

Research project cover sheet

To accompany a research project submitted for examination in partial fulfilment of the requirements for the Honours Degree in Psychology / Organisational Psychology

1. Information


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2. Declaration by supervisor

Either:

This project has been prepared under my supervision. I have read it carefully and believe that it meets the standards set out in the appropriate guidelines booklet in terms of academic content, clarity of research question, description of methodology, quality of analysis and ethical standards, as well as in terms of format, length, structure and referencing.

Signature and date:



22. Jan. 2021

Or:

This project has been prepared under my supervision using the guidelines set out in the appropriate guidelines booklet in terms of format, structure and referencing. However, I am not convinced that it meets the required academic standards with regards to academic content, clarity of research question, details of the methodology, quality of analysis, or ethical aspects.

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A systematic review on nurses training in South Africa and its relevance during a pandemic.

Systematic Review submitted by

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Research Project submitted in partial fulfilment of the requirements for the degree of a Bachelor of Social Science Honours in Psychology.

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Abstract

This is a systematic review on the training and profession of nurses in South Africa. The researcher used an inductive thematic analysis to explore the themes that emerged from the literature. This review used peer-reviewed articles from Google Scholar, PubMed, Sabinet and EBSCOhost and identified 17 articles that were relevant for the study between the timeframe of 1994-2020. The review was done using Braun and Clarke's thematic analysis and 5 themes were found: *Nursing Crisis; Challenges in Nursing; Training Gap; Transformation in Nursing* and the *Job Profile of Nurses*. The study recommended that more research needs to be conducted in certain areas, for example in the Eastern Cape, and to provide better incentives to nurses for example, certificates upon completion of in-service training.

Key words: nursing, shortages of nurses, healthcare providers, transformation in nursing, South Africa.

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Chapter 1: Context and Conceptualisation

1.1 Introduction

This study used a systematic review design, which required the researcher to do an in-depth reading of all the existing literature on the topic, “*A systematic review on nurses training in South Africa and its relevance during a pandemic*” in an attempt to answer the research question, “*What are the themes that emerge from a systematic review of research that surrounds nurses training and the profession in South Africa?*”. A systematic review provides an extensive report on a topic and allows future researchers, interested in the study, a broad yet general idea of the topic. A total of 17 peer reviewed articles was used in this study. A Thematic Analysis was used to analyse the data, as the nature of this systematic review is qualitative. Braun and Clarke’s thematic analysis will be discussed in more detail in the methodology chapter. This study is separated into four chapters namely: *Concept and Conceptualisation*; *Research Methodology*; *Analysis and Discussion*; and lastly, *Conclusion and Recommendations*. In chapter two, *Research and Methodology*, I have included tables to illustrate the articles that formed part of the data that was used in this study. Chapter three provides an in-depth analysis and discussion of the themes which the researcher extracted from the data. The last chapter provides future researchers interested in this topic, with recommendations on possible research areas. This chapter also mentions the limitations which the researcher encountered during this study.

With regards to the title of this thesis, “*A systematic review on nurses training in South Africa and its relevance during a pandemic*”, although the articles in the analysis do not relate to the pandemic itself, as they were not part of the search words, I brought the pandemic into the thesis title as it is our current reality. I therefore engage with the Covid-19 pandemic to the extent of understanding whether the training nurses undergo, equips them to deal with the changing healthcare demands we are currently faced with. I engage with the Covid-19 pandemic in the discussion chapter to see how effective (based on the themes) nurses training is in light of the pandemic. This is the reason why the pandemic does not feature in the research question but I added articles relating to the pandemic in the literature review to get a sense of how nurses are coping and dealing with the pandemic.

1.2 The nursing profession

The nursing profession is a comprehensive service-oriented applied discipline that occupies a crucial position within the healthcare system (Deng, 2015). As the largest group of health-care providers in any country Breier, Wildschut, and Mqolozana (2015) acknowledge nurses as the backbone of South Africa's health system. Currently, we find ourselves in an extraordinary global health emergency and nurses are our hero's serving selflessly at the frontline. In many parts of the world, nurses are faced with a shortage of much-needed supplies, including personal protective equipment (PPE) such as: masks, gloves and gowns, even while faced with this shortage they continue to actively embrace the challenges presented by COVID-19 (Jackson et al., 2020).

