampling is a method that involves a conscious selection of subjects to be included in a study (Grove *et al.*, 2013:365). Inclusion criteria were thus used. The criteria for inclusion in this study were as follows:

- Eligible participants must be nurses – either registered, enrolled or assistant nurses.
- Eligible participants must work at the Klerksdorp/Tshepong hospital.
- Eligible participants must understand, read, write and speak English.
- The sample must include participants representing different ethnic groups (African, Coloured, White and Asian).
- Eligible participants must work at the Klerksdorp/Tshepong hospital for at least a period of six months or longer.

The participants were recruited by the researcher himself and a fieldworker. They visited the different wards to explain the objectives of the research prior to the collection of data. The researcher was introduced to prospective participants by the managers of each unit. A sample of 158 participants (n=158) completed the questionnaire.

The data in the quantitative phase were collected by means of a questionnaire which included questions about the demographic information of the participants (Section A) and the structured CD-RISC questionnaire (Section B). In both of the questionnaires the participants wrote down their responses to questions printed on the document (Brink *et al.*, 2012:154; Polit & Beck, 2012:740). Structured questionnaires such as the questionnaire used in this study, enhance objectivity and support statistical analysis. Brink *et al.* (2012:153), Maree and Pietersen (2007:157) and Polit and Beck (2012:305) point out the following advantages of using questionnaires to obtain information during a research study:

- It is a quick way of obtaining data from a large group of people.
- It is less expensive in terms of time.
- Participants feel a greater sense of anonymity and are more likely to provide honest answers.
- The absence of interviews ensures that there will be no bias.

2.3.1.2 *The role of the researcher*

Ethical approval was granted by the Research Ethics Committee of the North-West University before this study was conducted. This research is a sub-study of a larger study that had already been granted ethical approval, entitled “Exploring the strengthening of resilience of health care givers and risks groups (The Rise study)” (Koen & Du Plessis, 2011). Permission to conduct this research study was also obtained from the North West Provincial Department of Health and the management of the Klerksdorp/Tshepong hospital. After consent has been granted to conduct this research study, the managers of the different units in the hospital were approached. After confirmation from the managers, the researcher and a fieldworker met with the nurses to explain the purpose of the study. The questionnaires were distributed by the fieldworker to the nurses in the different wards who were willing to participate in the study. The nurses who were willing to participate in this study were also given consent forms to complete. The completed questionnaires were collected from all the wards by the fieldworker three months later.

The participants were required to complete Section A which consisted of demographic information. The following variables were included: gender, age, level of education, years of experience; position and section of work (see Appendix G). Demographic information was included to evaluate whether there were any correlations between the demographic information and the resilience of nurses.

Section B consisted of the CD-RISC which was developed to determine the resilience of individuals in 2003 (Connor & Davidson, 2003:77). A 2-item, 10-item and 25-item version of this scale exists. For the objective of the study the 25-item version was chosen. It consists of a 5-point (0-4) self-rating questionnaire on a Likert scale. The questions range from 0 (not true at all) to 4 (true nearly all the times) and the participants shared their views of themselves according to each question. Permission was granted by the developers of the scale to use this questionnaire for the purpose of this study (see Appendix I). To protect the copy right of the questionnaire, as requested by the authors, only the section of the demographic questionnaire is attached.

2.3.1.3 *Data analysis*

The questions concerning the demographic information were analysed to determine whether gender, age, level of education, number of years of experience, position and section of work had an impact on the resilience of these nurses.

The data obtained from the CD-RISC were computed and analysed by the statistical consultation service of the North-West University at the Potchefstroom Campus by using the Statistical Package for the Social Science (SPSS 21.0) Institute Inc. software package (SPSS., 2013). The data were analysed descriptively by means of frequencies (f), percentages (%), mean (M), Standard Deviation (SD), Cronbach's alpha (α) and effect size. The data obtained were then summarized and described in order to be meaningful to readers.

2.3.2 Qualitative phase (phase 2)

2.3.2.1 Population, sampling and sample size

The second phase of this research study was qualitative in nature and included the same sample as in the first phase. These two phases were conducted simultaneously. Narrative data were collected and analysed until data saturation was reached (Grove *et al.*, 2013:371). Data saturation was reached after all the narratives were analysed.

2.3.2.2 Data collection

2.3.2.2.1 Method of data collection

Data collection takes place at a clinical setting and in this case the data collection took place at the Klerksdorp/Tshepong hospital, as previously mentioned. Data collection for the qualitative phase and the quantitative phase was done simultaneously. Data were collected by means of an open-ended question and the participants were asked to respond to the question in the form of a narrative (see Appendix H). According to Nieuwenhuis (2007:102) the word "narrative" is generally associated with terms such as "tale" or "story". A story, according to Grove *et al.*, (2013:282), can be a powerful way to make a point. The data collected consisted of rich descriptions of the view of the participants with regard to their strengths that contributed to their resilience. In order to collect the narrative data, the following open-ended question relevant to objective one of the study was formulated in terms that were understood by the participants:

- What are your strengths that help you cope as a nurse?

2.3.2.2.2 Qualitative data analysis

For the purpose of this study qualitative content analysis was used. Content analysis refers to the process of organizing and integrating narrative information obtained from a qualitative study, according to key concepts and themes (Polit & Beck, 2012:723). The steps for data analysis suggested by Holloway and Wheeler (2002:147) were followed:

- Order and organize the collected material.
- Reread the data.
- Break the material down into manageable pieces.
- Compare and look for contrasting categories.
- Group categories together.

- Recognize and describe patterns and themes.
- Interpret and search for meaning.

According to Holloway and Wheeler (2002:159), the process of data analysis only stops when no new information on a category can be found in spite of the attempt to collect more data from a variety of sources. The reliability of the coding was checked by an independent co-coder (see Appendix J) (Brink *et al.*, 2012:193).

2.4 MEASURES TO ENSURE RIGOUR

Grove *et al.* (2013:36) see rigour as the striving for excellence in research through the use of discipline, scrupulous adherence to detail and strict accuracy. Rigour makes research transparent, thus indicating whether the research reflects the truth of what is being researched. Rigour will be described in terms of validity and reliability.

2.4.1 Quantitative (phase 1): Validity and reliability of the structured questionnaire (CD-RISC)

- **Validity**

Validity is concerned with the accuracy and truthfulness of scientific findings (Brink *et al.*, 2012:171). Validity can be divided into, internal and external validity. For external validity to be achieved the participants should be as representative as possible. In this case it was achieved through input from the statistical consultant on the number of participants to be included in this research.

Internal validity was achieved through the use of a variety of sources in data gathering. A concurrent mixed method was used.

In 2003 a study was done to determine the validity of the CD-RISC questionnaire. From this study it was concluded that the CD-RISC questionnaire was valid and psychometrically sound (Connor & Davidson, 2003:76).

- **Reliability**

Reliability is concerned with the consistency, stability and repeatability of data obtained from the participants as well as the ability of the researcher to collect and record information accurately (Brink *et al.*, 2012:171). Moreover, Pietersen and Maree (2007:215) add that when referring to the reliability of a research instrument it means that if the same instrument is used at different times with different subjects from the same population, the findings should still be the same. For the purpose of this study reliability was confirmed through the use of an already reliable and valid instrument – the CD-RISC (Connor & Davidson, 2003:76). A study done by Connor and Davidson (2003:79) in America among primary care outpatients, psychiatric outpatients, patients with generalized anxiety disorders, patients with posttraumatic stress disorders and a sample from the general population reported a reliability index of 0.89.

Various authors (Brink *et al.*, 2012:169; Grove *et al.*, 2013:391; Pietersen & Maree, 2007:216 and Polit & Beck, 2012:333) agree that reliability estimates from 0.80 and higher can be regarded as acceptable.

2.4.2 Qualitative phase (phase 2): Trustworthiness

Polit and Beck (2012:745) refer to trustworthiness as the degree of confidence qualitative researchers have in their data. To ensure trustworthiness in this study, the researcher applied the strategies recommended by Krefting (1991:214). For Krefting (1991:217), the key characteristics of trustworthiness are credibility, transferability, dependability and confirmability. These characteristics are summarised in Figure 2.2 below. A discussion of each of these characteristics will follow after Figure 2.2.