Alleyne (2011) argues that nurses have a broad reach within and beyond the health sector and particularly within their local communities, where they may be demographically similar to their patients. As an outcome, nurses have the potential to bridge the gap between communities and the healthcare system and coordinate care for patients with increasingly complex disease profiles (Armstrong, & Rispel, 2015). Nurses need to familiarise themselves with and contribute to the formulation, implementation, and evaluation of national policies and programs that are designed to tackle health system challenges (Alleyne, 2011). For nurses to fulfil their potential in this field, they must have the necessary knowledge and skills to advocate, educate, inform, and support patients and patients' families (Alleyne, 2011).

The education and training of nurses are important aspects of the functioning of any health system; and nursing education and training systems must be integrated with service delivery needs (Deng, 2015). The government needs to ensure that a sufficient number of caring and competent nurses are educated and trained to meet these service delivery needs (Department of Health (DoH), 2018). Teaching fundamental concepts and basic knowledge of nursing and nursing skills is the first step in the process of nursing education (Deng, 2015).

Dolamo and Olubiyi (2013) acknowledge that globally, teaching and learning in the nursing profession is a combination of theoretical, clinical, and internship-based programs. Central to the education and training of nurses, is a need to align nursing education with post-school education legislative prescripts while ensuring that qualifications obtained lead to professional registration

in prescribed nursing categories (DoH, 2018). Blaauw, Ditlopo, and Rispel (2014) identified nursing education reform, as an important strategy to enhance healthcare professional's performance, thereby improving the functioning of health systems.

1.3 Background of nursing in South Africa

During the pre-colonial days in South Africa, not much was known about nursing (Dolamo & Olubiyi, 2013). Over the years, the nursing education system has evolved (DoH, 2018). The first nursing school was established in 1877, following the standard hospital apprenticeship model of the time; it was then placed under the authority of the Medical Council, instead of the Department of Education (Blaauw et al., 2014). The first university nursing degree programs to be offered in South Africa was then introduced in 1956 (Blaauw et al., 2014). According to Blaauw et al. (2014) the three main nursing qualifications recognised in South Africa is as follows: a one- year certificate; a two-year certificate; and a four-year diploma at a nursing college or a four-year degree at a university. These qualifications led to the following registrations: an enrolled auxiliary nurse; an enrolled nurse; and a professional nurse (Blaauw et al., 2014). A bridging program made it possible for enrolled nurses to complete a two-year diploma at a nursing college and qualify as a registered general nurse. Specialised nurses had to complete either a postgraduate diploma or master's degree, and doctoral nursing programs were only available at universities (Blaauw et al., 2014).

Dlamini, Mohlathi, and Jabu (2015) suggest increasing professionalisation amongst nursing students and a shift to university education as important features of nursing education reform in South Africa. The following higher education institutions have all contributed to the education of the nursing workforce: universities; universities of technology; provincial nursing colleges; and private nursing education institutions (DoH, 2018). According to Blaauw et al. (2014) a new comprehensive 4-year curriculum will be introduced in 2020, for the training of professional nurses in South Africa, which comprises of general nursing, midwifery, community nursing, and psychiatric nursing. Nurses who were interested in specialised disciplines (e.g., paediatrics or psychiatry) could complete a postgraduate diploma or master's degree with universities being the only tertiary institution that offered doctoral nursing programs (Blaauw et al., 2014).

According to Blaauw et al. (2014) the call for a bachelor's degree as the minimum requirement for entry to the profession has been a development in the professionalization of nursing education. Due to changes in patient and disease profiles; advances in medical and information technology; the challenges that come with working in health care teams; the need for life-long professional development; and the demands of continuously changing health systems, Blaauw et al. (2014) suggest that a university degree is more suitable to cope with increasing complexity of contemporary nursing practice.

1.4 Legacy qualifications and transformation

The previous nursing curriculum, which produced qualifications referred to as legacy qualifications¹, halted intake in 2015 (DoH, 2018). The following are some of the legacy qualifications which were previously offered: post basic course; college diploma; certificates in nursing; bridging courses for enrolled nurses; college diplomas and a university degree (DoH, 2018). However, these qualifications proved to be problematic and unable to support the ever-changing population and health system needs of South Africa (Armstrong, & Rispel, 2015).

There has been a transformation in nursing education offered in South Africa. To ensure that qualifications obtained lead to professional registration in the prescribed nursing categories, nursing education had to be aligned with post-school education legislative regulations (DoH, 2018). The South African Nursing Council (SANC) is the body assigned to set and maintain standards of nursing practice and education in South Africa. While the training of enrolled nursing auxiliaries and enrolled nurses ended in June 2015, 2019 was set for the complete phasing-out of the program leading to registration as a nurse and midwife; however, the SANC continues to postpone the phasing-out of the legacy qualifications, (Armstrong & Rispel, 2015). While the phasing out of legacy qualifications has commenced, those students who joined under these qualifications will still be allowed to complete their degree. Effectively this meant that enrolment into any legacy qualification would not be possible after 31 December 2019 (SANC, 2016).

¹ **Legacy qualifications:** qualifications that existed prior to the creation of the National Qualifications Framework (NQF) are recorded as legacy qualifications.

According to Breier et al. (2015) there is a new four-year nursing curriculum introduced (starting January 2020), which leads to the registration of a professional nurse, this curriculum includes: general nursing, midwifery, community nursing, and psychiatric nursing. This indicates that an increase in professionalisation and a shift (phasing out of legacy qualifications) to university education, is key features of the reform of nursing education in South Africa, starting in 2020. Part of this reform is to get nursing education placed within the higher education framework; as well as greater professionalisation through the lengthening of training periods and professional education in institutions of higher learning (Blaauw et al., 2014).

According Rispel and Bruce (2014) in South Africa, there are three categories of nurses that are recognised: professional registered nurses (a large percentage of professional registered nurses are also practising as midwives), enrolled nurses, and nursing assistants or auxiliaries, each with four years, two years, and one year of training respectively. This is still the case according to the SANC (2020).

The Institute of Medicine (2011) has acknowledged that due to increased complexities of the nursing profession, nurses are required to have a university degree. Some of these complexities are: advances in medical and information technology; changes in disease and patient profiles; the challenges that come with working in the health care teams and the demands of continuously changing health systems (Institute of Medicine, 2011).

1.5 Nursing training institutions

Nursing education takes place in a complex environment, which is characterised by both theoretical and practical learning. Armstrong and Rispel (2015) acknowledge that nursing education occurs at the following training institutions: public universities; public-sector nursing colleges (where nursing students complete their practical's only at public health facilities such as hospitals and clinics); nursing colleges run by the defence force; and private nursing schools that are run for profit. According to Armstrong and Rispel (2015) nursing education takes place in a complex environment, and can create fragmentation and various layers of complexity.

By law, public universities and public-sector nursing colleges are the only institutions that are allowed to offer courses leading to registration as a professional nurse. This includes general nursing, community health nursing, psychiatric nursing, and midwifery, which is offered through a 4-year degree or diploma (DoH, 2018).

According to Armstrong and Rispel (2015) the nursing education institutions require curriculum revision so that they are more appropriate for the current health system needs of South Africa. A new date was set for 2019 for the complete phasing-out of the program leading to registration as a nurse (general, psychiatric, and community) and midwife (Armstrong & Rispel, 2015).