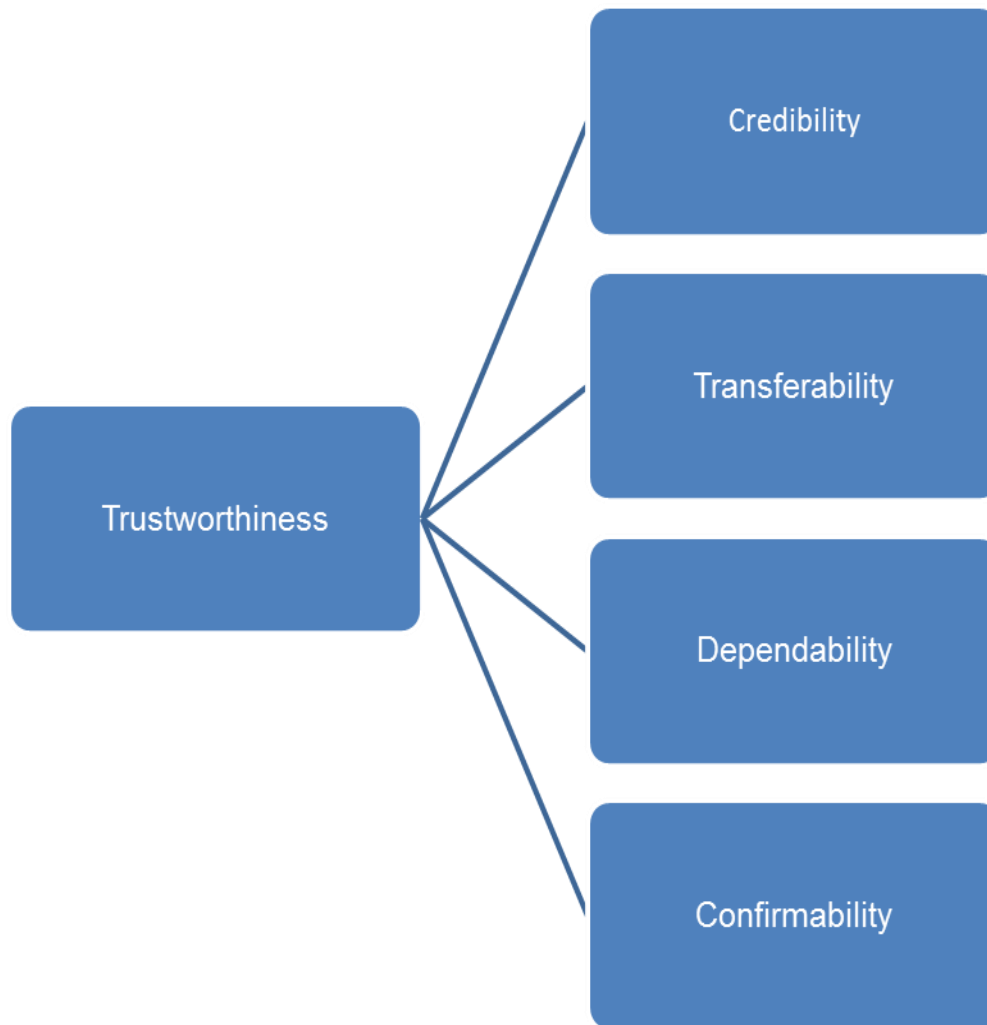


Figure 2.2: A summary of the characteristics of trustworthiness (Krefting, 1991:217)

2.4.2.1 *Credibility*

Credibility refers to confidence in the truth of the data and the interpretation of the data (Polit & Beck, 2012:585). To achieve credibility in this study, the following strategies were used: triangulation, peer examination and debriefing.

Triangulation is a process wherein multiple methods are used to collect and interpret data (Polit & Beck, 2012:745). The data collection methods that were used include the writing of a narratives as well as answering a structured questionnaire, the CD-RISC. Peer examination and debriefing involve sessions with experts to review and explore various aspects of the research process (Polit & Beck, 2012:594). In this research study the methods included the evaluation of the research proposal by the ethics committee, meetings with the statistical consultation service and contact sessions with research supervisors at the North-West University, Potchefstroom Campus, on a regular basis to ensure objectivity (Holloway & Wheeler, 2002:259; Krefting, 1991:218; Polit & Beck, 2012:594).

2.4.2.2 *Transferability*

Transferability refers to the extent findings can be transferred to other settings or groups (Polit & Beck, 2012:585). The following strategy was used to enhance transferability: A dense description of the research methodology is provided to ensure applicability of the finding to other contexts and to provide other researchers with sufficient information to evaluate similarities in other contexts. (Krefting, 1991:220; Holloway & Wheeler, 2002:262).

2.4.2.3 *Dependability*

Dependability refers to the stability of data over time and conditions (Polit & Beck, 2012:585). To ensure dependability in this research study, a dense description of the methodology is provided. The description includes the methods used to gather data, the type of analysis used and how the data were interpreted in this study. The researcher also made use of an inquiry audit, which involves the scrutiny of data and supporting documents by an external reviewer (Holloway & Wheeler, 2002:262; Polit and Beck, 2012:594).

2.4.2.4 *Confirmability*

Confirmability refers to the objectivity or neutrality of the data and interpretations (Polit & Beck, 2012:723). To ensure conformability in this study, the researcher checked with his supervisors to detect bias or inappropriate subjectivity when he interpreted the data obtained (Holloway & Wheeler, 2002:259). The researcher also tried to understand how and why certain decisions were made during the progression of events in the study (Krefting, 1991:221). Raw material that were used to gather data and field notes are being kept for auditing purposes. Triangulation was obtained by the combination of multiple research methods from quantitative and qualitative approaches.

2.5 ETHICAL CONSIDERATIONS

According to Polit and Beck (2012:727), research ethics refer to a system of moral values that are concerned with the degree to which research procedures adhere to professional, legal and social obligations to the participants participating in a study. Ethical considerations are very important when conducting a research study and the researcher took special care in ensuring that ethical standards were met (Klopper, 2008:71).

This research study is a sub-study of a larger study that has already been granted ethical approval, entitled “Exploring the strengthening of resilience of health caregivers and risks groups (The Rise study)” (Koen & Du Plessis, 2011). Ethical approval was granted for the larger study, as well as the sub-study by the Research Ethics Committee of the North-West University, Potchefstroom Campus, before this study was conducted (see Appendix A). The ethical clearance reference number is NWU-00036-11-A1. Permission to conduct the research was also obtained from the North West Provincial Department of Health (see Appendix C) and the management of the Klerksdorp/Tshepong hospital (see Appendix E). The researcher also ensured that the rights of the participants were protected. These rights include the right to self-determination and informed consent, the right to confidentiality and the right to privacy (Grove *et al.*, 2013:164-174). These rights will be discussed in the following paragraphs.

- **Principle of self-determination**

The first ethical principle to consider is the right to self-determination, which implies that participants have the right to decide whether or not to participate in a study, the right to withdraw from a study, refuse to provide information and to ask for clarification about the purpose of a study (Brink *et al.*, 2012:35; Grove *et al.*, 2013:164; Polit & Beck, 2012:154). The researcher therefore, had to obtain informed consent before conducting the research (Brink *et al.*, 2012:38; Taylor *et al.*, 2007:108). Informed consent refers to voluntary agreement by participants to participate in a research study which he or she has full understanding of the study before the study begins (Brink *et al.*, 2012:213; Taylor *et al.*, 2007:108). According to Taylor *et al.* (2007:108) informed consent has two elements, namely to information and consent. The participants in this study were fully informed about the nature and purpose of this study. This was done in the form of a letter (see Appendix F).

- **Principle of beneficence**

The second ethical principle to be considered is the principle of beneficence which implies that researchers need to secure the well-being of participants (Brink *et al.*, 2012:35; Polit & Beck, 2012:152; Taylor *et al.*, 2007:105). No physical harm has resulted from completing the questionnaire. The research benefit was another aspect which was taken into consideration. Grove *et al.* (2013:175) state that the research benefit is something of health related, psychosocial or other value to a subject that will contribute to the acquisition of knowledge. The benefit the participants received from participating in this research is increased knowledge on resilience.

- **Principle of justice**

The third ethical principle to be considered is the principle of justice which implies that researchers need to be fair to participants (Brink *et al.*, 2012:36). The researcher committed himself to maintain anonymity and confidentiality. According to Polit and Beck (2012:162), anonymity occurs when researchers cannot link participants to their specific data. Anonymity in this research was maintained by not using the names of the participants. The participants were requested to not write their names on their narrative and questionnaire. The process of ensuring confidentiality refers to the responsibility of researchers to protect all data gathered during a study (Brink *et al.*, 2012:37). In this study no unauthorised persons were allowed to gain access to the study data except the researcher and supervisors.

2.6 SUMMARY

Chapter 2 provided a detailed discussion of the research design, methods, data collection, data analysis, rigour and ethical considerations of the study. In chapter 3 a literature review is provided.

CHAPTER 3

LITERATURE REVIEW

3.1 INTRODUCTION

The literature review, according to Grove *et al.* (2013:40), is an organised, written presentation of what has been published on a topic by scholars and includes a presentation of research conducted in the selected field of study. In this case a literature review was conducted to support the quantitative phase of this research, namely to gain a deeper understanding on the concepts of burnout in nurses, burnout and resilience in nurses.

For the literature review a computerised search was conducted using the following databases: EBSCOHost, Academic Premier, ERIC, CINAHL, ScienceDirect, SAE Publications, Wiley Online Library and Google Scholar. Copious amounts of literature are available on burnout and resilience abroad, but only two South African published studies conducted on resilience in professional nurses were found. The search terms included the following keywords: nurses, burnout and resilience.

3.1.1 Burnout

Maslach (2015:929) as well as Maslach and Leiter (2007:368) define burnout as a psychological syndrome that develops in response to chronic emotional and interpersonal job stressors. According to Maslach (2015:929) the three defining components of this syndrome are exhaustion, cynicism and detachment from the job, a sense of inefficacy and reduced accomplishment. Some of the burnout symptoms can include, according to Edward and Hercelinskyj (2007:240) and Portnoy (2011:47), chronic fatigue, exhaustion, tiredness, a sense of being physically run down, anger, frequent headaches, weight loss and gain, sleeplessness, depression, shortness of breath, feeling of helplessness and an increased degree of risk taking, moodiness, lowered resiliency and increased interpersonal conflicts.

Focusing on burnout and resilience, a study was done by Arrogante (2014:283) in Spain to determine the relationship between three burnout dimensions, namely emotional exhaustion, depersonalization and reduced personal accomplishment, health and resilience. A correlational and cross-sectional study with probabilistic sampling was conducted on a sample of 194 nursing staff which composed of nurses (n=133) and nursing assistants (n=61). The following instruments were used to collect data: MBI-HSS, 10-item CD-RISC (resilience) and socio-demographic variables. Arrogante (2014:283) suggests that resilience is not only important to improve the mental health of nurses but also to buffer and minimize the negative consequences of occupational stress with adverse results being signs of burnout.

A national survey was undertaken by Mealer *et al.* (2009:1118) to determine whether resilience was associated with healthier psychological profiles in intensive care unit

nurses in America. Data were collected through the Maslach Burnout Inventory, Connor-Davidson Resilience Scale and Hospital Anxiety and Depression Scale. Surveys were mailed to 3500 randomly selected intensive care unit nurses. Mealer *et al.* (2009:1118) came to the conclusion that a presence of high resilience was associated with a lower prevalence of posttraumatic stress disorder, symptoms of anxiety or depression and the burnout syndrome.