1.6 Nursing during Covid-19

In the unparalleled and extraordinary public health emergency in which we currently find ourselves in, across the world nurses stand as they always do at the front line (Jackson et al., 2020). Globally, nurses are staffing clinics and hospital wards and, in some situations literally working until they drop (Jackson et al., 2020). Nurses in many parts of the world are faced with shortages of much-needed supplies including personal protective equipment's yet they are actively embracing the challenges presented by COVID-19 to provide essential services to their patients (Jackson et al., 2020). For nurses, particularly in environments where the focus is on preserving life, such as emergency departments and intensive care units, death can represent failure, and therefore become a source of stress and distress for the medical and nursing staff in these departments (Jackson et al., 2020).

The COVID-19 pandemic is a global health crisis, resulting in substantial personal and professional difficulties (Pragholapati, 2020). When a nurse with low self-efficacy (self-efficacy refers to one's belief to execute behaviours to their best ability) experiences difficulties, stress and anxiety may occur, thereby interfering with performance, and reducing self-efficacy even more (Pragholapati, 2020). Health professionals are showing symptoms of depression, anxiety, and sleep disorders, which indicates that COVID-19 has caused various types of psychological problems in different population groups (Pragholapati, 2020). There is a great need to focus specifically on health care providers as they are serving on the frontline, Pragholapati (2020) suggests that preventive measures must be taken to reduce secondary traumatic stress reactions, including increased awareness of symptoms, taking a break from work and engaging in self-care.

1.7 Training Gaps

There is a large inter-provincial disparity in the distribution of primary care nurses (Strasser, London & Kortebout, 2005). Drennan (2002), found that only 22% of nurses providing primary care services in KwaZulu Natal province, were diploma-trained. Better coverage is seen in the more affluent provinces such as Gauteng and Western Cape (Strasser et al., 2005). Essentially, the problem is a lack of enough skilled nurses in the following provinces: Eastern Cape; KwaZulu Natal and Limpopo (Strasser et al., 2005).

1.8 Nine core - competencies for nurses

Strasser et al. (2005) provides a list of 9 core – competencies which nurses should demonstrate they are as follows: the ability to solve problems, this relates to consultation and health assessment skills; nurses should be capable of managing common conditions such as diarrhoea, tuberculosis, HIV/AIDS and acute respiratory infections; the ability to apply rational drug use, demonstration of effective communication and counselling skills towards patients; the ability to identify when a patient needs to be referred to another health professional, demonstration of community orientation, and to provide general clinic management. Nurses should provide a caring and confident approach towards patients and able to use the information which the patient provides them with.

1.9 In-service training and guidelines to improve in-service training programmes

In-service training is defined as the informal training of nurses to improve their professional knowledge, skills and attitudes according to the demands of the nursing profession and, is the key to providing excellent nursing care (Letlape, Koen, Coetzee, & Koen, 2014).

A well-planned in-service training programme should facilitate the attainment of standards of care and help registered nurses to acquire the skills and knowledge necessary to fulfil their role expectations (Norushe, Van Rooyen & Strumpher, 2004).

Norushe et al. (2004) have proposed the following strategies as guidelines to assist in the planning, implementation and evaluation of effective in-service training programmes: *Identification and*

assessment of training needs of registered nurses, planning of in-service training programmes and successful in-service training programmes depend on active participation and involvement of registered nurses. Considering unit conditions, this refers to staff shortages, workload and unit peak time, should be taken into consideration before conducting in-service training. The role of management concerning in-service training programmes, a climate of trust and open communication between themselves and staff members should be created. Selection of competent instructors for in-service training programmes, instructors presenting in-service training should have a more in-depth understanding of the subject than their audience. Improving teaching strategies of instructors, formal lectures, demonstrations, group discussions, role-plays and learning games should be included as teaching methods. Improve effective leadership qualities, successful in-service training programmes depend on teamwork, mutual problem-solving, team learning and shared goal setting (Norushe et al., 2004).

High-quality nursing care can only be a reality in an environment where registered nurses are kept up to date with modern developments utilizing in-service training, which should be seen as an integral part of the working environment (Norushe et al., 2004). The acquired knowledge gained through in-service training should enable the registered nurses to be far more receptive and adaptable to changes in their roles and contribute to employee satisfaction and improve morale (Norushe et al., 2004).

According to Norushe et al. (2004) in-service training is offered and paid for by the employers and there is no specific time when training is provided and nurses are encouraged to attend these training sessions

1.10 Aim and Purpose

The aim of the research is to give a systematic review of the literature that explores nurses training in South Africa. The rationale for this research was to explore what training do nurses undergo to equip them to deal with changing and increasingly demanding service needs. Under the circumstances of the current global pandemic, this research is topical. This study reviewed training programmes offered to nursing students. This review may also assist future researchers who are interested in aspects related to health and nursing in South Africa.

The literature review helped highlight that even though South Africa has nursing education facilities, nursing in South Africa is a profession in peril (Rispel & Bruce, 2014).

Chapter 2: Research Methodology

2.1 Introduction

The research methodology section will describe the methods of data collection, data analysis and the interpretation of the data. Methodology is important in research as it sets out the path which the researcher should follow when conducting the research. The *methodology* gives the researcher and future researchers guidelines to make their research project manageable, smooth and effective (Stangor, 2014). A systematic review is a review of literature on a research question that is already available (Denyer & Tranfield, 2009). A systematic review then identifies, selects and critically analyses the relevant primary data from previous studies, which can be used in a new review (Denyer & Tranfield, 2009).

Melnyk, Fineout-Overholt, Stillwell, and Williamson (2010) suggest seven steps to ensure a detailed systematic review. The steps are as follows: formulate a research question; develop a search strategy; execute the search and select relevant articles from the available literature; conduct a critical appraisal of the studies used; extract data from studies; evaluate the findings; and lastly formulate the conclusion. These steps were followed throughout chapter 2 and 3 in order to ensure a detailed systematic review.

In this chapter I outlined each of these steps along with a description of how it was followed with regards to my research. Braun and Clarke's (2006) thematic analysis were used to analyse the data that had been systematically searched and selected. This analysis consists of 6 stages, which will be described under section, (2.4: *Braun and Clarke's Thematic Analysis*), in detail. The six stages are followed in order to identify relevant themes in the data that help answer the research question. This study employed Russel and Gregory's (2003) guidelines to assess the validity of the articles. I have described these guidelines under section, (2.5: *Validity and Reliability of the study*), including the process that enabled me to follow these guidelines.

According to Melnyk et al. (2010) the first step of systematic review is identifying and formulating a clear research question, which I have done in the following section.

2.2 Research question

What are the themes that emerge from a systematic review of research that surrounds nurses training and the profession in South Africa?

Although the articles in the analysis do not relate to the pandemic itself, as they were not part of the search words as seen under section (2.3: *Data collection*), I brought the pandemic into my thesis title as it is our current reality. I therefore engage with the Covid-19 pandemic to the extent of understanding whether the training nurses undergo, equips them to deal with the changing healthcare demands we are currently faced with.

2.3 Data collection

Melnyk et al. (2010) suggest that the next step in a systematic review is to generate a search strategy. The databases used for this study were the following: Google Scholar, PubMed, Sabinet and EBSCOhost: The terms and phrases that were searched were a combination of the following: “Nursing” OR “Education” OR “Training”, AND “Frontline nurses” OR “Healthcare providers” OR “Healthcare workers” OR “Legacy qualifications” AND “In-service training” OR “Transformation in nursing training” OR “Changes in nursing education” AND “South Africa”. The time frame will be between “1994-2020”.

The reason for inclusion of the terms: “nursing”, “legacy qualifications”, “frontline nurses” and “in-service training” is because it may be possible that the articles could use these terms while relating to nurses’ training, which may provide data that is relevant to the study.

Possibility of the terms “Education” and “Training” were searched for, as some authors may have used the term “Nursing Education” instead of “Nurses Training”. Some of the authors might have used the terms "Transformation in nursing training" instead of "Changes in nurses training." Hence, I alternated between these two phrases. Possibilities of the terms “Health care providers” were searched, as some of the authors might have used the term “Health care providers” instead of “Healthcare workers”.