3.1.2 Burnout in nurses

The primary reason nurses enter this profession is because of their caring nature (Koen *et al.*, 2011b:93). Nurses form part of the multidisciplinary team that strives to improve outcomes in sick patients (Divatia 2014:127). Divatia (2014:127); Gray (2012:1); Hart *et al.* (2012:721) and McCann *et al.* (2013:60) state that health professionals are faced with numerous stressors within their clinical practise which include time pressures, work load, multiple roles portrayed, emotional issues and staff shortages. Frequent work place stressors, according to McCann *et al.* (2013:60), Cameron and Brownie (2010:66) and Portnoy (2011:47), can impact on the physical and mental well-being of nurses and their ability to practice effectively for and can result in burnout.

A study was completed by Jamal and Vishwanht (2000:454) to examine the relationship of job stressors and burnout among Canadian managers and nurses. Data were collected by means of a structured questionnaire. The above-mentioned researchers concluded that job stress was significantly correlated with overall burnout.

Another study was done in the United Kingdom by Jenkins and Elliot (2004:622) among mental health nurses to investigate and compare levels of stressors and burnout and to examine the relationship between job stressors. Data were collected by completion of the Health Professionals Stress Scale and Maslach Burnout Inventory. A sample of 93 nurses took part in this study. The findings were consistent with the notion of burnout developing in response to job related stressors.

A study was completed by Koekemoer and Mostert (2006:79) among South African nurses to determine which job characteristics are associated with burnout. This study has also come to the conclusion that characteristics like pressure at work and lack of autonomy indeed contribute to an increase in burnout.

A recent study was done by Terry and Stewart (2014:37) to identify educational interventions to reduce burnout and promote well-being in nurses working in secure settings. A systematic review of health, educational and criminal justice literature was undertaken to appraise relevant studies and identify educational interventions that were effective in reducing burnout. The researchers concluded that supportive relationships can help nurses to manage emotional stress and to continue personal and professional development. These factors can reduce burnout in nurses.

3.1.3 Resilience in nurses

Resilience has increasingly become the focus of research during the past decade (Smith *et al.*, 2008:194; Windle 2011:152). Flemming and Ledogar (2008:7) as well as Windle (2011:152) state that a large proportion of resilience research is routed within the discipline of developmental psychology, but Tusaie and Dyer (2004:3) mentioned that the concept has increasingly found its way into nursing literature. According to Stephens (2013:125), the concept of resilience has evolved over time and is now clarified according to context and population. Stephens (2013:125) furthermore mentioned that resilience has been recognized as an important concept for the nursing profession and according to Gillepsie *et al.* (2007:968) it augments adaption in demanding and volatile clinical environments.

Looking at resilience, a comprehensive search was undertaken by Hart *et al.* (2012:720) in America to describe the nursing research that has been conducted on this phenomenon among nurses. The search included research that has been done between 1991 to 2011. Hart *et al.* (2012:720) concluded that becoming aware of the contributing factors can help in building successful strategies to retain nurses in the profession.

A correlation cross-sectional survey was undertaken by Gillepsie *et al.* (2007:968) in Australia to examine the relation of perceived competence, collaboration, control, self-efficacy, hope, age, experience, education and years of employment to resilience in the operating room. The results show that identified variables, such as hope, efficacy, control, coping and competence, may result in implementing strategies to promote resilience in nurses. In addition, the study of Grafton *et al.* (2010:698) with the objective to understand resilience as an innate resource and its potential and relevance in managing work stress of oncology nurse concluded that resilience can be developed or enhanced through education, practice and support. For their research the researchers made use of journal articles and research results from a variety of Australian journals and published texts.

Jackson *et al.* (2007:1) have done a literature review to explore the concept of personal resilience as a strategy for responding to workplace adversity and to identify strategies to enhance personal resilience in nurses. According to these researchers, their findings suggest that nurses can actively participate in the development and strengthening of their own personal resilience to reduce work place adversities and thus improve the overall health care setting.

Koen *et al.* (2011b:103) have undertaken a study to determine resilience in professional nurses by the use of a sequential exploratory design due to the limited data available on resilience among South African nurses. Their study included nurses working in private and public hospitals. The authors concluded that there is a high incidence of resilience among these nurses. Moreover, they concluded that there is a need to facilitate less resilient nurses in order to prevent them from leaving the nursing profession.

3.2 CONCLUSION

Many researchers agree that caring as part of the professional practise of nurses may carry an emotional burden. Caring coupled with work stress can manifest as exhaustion, cynicism, depression, a feeling of helplessness that can lead to burnout. Researchers furthermore suggest that a higher degree of resilience among nurses can lead to a decrease in burnout. From research results on resilience it is; therefore, clear that it is possible that resilience can be developed, enhanced or learned in the workplace. Although a lot of research has been done on resilience abroad there is still little information available on research done in South Africa to provide nurses with the necessary means on how to develop, enhance or learn resilience. Knowledge about resilient behaviour among South African nurses can have the potential to enhance resilience in nurses and can lead to an improvement in clinical outcomes.

3.3 SUMMARY

This chapter provided an overview on relevant literature. In chapter 4 the research findings will be discussed.

CHAPTER 4

RESEARCH RESULTS

4.1 INTRODUCTION

In this chapter the analysis and interpretation of the results of the research will be discussed.

4.2 ORIENTATION TO DATA COLLECTION AND ANALYSIS

In this research study both quantitative and qualitative approaches were employed to collect data. The objectives of the study were to explore and describe strengths that can contribute to the resilience of nurses working at the Klerksdorp/Tshepong hospital; to determine the incidence of resilience among nurses working at the Klerksdorp/Tshepong hospital and to formulate recommendations to strengthen the resilience of nurses.

In the quantitative phase 158 questionnaires were completed by the participants and all 158 were submitted. The demographic information and results from the CD-RISC were analysed to determine the resilience level, and whether gender, age, educational level, number of years of service, position and section of work had a significant impact on the resilience of nurses. The CD-RISC was computed and analysed with the help of a statistical consultant at the North-West University, Potchefstroom Campus, using the Statistical Package for the Social Science (SPSS 21.0) Institute Inc. software package (SPSS., 2013). The data were analysed descriptively by means of frequencies (f), percentages (%), means (M), Standard Deviation (SD), Cronbach's alpha (α) and effect size.

In the qualitative phase 156 narratives were received. The narratives were analysed until data saturation was reached by making use of the steps for data analysis described by Holloway and Wheeler (2002:147). Data saturation was achieved after all the narratives were analysed.

The results of the analysis of the quantitative and qualitative phases will be discussed respectively.

4.3 RESULTS OF QUANTITATIVE ANALYSIS

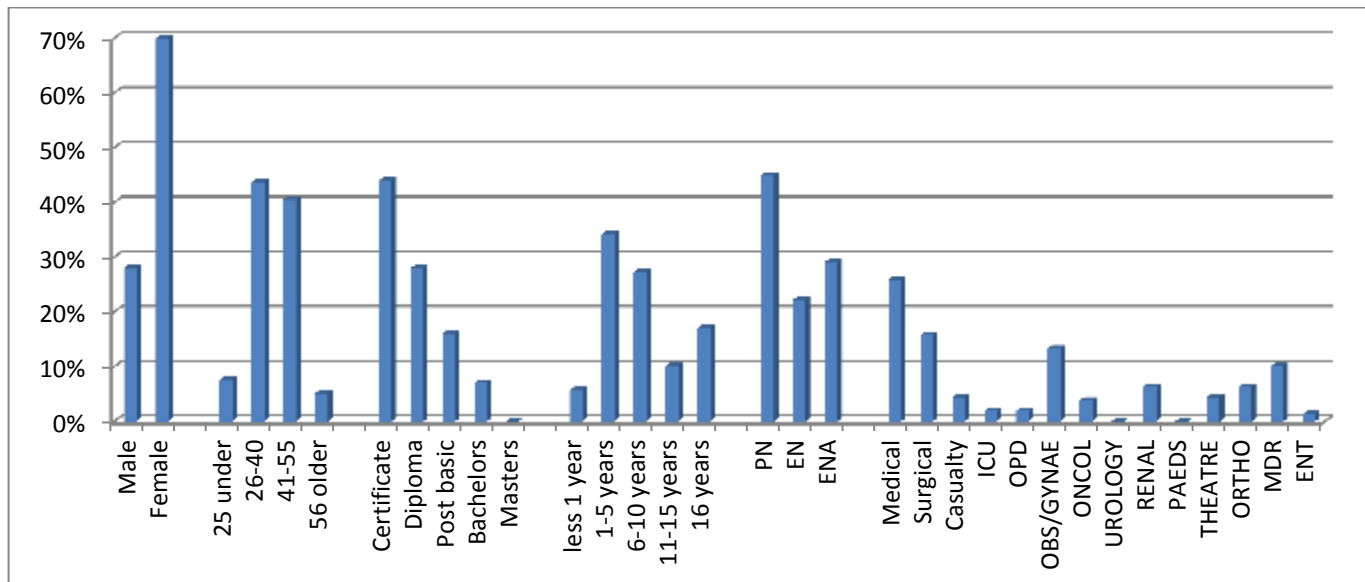
These results are presented by referring to the analysis of the descriptive statistics and the CD-RISC.

4.3.1 Descriptive statistics

4.3.1.1 *Demographic data*

This section of the research presents the analysis of the demographic data of the participants working at the Klerksdorp/Tshepong hospital and includes their gender, age, educational level, years of service; position and section of work (see Table 4.1).

Table 4.1 Demographic data



PN = Professional Nurse, EN = Enrolled Nurse, ENA = Enrolled Nurse Auxiliary, ICU = Intensive care unit, OPD = Outpatient Department, ONCOL = Oncology Department, MDR = Multidrug-Resistant TB Wards, ORTHO = Orthopaedics, OBS/GYNAE = Obstetrics/Gynaecology, PEADS = Paediatrics

A total of n = 158 (98.7%) nurses participated in this research study. The total consisted of n = 45 males (29%) and n = 111 females (70%). The gender data of only two of the participants (1.3%) were missing. Their ages, according to the participants, ranged from 25 to 56 years and older, with the total participants in the age group 26-40 years n = 69 (44%) and the total of the age group 25 and less n = 12 (8%).