The time frame 1994-2020 will assist in finding if there has been a shift in the training of nurses in South Africa. Since South Africa’s democracy in 1994, there has been a renewed focus on nursing education as part of the post-apartheid transformation of both the health and higher

education sectors (Mekwa, 2000). Therefore, the time frame will hopefully highlight the changes that have taken place.

A second search was conducted to ensure that there was no missing data that was not captured in the specific search. It was a broad search that I conducted to see if there were other articles in South Africa about nurses training that also mentioned anything that was relevant to this study.

Table 1

Specific search (Search 1)	General search (Search 2)
“Nursing” OR “Education” OR “Training”, AND “Frontline nurses” OR “Healthcare providers” OR “Healthcare workers” OR “Legacy qualifications” AND “In-service training” OR “Transformation in nursing training” OR “Reform in nursing training” OR “Changes in nursing education” AND “South Africa”	“Nurses training” OR “Nursing education” AND “South Africa”

According to Melnyk et al. (2010) the third step of ensuring a detailed systematic review is about executing the search and selecting the relevant studies. Bambra (2011) suggest that a systematic review should have a clear exclusion and inclusion criteria, as this helps in ensuring the selection of relevant studies. Therefore, articles that were selected and used in this study followed the following inclusion and exclusion criteria:

Inclusion criteria:

1. To ensure the credibility of this study, peer-reviewed journals were included.
2. The collected articles were refined to ensure that the data used in the articles related to the training of nurses in South Africa.
3. The study included data about nurses in South Africa during Covid-19, to see whether nurses are equipped to perform adequately under challenging conditions.
4. Only qualitative research was included in the study.

- The study included articles that were published before and after the phasing out of legacy qualifications. According to a circular published by the SANC in 2018, the phasing of legacy qualifications was set to take place in 2019, new nursing qualifications was set to be implemented in January 2020, however this may have been affected by the Covid-19 pandemic.

Exclusion criteria:

- This study is focussed on the South African context and hence excluded articles that were from other countries, unless SA was being explored in a global context.
- Articles that have not been peer-reviewed were excluded, unless sourced from an official website such as the World Health Organisation (WHO) or SANC.

The number of articles that were included in the research using the inclusion/exclusion criteria are shown in Table 2.1 – 2.4.

Table 2.1

Google Scholar	Number of articles from search	Number of articles after inclusion and exclusion	Total number of articles used in the research
Search 1	30	2	2
Search 2	3670	10	10
			12

Table: 2.2

PubMed	Number of articles from search	Number of articles after inclusion and exclusion	Total number of articles used in the research
Search 1	15	0	0
Search 2	3298	2	2
			2

Table: 2.3

EBSCOhost	Number of articles from search	Number of articles after inclusion and exclusion	Total number of articles used in the research
Search1	5	1	1
Search 2	170	1	1
			2

Table: 2.4

Sabinet	Number of articles from search	Number of articles after inclusion and exclusion	Total number of articles used in the research
Search1	1	0	0
Search 2	383	1	1
			1

A summary of the articles using different search engines, that were included in the research are shown in Tables 3-6. The fourth step in conducting a thorough systematic review is to ensure the critical appraisal of the articles, which involves making sure that the studies used are relevant to the research, that they come from a reliable source, and that the methods used in the studies were appropriate (Melnik et al., 2010). The following tables show how the articles used were relevant to the study.

Table 3: Google Scholar Summary

Number of Articles	Author	Title	Design and method	Results of article
1	Letlape, Koen, Coetzee & Koen (2014)	The exploration of in-service training needs of psychiatric nurses	Qualitative Interviews	On-going in-service training is necessary, in-service training is beneficial to psychiatric nurses. However, challenges exist with regard to in-service training.
2	Blaauw, Ditlopo & Rispel (2014)	Nursing education reform in South Africa –	Qualitative In-depth interviews	The requirement for a bachelor degree to qualify as a