With regard to the level of education a total of n = 71 (45%) obtained a certificate in nursing, diploma 29% (n = 45), post-basic level 17% (n = 26) and the participants who obtained a degree comprised 7% of the total sample (n = 11). 0% of the participants had a Master's degree in nursing.

The majority of the participants were employed full-time: 95% (150). The participants with less than one year working experiences comprised 5.7% (n = 9). One to five years working experience 34% (n = 54), the participants with six to ten years employment comprised 27% (n = 43), eleven to fifteen years comprised 10% (n = 16) and more than 16 years: 18% (n = 28).

With regard to position, n = 71 (45%) indicated that they were professional nurses, followed by auxiliary nurses n = 46 (29%) and enrolled nurses (n = 35) 22%.

Looking at the percentage of nurses working in the different sections of the hospital who participated in the research study, the majority of them indicated that 26% (n = 41) are stationed in the medical unit, followed by the surgical unit with 16% (n = 25) and the obstetrics/gynaecology unit comprised of 13% (n = 21) of the sample. The ICU and OPD units comprised of 2% (n = 3), Casualty 4% (n = 7), ONCOL 3% (n = 6), Renal 6% (n =

3), Theatre 4% (n = 7), Orthopaedics 6% (n = 10), MDR 10% (n = 16), ENT 1% (n = 2), Urology and PEADS unit 0% (n = 0) of the sample.

4.3.2 Analysis of the CD-RISC

The analysis is presented by referring to the reliability of the CD-RISC, resilience levels and statistical significance of the CD-RISC.

4.3.2.1 Reliability of the CD-RISC

Pietersen and Maree (2007:216) mentioned that the coefficient that is used to measure the internal reliability of an instrument is called the Cronbach's Alpha. Grove *et al.* (2009:379) as well as Pietersen and Maree (2007:216) suggest that a reliable estimate of ≥ 0.80 can be regarded as acceptable by researchers. Table 4.2 indicates the reliability with regards to the research, which indicates that the results can be viewed as reliable.

Table 4.2 Reliability of statistics

Cronbach's Alpha	N of items
.938	25

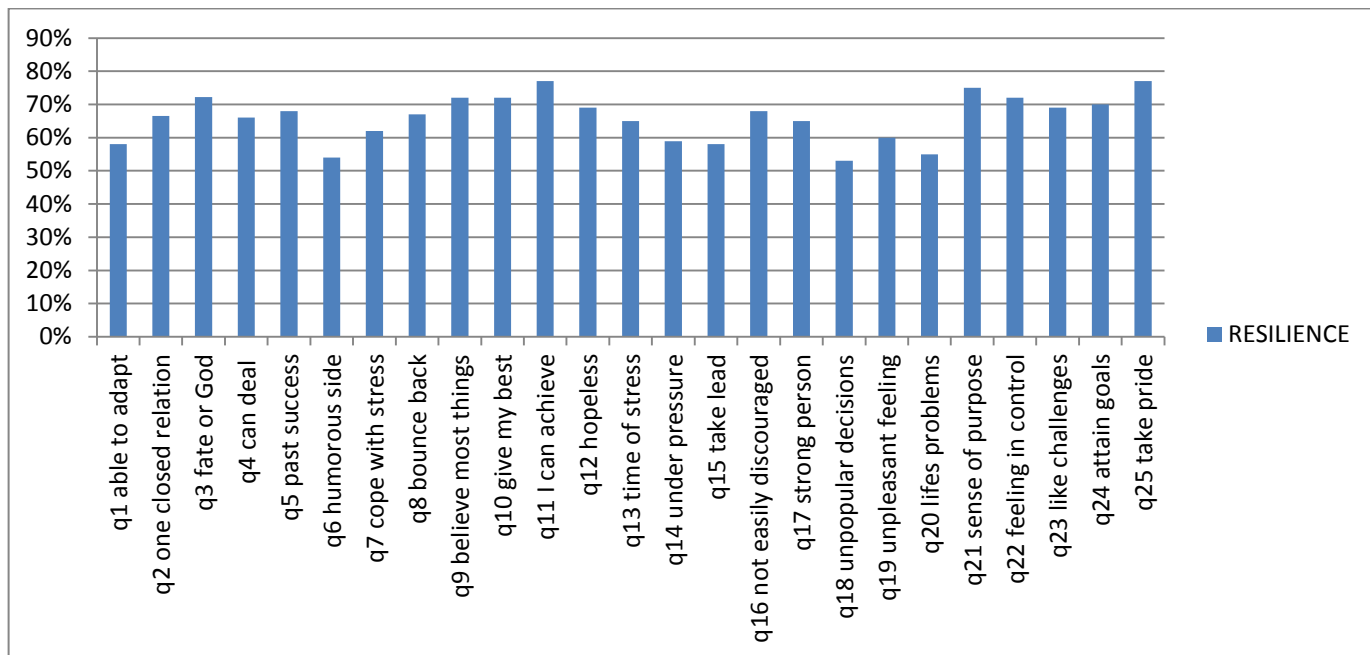
The CD-RISC scale that was used in this research study consisted of 25 items with a Likert scale where 0 reflects "not true at all", 1 is "rarely true", 2 is "sometimes true", 3 is "often true" and 4 is "true nearly all the time".

The participants scored the highest on items 11 (*I believe I can achieve my goals, even if there are obstacles*) and 25 (*I take pride in my achievements*). The participants scored 77% (m = 3.75, SD = 0.59) for both these items, followed by item 21 (*I have a strong sense of purpose in life*) 75% (m = 3.76, SD = 0.55) and item 3 (*When there are no clear solution to my problems, sometimes fate or God can help*) and item 22 (*I feel in control of my life*) 72% (m = 3.69, SD = 0.63).

Ten items (2: *I have at least one close and secure relationship that helps me when I am stressed*, 4: *I can deal with whatever comes my way*, 7: *Having to cope with stress can make me stronger*, 8: *I tend to bounce back after illness, injury or other hardships*, 12: *Even when things look hopeless, I don't give up*, 13: *During times of stress/crisis, I know where to turn for help*, 16: *I am not easily discouraged by failure*, 17: *I think of myself as a strong person when dealing with life's challenges and difficulties*, 23: *I like challenges* and 24: *I work to attain my goals no matter what roadblocks I encounter along the way*) scored between 60% and 70%.

Item 18 (*I can make unpopular or difficult decisions that affect other people, if it is necessary*) scored the lowest with 53% (m = 3.22, SD = 1.1), as well as item 6 (*I try to see the humorous side of things when I am faced with problems*) with a score of 54% (m = 3.3, SD = 0.86).

Table 4.3 CD-RISC results per item



4.3.2.2 Resilience levels

As mentioned previously, one of the objectives of the study was to measure the level of resilience among nurses working at the Klerksdorp/Tshepong hospital. The mean score for resilience with regard to the 158 participants was 89 out of a scale of 100 with a standard deviation of 12. This indicates that the resilience among the participants was high (Connor & Davidson, 2003:76).

4.3.2.3 Statistical significance

Gillespie *et al.* (2007) has identified in their research that variables, such as gender, age, level of education and number of years of experience in a clinical environment (operating rooms), have an effect on the resilience outcomes of nurses. Gender, age, level of education and number of years of experience were variables of significance to this study.

Cohen's *d* effect size indicator was used to analyse the strengths of the relationships between gender, age, level of education, number of years of experience and position and resilience. The following criteria were used as a guideline to interpret relationships: *d*: 0.2 = small, 0.5 = medium and 0.8 = large (Cohen, 1988:20).

The relationship between gender and resilience suggest that the male participants were more resilient than the female participants as can be seen by their mean values. However, with an effect size of 0.3 it indicates that the correlation between gender and resilience was not of statistical significance (see Table 4.4).

Table 4.4 Statistical significance

Gender	N	Mean	SD	d
Males	45	3.6	0.76	0.3
Females	110	3.5	0.52	

With regard to age and resilience no statistical significance was identified. The level of education, position and number of years with regard to experience also did not show any significant correlation.

Although most of the participants were resilient, the research shows that there are no statistically significant correlation between the resilience scores and demographic information. The objective that was set to determine the level of resilience among these nurses was thus reached. It could also be furthermore speculated that these nurses possess strengths or strategies that help them to thrive despite of adversities.

4.4 CONCLUSION OF QUANTITATIVE RESULTS

The objective of the quantitative phase of the research was to measure resilience among a group of nurses with the use of the CD-RISC. The main finding was that all of the participants in the sample group could be described as resilient. The findings linked to that of Ramalisa (2014:72) who found that despite the fact that nurses were found to be resilient, no statistical significance could be found between demographic information and resilience. It also suggests that the participants in this study are not very different from nurses who provided mental health care as explored by Ramalisa (2014:72).

The results from the CD-RISC indicate that the participants working at the Klerksdorp/Thepong hospital in the North West Province are motivated (*I believe I can achieve my goals, even if there are obstacles*) and (*I take pride in my achievements*) (items 11 and 25). The participants take pride in their achievements and the fact that they are motivated suggests that although they are faced with obstacles, like staff shortages and a highly stressful environment, they possess strengths that enable them to achieve their goals. The results also suggest that the participants *have a strong purpose in life* and that their religious beliefs help them in times of problems (*When there are no clear solution to my problems, sometimes fate or God can help*) and their strength guides them to find *control in their lives* (items 21, 3 and 22). Although the participants are faced with obstacles, their religious beliefs guide them to be in control of their lives which also motivate them to achieve their goals in rendering quality care to patients.

In the same context the results also indicate that the participants find it difficult to make unpopular or difficult decisions (item 18: *I can make unpopular or difficult decisions that affect other people, if it is necessary*), but [they] *try to see the humorous side of things when they are faced with problems* (item 6). Although the participants feel motivated, they have difficulty in making unpopular or difficult decisions which affect other people.

4.5 RESULTS OF QUALITATIVE ANALYSIS

As mentioned previously, the objective of the qualitative phase was to explore and describe strengths that contribute to the resilience of nurses working at the Klerksdorp/Tshepong hospital. This objective were obtained by applying the techniques for data analysis as described in the work protocol (see section 2.3.2.2.2 and Appendix J). It was clear that data saturation was reached after all of the narratives were analysed. After coding had occurred a meeting for a consensus discussion was organized between the researcher and the independent co-coder. Four main themes and sub-themes were identified from the narratives after consensus has been reached as displayed in (Figure 4.1) and (Table 4.5). The themes and sub-themes will now be discussed and presented using the exact words of the participants and their words will be related to relevant literature.

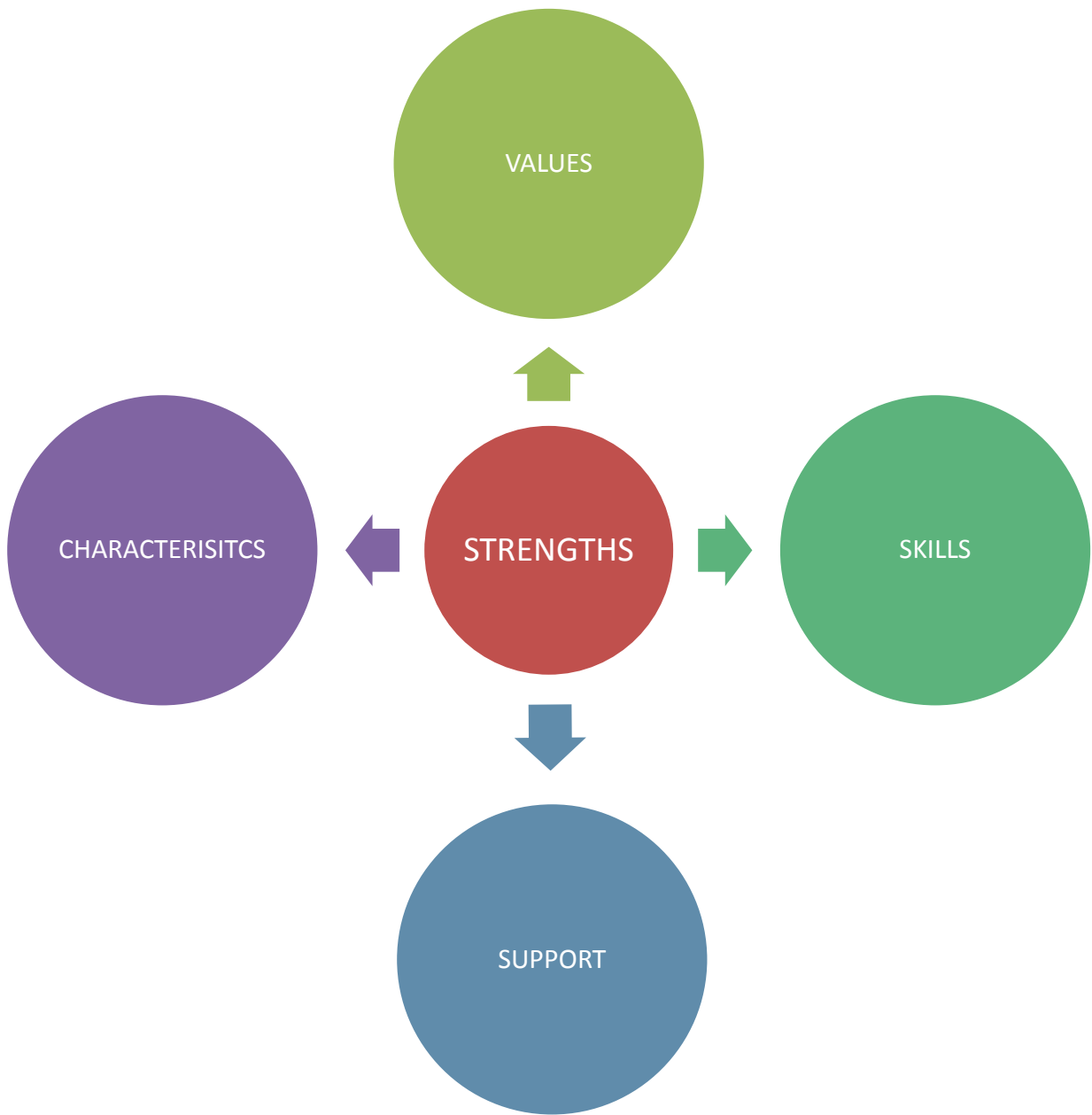


Figure 4.1: Strengths that help nurses cope

Table 4.5 Strengths of nurses working at the Klerksdorp/Tshepong hospital

Theme 1: Values		
Sub-themes	1.1 Spiritual/Religious values <ul style="list-style-type: none"> • Belief in God • Prayer 	1.2 Moral values <ul style="list-style-type: none"> • Belief in self • Fundamentals of nursing
Theme 2: Characteristics		
Sub-themes	2.1 Professionalism <ul style="list-style-type: none"> • Positive attitude • Caring • Compassion • Empathy • Love • Passion • Respect • Change 	2.1 Personal characteristics <ul style="list-style-type: none"> • Adaptability/Flexibility • Challenges • Courage • Hard working • Humour • Loyal • Motivated • Patience • Perseverance • Focused on purpose
Theme 3: Skills		
Sub-themes	3.1 Professional skills <ul style="list-style-type: none"> • Communication skills • Decision making and problem solving skills • Interpersonal skills • Leadership skills • Lifelong learning • Management skills • Team work • Time management 	3.2 Personal skills <ul style="list-style-type: none"> • Assertiveness • Stress management
Theme 4: Support		
Sub-themes	4.1 Professional support <ul style="list-style-type: none"> • Colleagues • Appreciation of patients • Past experiences and previous education 	4.2 Personal support <ul style="list-style-type: none"> • Family • Friends

4.5.1 Theme 1: Values

Values emerged as a theme from the narratives in response to the open-ended question: “What are your strengths that help you cope as a nurse?” According to Rassin (2008:614), values are active standards that define social and professional behaviour and also effect moral judgement. Under this theme two sub-themes emerged, namely spiritual/religious values and moral values. The participants indicated that under spiritual values the strengths that help them to cope are the following: their belief in God and in prayer. Under moral values the following were indicated: a belief in self and fundamentals of nursing.

4.5.1.1 Sub-theme 1: Spiritual/Religious values

The participants referred to a strong belief system that they depend on for strength to help them cope as nurses. The participants explained that they believe in God and through prayer they find strength to cope. One of the participants related when waking up in the morning he asks God for help. The following are direct extracts from the narratives:

I communicate with God on a daily basis. (n1)

... have an abundance of love and guided by the Almighty. (n4)

I believe in God cause he's the Almighty. (n13)

... pray to God every day for strength and courage. (n34)

... pray and tell God what you want from Him. (n25)

Cavendish *et al.* (2004:26) reported that prayer is personal communication with one's God or higher power and forms part of one's belief system and prayer can empower performance enhancement. McSherry and Jamieson (2013:3170) also confirm that spirituality can be a positive life enhancing aspect. Nurses also reported that finding meaningful engagement in spiritual practices can also strengthen their ability to cope with challenges they faced in the workplace (Cameron & Brownie, 2010:70). Ablett and Jones (2007:736) confirm that spirituality helps nurses to address the needs of their patients.

4.5.1.2 Sub-theme 2: Moral values

A belief in self and the fundamentals of nursing, according to some of the participants, have given them the strengths to cope as nurses.

The participants shared the following in their narratives:

I also believe in always doing the right thing first. (n61)

... and believe in oneself also help me to cope well ... (n45)

... believing in the fundamentals of what nursing is all about. (n109)

Horton *et al.* (2007:716) mentioned that moral values have a great influence on the way nurses think and act and play an important role in the caring that nurses provide. Cameron and Brownie (2010:66) mentioned the appreciation of the uniqueness of self as an attribute associated with resilience.

4.5.2 Theme 2: Characteristics

Characteristics was identified as a second theme and two sub-themes emerged, namely professionalism and personal characteristics.

4.5.2.1 Sub-theme 2: Professionalism

The participants mentioned that certain professional characteristics, such as a positive attitude, caring and having compassion for patients, experiencing empathy and love, showing passion and respect, they are able to cope as nurses. The participants furthermore explained that being helpful to others unearth a feeling of acceptance and respect. The participants shared the following in their narratives:

... if one has a positives attitude towards life. (n13)

... to be positive about every situation. (n29)

...i accept and respect patients ... (n47)

...i help others in need ... (n61)

... a smile is always welcome by others ... (n61)

The importance of a positive outlook was also mentioned in studies done by Koen *et al.* (2011b:110) and Cameron and Brownie (2010:69). The ability to provide holistic care also fosters a degree of satisfaction among nurses (Cameron & Brownie, 2010:68). Ablett and Jones (2007:737) also mentioned that working in a pleasant environment with a manageable workload with time available to talk and listen to patients also equips nurses with resilience when facing adversities.

4.5.2.2 Sub-theme 2: Personal characteristics

Most of the participants mentioned personal characteristics that enable them to manage job adversities. The participants expressed that knowledge on how to deal with challenges from previous experiences establish them as hard workers and empower them to adapt to changes at work.

Some of the participants wrote the following:

... as well as knowledge to deal with challenges. (n4)

I have resorted to be strong. (n6)

I'm a strong person. (n148)

I'm a hardworking person. (n23)

I am able to adapt to changes. (n25)

... sense of humour that are the basics of therapeutic to someone's illness. (n46)

... my ability to adjust. (n47)

... loyalty to others and my supervisors helps me to cope as a nurse. (n66)

... patience helps me cope. (n88)

... perseverance and handling stress very well. (n118)

... motivated ... (n146)

... being flexible ... (n157)

... staying focused and thinking clearly ... (n19)

According to Windle (2011:155), personal characteristics represent qualities that enable individuals to thrive in the face of adversities. The participants mentioned the following personal characteristics, namely: adaptability/flexibility, courageousness and being able to handle challenges, hardworking, sense of humour, loyalty, motivated, patience, perseverance and purpose driven.

In literature Earvolina-Ramirez (2007:241), Edward (2004:146), Hart *et al.* (2012:727) and Stephens (2013:128) mentioned that resilience can be fostered through personal characteristics such as adaptability/flexibility, courageousness and being able to handle challenges, hardworking, sense of humour, loyalty, motivated, patience, perseverance and being purpose driven.

4.5.3 Theme 3: Skills

Skills were identified as the third theme and two sub-themes emerged, namely professional and personal skills.

4.5.3.1 Sub-theme 3: Professional skills

The participants wrote about skills, such as good communication, interpersonal communication, management, problem-solving skills and teamwork that equip them to function and cope with the demands present in the nursing profession. They mentioned that the ability to have good listening skills enhance their communication skills which help them to solve problems and to function well in a team. Some of the participants wrote:

... great communication skills ... (n157)

... good listener ... (n41)

... problem solving ... (n117)

... *learning a new thing or having clarity.* (n3)

... *building team spirit ...* (n157)

I'm functioning very well in a team. (n89)

... *time management ...* (n15)

Professional skills, when applied as strengths, can help nurses cope when facing adversities have also been reported in literature by Earvolina-Ramirez (2007:242), Koen *et al.* (2011b:108) and Ramalisa (2014:74).

4.5.3.2 Sub-theme 3: Personal skills

The participants also indicated the importance of personal skills in the workplace. They mentioned that assertive behaviour equip them with the ability to handle stress very well. Some of the participants shared the following in their narratives:

... *assertiveness is a rule if you are a nurse.* (n61)

... *handling stress very well ...* (n118)

I can handle stress very well. (n120)

Literature confirms that assertiveness is considered healthy behaviour which can result in personal empowerment (Mahmoudurah *et al.*, 2009:120; Rasetsoke (2013:109) and Sudha (2005:182) furthermore added that assertive behaviour is an essential component for nurses at the workplace to manage stress.

4.5.4 Theme 4: Support

In order for nurses to cope, *support* emerged as a theme. From this theme two sub-themes emerged: *professional and personal support*.

4.5.4.1 Sub-theme 4: Professional support

The participants wrote that the support of colleagues, appreciation from patients as well as past experiences and previous education seem to help in coping with adversities. They shared the following in their narratives:

... *when helping people and they become appreciating in the form of words ...* (n1)

I am appreciated of the work I'm doing. (n10)

... *through my past experience with people that were sick ...* (n124)

Cameron and Brownie (2010:68); Lucey (2015:160); Ramalisa (2014:76) and Trimmer and Haggerty (2015:1) made reference to the importance of support – especially from colleagues. Ramalisa (2014:75) furthermore mentioned that support provided by colleagues can be seen as valuable because it provides knowledge and guidance because

colleagues share similar situations and experiences. Collegial support also provides the opportunity to validate experiences (Cameron & Brownie, 2010:66). Koen *et al.* (2011b:109) also identified support in the workplace as a strength to help nurses cope. According to Abualrub *et al.* (2009:362), collegial support among nurses also contributes to more satisfied workers and they are more inclined to not leave the profession. Collegial support also helps nurses to overcome stress in the workplace (Hart *et al.*, 2012:727). Raso (2014:5) also adds that nurses sometimes feel left out in their work place and by recognizing their efforts it can lead to a feeling of being valued which can ultimately lead to an increased commitment and dedication to the work they do.

4.5.4.2 Sub-theme 5: Personal support

From the narratives it was clear that in order for these participants to cope they had to lean on people. In this study the participants mentioned that they find people, such as their families and friends, helpful in terms of giving strength to help them cope as nurses. The participants wrote:

... also have friends whom we discuss ... (n1)

I have a family that makes me deal with life as the way it is. (n22)

... strong family bonds ... (n41)

... my relationship with my family ... (n43)

... the love of my family and friends. (n90)

... the family that I have help me to cope. (n69)

A study found that personal support especially provided by family and friends could help nurses cope better (Edward & Hercelinskyj, 2007:242; Hart *et al.*, 2012:727; Koen *et al.*, 2011b:108). Studies have also found that having support from family and friends can positively influence the ability to cope (McDonald *et al.*, 2015; Videbeck, 2010:125). Ablett and Jones (2007:737) have also uncovered the theme *support* in their research.

4.6 CONCLUSION

In conclusion, it can be stated that the objectives of this study, namely to explore and describe strengths that contribute to the resilience of nurses working at the Klerksdorp/Tshepong hospital and to determine the incidence of resilience in nurses working at the Klerksdorp/Tshepong hospital were met. In chapter 5 the conclusions, recommendations and limitations will be discussed.

CHAPTER 5

CONCLUSIONS, LIMITATION AND RECOMMENDATIONS

5.1 INTRODUCTION

The conclusions in respect of the research findings will be discussed in this chapter, followed by the limitations of the study. Recommendations will lastly be made for nursing practice, nursing education and nursing research with reference to the formulation of guidelines. As previously mentioned, this study used a mixed method to discover if resilience was present in nurses working at the Klerksdorp/Tshepong hospital in the North West Province. The objective of the first phase was to determine the incidence of resilience in nurses working at the Klerksdorp/Tshepong hospital. This was done by using a structured questionnaire, the CD-RISC. The objective of the second phase was to explore and describes strengths that contribute to resilience of nurses working at the Klerksdorp/Tshepong hospital. This was done in the form of a narrative. The participants were asked to write a story prompted by the following open-ended question: “What are your strengths that help you cope as a nurse?” In order to formulate recommendations to strengthen resilience, the following conclusions were drawn from the findings evident form the narratives and questionnaires.

5.2 CONCLUSIONS

In the following sections the conclusions for both the phases will be highlighted. These conclusions lead to the formulation of recommendations for the nursing practice, nursing education and nursing research.

5.2.1 Quantitative phase (phase one)

- The objective of the first phase was to determine the incidence of resilience in nurses working at the Klerksdorp/Tshepong hospital by using the CD-RISC (Connor & Davidson, 2003:76). The results from the CD-RISC suggested that regardless of demographic differences the nurses working at the Klerksdorp/Tshepong hospital could be described as resilient. Research done by Jackson *et al.* (2007), Koen *et al.* (2011a:9) and Ramalisa (2014:82) have found that despite the fact that nurses experience adversities in the workplace, they remain resilient under these circumstances – as in this case.

Furthermore, the results indicated that these nurses working at the Klerksdorp/Tshepong hospital are highly motivated (item 11: *I believe I can achieve my goals, even if there are obstacles*) and (item 25: *I take pride in my achievements*). The results also suggest that these nurses (item 21: *have a strong purpose in life*) and their religious beliefs guide them in times of problems (item 3: *When there are no clear solutions to my problems, sometimes fate or God can help*) and help them to find (item 22: *control in their lives*). The results also indicate that these nurses find it difficult to make unpopular or difficult decisions which can affect other people (item 18: *I can make unpopular or difficult decisions that affect other*

people, if it is necessary), and that they scored low on item 6 (but try to see the humorous side of things when they are face with problems).

5.2.2 Qualitative phase (phase two)

- From the qualitative phase (phase 2) of this research the objective was to explore and describe strengths that contribute to the resilience of nurses working at the Klerksdorp/Tshepong hospital. Data analysis from this phase identified four themes, namely values, characteristics, skills and support. The participants reported that they are strengthened by a strong spiritual/religious system which is driven by a belief in God and prayer. They reported that they communicate with God on a daily basis by praying to God to strengthen them and to give them courage. In addition, this belief in themselves and the fundamentals of nursing act as a coping mechanism to help them flourish during times of adversities. Characteristics like professional and personal strengths also equip these nurses with the ability to cope with problems in their work place. Personal traits, such as being positive and accepting and showing respect, are some of the strengths named by these nurses. Having inner personal strengths, such as being flexible, being courageous and strong, having a sense of humour, to be loyal, patient and to persevere as well as being purpose driven, equip the nurses to serve their patients. Professional and personal skills were also strengths that were uncovered during this phase. Good communication skills, problem-solving skills, interpersonal skills, leadership skills, teamwork, time management and life-long learning are also some of the strengths identified which help the nurses to thrive and to provide quality care when facing adversities at their work place. The importance of support from colleagues, family, friends and appreciation from patients were also mentioned.

The results from the CD-RISC and strengths are illustrated in Figure 5.1 in the next page.

CD-RISC questionnaire:
Motivated (believe I can achieve my goals)
Take pride in achievements
Faith in God
Control of their lives
Find it difficult to make unpopular or difficult decisions
Limited use of humour



Spiritual/Religious values:
Belief in God
Moral values:
Belief in self

Professionalism:
Positive attitude
Personal characteristics:
Hard worker

Professional skills:
Communication skills
Personal skills:
Assertiveness

Professional support:
Colleagues
Personal support:
Family

Strengths:

- Values
- Characteristics
- Skills
- Support

Figure 5.1: Resilience: strengths and competencies

5.3 LIMITATIONS OF THIS RESEARCH

The research was contextual in nature; therefore, it cannot be generalized to other nurses in other parts of South Africa or the world. Furthermore, taking the sample size into consideration it also limits transferability to other parts of South Africa or the world. Looking at the collection of data by means of narratives it can also be viewed as a limitation. The use of other types of data gathering methods could have enriched the data as well as the findings, for example if focus groups or interviews were used during the research study. This is noted as a common disadvantage of using narratives as the data collection method. However, all of the narratives were analysed and data saturation was reached. Another limitation was a relatively low response rate in the quantitative phase. However, the results were found to be reliable and provided a thorough overview of the resilience of the participants.

5.4 RECOMMENDATIONS

The following recommendations are made for the nursing practice, nursing education and nursing research.

5.4.1 Recommendation for nursing practice

Guidelines to strengthen the resilience of nurses working at the Klerksdorp/Tshepong hospital will be of great assistance. The results from the quantitative phase suggest that the nurses have relatively high levels of resilience but needs strengthening on aspects such as assertiveness and humour. Training on assertive behaviour techniques by experts in the field to managers and nurses on a quarterly basis through role-play, case studies or group discussions will equip them with the ability to effectively manage work adversities which in turn can build their confidence and can ultimately contribute to resilience. Guidelines to strengthen effective assertive behaviour can include the following simple techniques as suggested by Russel (2011:41) and Sudha (2005:182):

- Be specific and as clear as possible about what you want, think and feel. When conveying a message, for instance to a person, be direct and own your message. This can be accomplished by the use of “I”, for example: “I do not want to do this”.
- Ask for feedback, for example: “Am I being clear?” This technique can encourage others to correct any misconceptions.
- Stop apologizing all the time, for example do not say “I am sorry” unless you have done something you have to apologize for.
- Learn to accept compliments. When complimented on a job well done, say “thank you”.
- Act confident even if you do not feel confident, for example maintain direct eye contact and use a steady and audible voice.

Humour and laughter therapy can also be used to foster resilience among managers and nurses by providing training presented by experts in the field on a quarterly basis. Dowling

(2002:123) and Mallet (1995:73) mentioned that humour in practice can overcome anxiety and hostility. Ulloth (2003:36) suggests the following:

- Laugh more often and tell jokes.
- Surround yourself with humour, for example humorous health care journals, funny pictures to decorate the rooms of patients.
- Observe humour in everyday life.
- Take yourself lightly and laugh at yourself, for example nurses can share blunders and embarrassing experiences.

Results from the qualitative phase suggest that resilience could be strengthened through instilling important values and highlighting certain characteristics, skills and support systems. In practice, managers as well as supervisors can strengthen certain values on a daily basis in nurses, for example by allowing prayers before starting the daily routine to strengthen them and encourage them to get through the day. It is also important that managers and supervisors should recognize the essential skills of nurses and acknowledge them which in turn can encourage them to deliver quality nursing care. Good educational training should also be implemented by management and supervisors aiming at strengthening skills by mentors, for example courses on how to effectively manage stress and to train nurses in effective communication. Building these skills can help nurses to develop resilience and they will be able to manage workplace adversities. The importance of a good support system should also be taken in consideration. Supervisors and managers should encourage collegial support in practice. Nurses should also be given the opportunity to strengthen their support systems and they should be encouraged by management to start support groups, not managed by managers or supervisors but by nurses themselves whereby resilient nurses can uplift less resilient ones.

5.4.2 Recommendations for nursing education

In the nursing education field the inclusion of resilience development for nursing students should also be incorporated in the curriculum to prepare students before they enter the work force. The development and improvement of certain skills of students should also be facilitated by educators. The necessary guidance and facilitation from educators, for example teaching the fundamentals of nursing to students, could equip student nurses to become resilient. Nursing educators should also encourage students to start support groups on campus to promote and strengthen resilience. Lastly, the nursing curriculum presented at universities and colleges should also incorporate resilience training for educators to fully equip them to strengthen their own resilience.

5.4.3 Recommendations for nursing research

Further research on this topic could include an evaluation between the different measuring instruments to measure resilience among individuals. Factors identified in this study like strengths and how to strengthen resilience could also be incorporated in future research. The effectiveness of the proposed recommendations on strengthening resilience should

also be evaluated in future research. In future research the role of nursing educators to strengthen resilience among student nurses should also be explored.

5.5 CONCLUSIONS BY THE RESEARCHER

The objectives of this research study were to explore and describe the strengths that contribute to resilience in nurses working at the Klerksdorp/Tshepong hospital, to determine the incidence of resilience in nurses working at the Klerksdorp/Tshepong hospital and to formulate recommendations to strengthen the resilience of these nurses. All three of these objectives have been reached. Recommendations were formulated which can assist nurses to strengthen their resilience in order to face adversities at their workplace. Results from this study underline the results from other research studies: Despite nurses going through adversities they remain resilient. Nursing managers, educators and researchers should focus on strategies to promote resilience among nurses in order to equip them to deliver quality nurse care. A report on the findings of this research study will be provided to the managers of the Klerksdorp/Tshepong hospital to inform them and to enable them to strengthen the resilience of nurses working at this hospital.

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Appendix A: Ethical clearance



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ETHICS APPROVAL OF STUDENT ON PROJECT

This is to certify that the ethics application under the original project that was approved by the NWU Ethics Committee:

Project title :

Main project RISE (Strengthening the resilience of health caregivers and risk groups, MP Koen en E du Plessis)

M. Cur student: Mr Morris Phyffer

Student no.: 12897329

Title of theses: Resilience among nurses working at Klerksdorp/Tshepong hospital in the North West Province

Projectleader : Prof. D Koen and Prof. E Du Plessis

Ethics number: NWU-00036-11-A1

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

The Ethics Committee would like to remain at your service as scientist and researcher, and wishes you well with your project.

Please do not hesitate to contact the Ethics Committee for any further enquiries or requests for assistance.

Yours sincerely



HM Halgryn

NWU Research Ethics Secretariate

ROOM 708
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AUGUST 2014

THE DIRECTOR OF RESEARCH, POLICY & PLANNING
DEPARTMENT OF HEALTH
PRIVATE BAG X2068
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2735

Dear Sir/Madam

**APPLICATION FOR PERMISSION TO CONDUCT RESEARCH AT
KLERKSDORP/TSEPONG HOSPITAL**

I am currently studying for the Master's Degree in Nursing (M. Cur) with the North-West University (Potchefstroom campus). I am expected to conduct a research project as a requirement of the degree. May I therefore, request your permission to conduct this study at Klerksdorp/Tshepong hospital.

The topic for my research is: **Resilience among nurses working at Klerksdorp/Tshepong hospital in the North West Province.**

The objective of my research is:

- Explore and describe strengths that contribute to resiliency of nurses working at Klerksdorp/Tshepong hospital.
- Determine the incidence of resilience of nurses working at Klerksdorp/Tshepong hospital.
- Formulate recommendations to strengthen resilience of nurses.

The study will employ a mixed method research approach to explore and describe the phenomenon under study. It involves the use of both a structured questionnaire and an open-ended question to collect data amongst the nurses. The criteria for inclusion in this study are as follows:

- Eligible participants must be nurses – either registered, enrolled or assistant nurses.
- Eligible participants must work at the Klerksdorp/Tshepong hospital.
- Eligible participants must understand, read, write and speak English.
- The sample must include participants representing different ethnic groups (African, coloured, White and Asian).
- Eligible participants must work at the Klerksdorp/Tshepong hospital for at least a period of six months or longer.

The North-West University requires that participants of this study be protected in terms of keeping their identity anonymous and the information confidential. This research is also a sub-study of larger study that had already been granted ethical approval, entitled “Exploring the Strengthening of Resilience of Health Caregivers and Risk Groups (The RISE study)” The ethical clearance reference number is NWU-00036-11-S1.

Please find attached a copy of the research proposal for your perusal. Your favourable consideration will be much appreciated.

Yours sincerely

Morris Phyffer (Researcher)

Prof. M.P. Koen (Supervisor)

Prof. E. Du Plessis (Co-Supervisor)

Appendix C: Approval from provincial department to conduct research



health
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POLICY, PLANNING, RESEARCH, MONITORING & EVALUATION

To : Ms M Phyffer
From : Policy, Planning, Research, Monitoring & Evaluation
Subject : Approval Letter- Resilience among nurses working at Klerksdorp/
Tshepong Hospital in the North West Province.

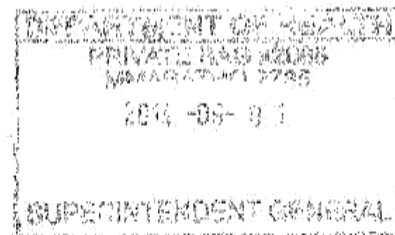
To inform the researcher that permission to undertake the above mentioned study has been granted by the North West Department of Health. The researcher is expected to arrange in advance with the chosen districts or facilities, and issue this letter as prove that permission has been granted by the provincial office.


Upon completion, the department expects to receive a final research report from the researcher.

Kindest regards


Acting Director: PPRM&E
Mr. B Reddinghys


Date




Healthy Living for All

ROOM 708
PERTAHOF NURSES' HOME
KLERKSDORP HOSPITAL
KLERKSDORP
2571
CELL NO: 0795457089
2 SEPTEMBER 2014

THE HOSPITAL MANAGEMENT
KLERKSDORP HOSPITAL
KLERKSDORP
2571

Dear Sir

**APPLICATION FOR PERMISSION TO CONDUCT RESEARCH AT
KLERKSDORP/TSEPONG HOSPITAL**

I am currently studying for the Master's Degree in Nursing (M. Cur) with the North-West University (Potchefstroom campus). I am expected to conduct a research project as a requirement of the degree. May I therefore, request your permission to conduct this study at Klerksdorp/Tshepong hospital?

The topic for my research is: **Resilience among nurses working at Klerksdorp/Tshepong hospital in the North West Province.**

The purpose of this study is to:

- Explore and describe strengths that contribute to resiliency of nurses working at Klerksdorp/Tshepong hospital.
- Determine the incidence of resilience of nurses working at Klerksdorp/Tshepong hospital.
- To formulate recommendations to strengthen resilience of nurses.

The study will employ a mixed method research approach to explore and describe the phenomenon under study. It involves the use of both a structured questionnaire and an open-ended question to collect data amongst the nurses. The criteria for inclusion for the participants in this study are as follows:

- Eligible participants must be nurses – either registered, enrolled or assistant nurses.
- Eligible participants must work at the Klerksdorp/Tshepong hospital.
- Eligible participants must understand, read, write and speak English.
- The sample must include participants representing different ethnic groups (African, coloured, White and Asian).
- Eligible participants must work at the Klerksdorp/Tshepong hospital for at least a period of six months or longer.

The North-West University requires that participants of this study be protected in terms of keeping their identity anonymous and the information confidential. This research is also a sub-study of larger study that had already been granted ethical approval, entitled “Exploring the Strengthening of Resilience of Health Caregivers and Risk Groups (The RISE study)” The ethical clearance reference number is NWU-00036-11-S1.

Please find attached a copy of the research proposal for your perusal. Your favourable consideration will be much appreciated.

Yours sincerely

Morris Phyffer (Researcher)

Prof. M.P. Koen (Supervisor)

Prof. E. Du Plessis (Co-Supervisor)

Appendix E: Approval from public hospital to conduct research



health

Department of
Health
North West Province
REPUBLIC OF SOUTH AFRICA

*All correspondence to
be directed to:*

The Clinical Manager
Dr. Npho Dikhing-Mahole
K/T Hospital Complex
Private Bag A14
KLERKSDORP
2570

Tel: (018) 406 4740

Fax: (018) 452 1923

ndikhing@nwpp.gov.za

Enq: Sbooi@nwpp.gov.za



CLINICAL MANAGER'S OFFICE

Re Resilience amongst nurses working at Klerksdorp/Tshepong hospital in the
North West Province

We are glad to provide tentative approval for the following study:

Title: Resilience amongst nurses working at Klerksdorp/Tshepong hospital in the
North West Province

- Investigator: M.Phyffer
- Supervisor: Prof . D.Koen
- Ethics approval no: NWU -00036-11-A1

You may start study and full Provincial approval will follow.

Please provide results of study to the hospital, PSG and Province on completion

Thanks

Date: _____

13/11/2014

CONSENT FORM FOR PARTICIPATION IN A RESEARCH STUDY.

TITLE OF STUDY: RESILIENCE AMONGST NURSES WORKING AT KLERKSDORP/TSHEPONG HOSPITAL IN THE NORTH WEST PROVINCE.

RESEARCHER: MORRIS PHYFFER

A. DESCRIPTION

You are invited to participate in a research study on “Resilience among nurses working at Klerksdorp/Tshepong hospital in the North-west Province. The purpose of this research is to:

1. Explore and describe strengths that contribute to resiliency of nurses working at Klerksdorp/Tshepong hospital.
2. Determine the incidence of resilience of nurses working at Klerksdorp/Tshepong hospital.
3. Formulate recommendations to strengthen resilience of nurses.

Your participation will involve writing a narrative (story) to an open ended question, namely: What are your strengths that help you cope as a nurse to provide quality health care and completing a questionnaire. Participation will take about 30 minutes of your time.

B. RISKS AND DISCOMFORTS

There are no risks associated with this research. In case there are questions that might affect you emotionally, debriefing will be provided by a trained professional.

C. BENEFITS

Your participation in this study may benefit you directly. This research may help us to understand the strengths that contribute to resiliency amongst nurses and it will help to formulate guidelines to support nurses to develop resilience.

D. VOLUNTARY PARTICIPATION

Your participation in this research study is voluntary and you may withdraw your consent to participate at any time. You will not be penalized should you wish not to participate or to withdraw from this research study.

E. ANONYMITY AND CONFIDENTIALITY

A confidential record will be kept of those who participate in this study. We will do everything to protect your privacy. All data will be kept safe and no one except the researcher will have access to it. Your identity will not be revealed in any publication resulting from this study.

F. PAYMENT

No participant will be rewarded for participating.

G. COMMITTEE APPROVAL

This research study has been approved by the Ethics committee of the North-West University (Potchefstroom campus). The ethical clearance reference number is NWU-00036-11-S1.

H. CONTACT INFORMATION

If you have any questions or concerns about this study please contact me, Morris Phyffer at 0795457089 or my supervisor Prof. Emmerentia Du Plessis at 018 2991876.

I. FEEDBACK OF FINDINGS

The findings of the research will be shared with you if you are interested. You are welcome to contact us regarding the findings of the research.

J. CONSENT

I have read this consent form. I have been given the opportunity to ask questions. I hereby consent to take part in this research project.

Participant's signature.....Date:.....

Appendix G: Demographic information

Questionnaire no. (for office use only)

INSTRUCTION TO COMPLETE DEMOGRAPHIC QUESTIONNAIRE

- 1 Complete all questions of the questionnaire
- 2 Use a black pen
- 3 Please mark with an "X" in the relevant box to your answer

A. Biographical background

1. What is your gender?

₁ Male

₂ Female

2. What is your age?

₁ 25 or under

₂ 26-40

₃ 41-55

₄ 56 or older

3. What is the highest level of education you have completed?

₁ Certificate

₂ Diploma

₃ Post-basic diploma

₄ Bachelor's degree

₅ Master's degree

₆ Doctoral degree

4. How long have you been working in the field of nursing?

₁ Less than a year

₂ 1-5 years

₃ 6-10 years

4 11-15 years

5 More than 16 years

5. What is your present position?

1 Professional nurse

2 Enrolled nurse

3 Nursing Auxiliary

6. At which section are you working?

1 Medical

2 Surgical

3 Casualty

4 ICU

5 OPD

6 Obstetrics/Gynaecology

7 Oncology

8 Urology

9 Renal

10 Paediatrics

11 Theatre

12 Orthopaedics

13 MDR

14 ENT, Ophthalmology & Maxillae

Appendix I: Permission to use CD-RISC



Money Transfer Deal Receipt

Confidential

WESTERN UNION INTERNATIONAL LT
 RICHVIEW OFFICE PARK, UNIT 9
 CLONSKEAGH, DUBLIN 14
 IRELAND
 0000
 V.A.T. Reg. No. : 445 024 9182
 Telephone: 0000000000

Branch Code : 008031 Deal Date : 16052014 Value Date : 16052014

Client Acc No : 0000009101960522
 Client Name :

Sender Full Name : MORRIS
 Sender Surname : PHYFFER
 Receiver Full Name : DAVIDSON
 Receiver Surname : JONATHAN
 Destination Country: United States
 Destination State : SOUTH CAROLINA
 Destination City : SOUTH CAROLINA
 Originating Country: South Africa
 Test Question : WHATS THE COLOUR OF THE SKY
 Test Answer : BLUE



Foreign Curr: USD Rate : 0010.51510000 Local Curr : ZAR
 Foreign Amount : *****46.00 Local Amount : *****483.69
 Comm Amount : *****73.61
 Swift Costs : *****.00
 VAT Amount : *****10.31

Total due by client : *****567.61

Expected Payout Currency : USD
 Expected Payout Amount : 0000000000046.00
 3RD Currency Rate : 000000001.0000000

Balance of Payments Category : 401
 Description: Gifts
 Full Details:
 Transaction no : CB08031627514E16
 MTCN No : 7268342730

I/We, the undersigned hereby declare that:
 - I/We have read this document and know and understand the contents thereof.
 - The information furnished above is in all respects both true and correct.
 - The currency applied for will only be used for the specific purpose stated here.
 - The documentation presented in support of this application is in all respects authentic.
 - I/We have not exceeded the limit applicable to the above transaction and this limit will not be exceeded as a result of the conclusion of this transaction.
 - I/We have provided this information being provided to the South African Revenue and/or the Financial Intelligence Centre.
Western Union International is a registered credit provider by No. 130570/12
 and/or the Financial Intelligence Centre.

ROOM 708
PETRAHOF NURSES' HOME
KLERKSDORP HOSPITAL
KLERKSDORP
2571
CELL NO: 0795457089

12 August 2015

REQUEST TO BE A CO-CODER OF MY RESEARCH PROJECT

Dear Madam

I am currently studying for the Master's Degree in Nursing (M. Cur) with the North-West University (Potchefstroom campus). I am expected to conduct a research project as a requirement of the degree.

The topic for my research is: **Resilience among nurses working at Klerksdorp/Tshepong hospital in the North West Province.**

The purpose of this study is to:

- To explore and describe strengths that contributes to resilience of nurses working at Klerksdorp/Tshepong hospital.
- To determine the incidence of resilience among nurses working at Klerksdorp/Tshepong hospital.
- To formulate recommendations to strengthen the resilience of nurses.

I therefore request you to be an independent co-coder of my research to provide verification of the findings from the collected data. Enclosed please find the research proposal and work protocol.

I trust that this research will contribute to the realization of the above mentioned objectives.

Thanks in advance

Morris Phyffer

Work protocol for data analysis

Dear Dr. Scrooby

Thank you for your willingness and agreement to participate in this research as an independent co-coder of the research titled: **Resilience among nurses working at Klerksdorp/Tshepong hospital in the North West Province.**

The purpose of this study is to:

- To explore and describe strengths that contributes to resilience of nurses working at Klerksdorp/Tshepong hospital.
- To determine the incidence of resilience among nurses working at Klerksdorp/Tshepong hospital.
- To formulate recommendations to strengthen the resilience of nurses.

The following steps will be followed as described suggested by Holloway and Wheeler (2002:147) will be followed namely,

- ordering and organising the collected material,
- rereading the data,
- breaking the material into manageable pieces,
- comparing and contrasting categories,
- grouping categories together,
- recognising and describing patterns and themes and
- Interpreting and searching for meaning.

Your participation as co-coder in this research is highly appreciated. The consensus meeting will take place at a convenient time after completing your own analysis.

Yours sincerely

M. Phyffer