		lessons from a policy analysis study	Thematic analysis	professional nurse and abolishing the enrolled nurse with 2 years training.
3	Strasser, London & Kortebout (2005)	Developing a Competence Framework and Evaluation Tool for Primary Care Nursing in South Africa	Qualitative, explorative Interviews	A better quality of nursing graduates is required to cope with the everchanging health system's needs.
4	Breier, Wildschut & Mgqolozana (2015)	Nursing in a new era	Qualitative Interviews	Shifts in training and employment patterns for nurses between 1997 and 2007. Increase in the number of nurses trained.
5	Rispel & Bruce (2015)	A profession in peril? Revitalising nursing in South Africa	Qualitative Survey	Challenges faced by nurses and nursing profession. Relevance of nursing curriculum.
6	Oosthuizen & Ehlers (2007)	Factors that may influence South African nurses' decisions to emigrate	Qualitative	Factors that may influence health care professional's decision to emigrate.
7	Norushe, Van Rooyen & Strumpher (2004)	In-service education and training as experienced by registered nurses	Qualitative, exploratory and descriptive Interviews Field notes from observations Tesch's method of analysis	In-service training is needed in order to keep up to date with the latest developments in the nursing profession.
8	Department of Health (2018)	National Policy on Nursing		A policy on nursing education and training

		Education and Training		
9	Duma, Dippenaar, Bhengu, Oosthuizen, Middleton, Phillips, Naude & Uys (2012)	Specialist and Advanced Specialist Nursing and Midwifery Practice	Qualitative	Subsections in the nursing profession
10	de Beer, Brysiewicz & Bhengu (2011)	Intensive care nursing in South Africa	Qualitative	Various challenges nurses face in intensive care nursing in South Africa
11	Mekwa (2000)	Transformation in Nursing Education	Qualitative	Role of SANC in nursing education, transformation in nursing education, future vision of nursing education in South Africa.
12	van der Colff & Rothmann (2014)	Occupational stress of professional nurses in South Africa	Qualitative Surveys	Occupational stressors for professional nurses in South Africa.

Table 4: PubMed

Number of Articles	Author	Title	Design and method	Results of article
1	Bvumbwe & Mtshali (2018)	Nursing education challenges and solutions in Sub Saharan Africa: an integrative review	Qualitative Explorative Thematic analysis	Challenges and solutions in nursing education.

2	Comiskey, Matthews , Williamson, Bruce, Mulaudzi & Klopper (2015)	Scaling up nurse education: An evaluation of a national PhD capacity development programme in South Africa, in the context of the global shortage of nursing graduates.	Qualitative Comparative effectiveness design Thematic analysis	To scale up nursing education it is recommended that degrees are offered instead of diplomas.
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Table 5: EBSCOhost

Number of Articles	Author	Title	Design and method	Results of article
1	Armstrong.& Rispel.(2015)	Social accountability and nursing education in South Africa.	Semi-structured interviews. Interviews were analysed using template analysis.	Social accountability is an essential component of transformative education.
2	Feldacker, Pintye, Jacob, Chung, Middleton, Iliffe & Kim (2017)	Continuing professional development for medical, nursing, and midwifery cadres in Malawi, Tanzania and South Africa: A qualitative evaluation.	Qualitative Semi-structured questionnaires and interviews	Continuing profession development (CPD) aims to ensure that, post-graduation, health care providers have the capacity to practice safely, effectively, and competently to meet changing societal healthcare needs.

Table 6: Sabinet

Number of Articles	Author	Title	Design and method	Results of article
1	Poggenpoel, Myburgh & Kaye-Peterson	Evaluation of distance bridging nursing courses presented by tertiary institutions in South Africa	Qualitative: field notes, focus group interviews, individual interviews, document analysis Quantitative: Questionnaire, exam marks	Obstacles exist with distance learning programmes offered at the tertiary institutions.

According to Melnyk et al. (2010) the fifth step of ensuring a detailed systematic review is about extracting the data from the selected articles. A thematic analysis enabled the extraction of data. In the following section, I explained the 6 stages of Braun and Clarke's (2006) thematic analysis and how it enabled the themes to emerge from the articles in the study.

2.4 Braun and Clarke's Thematic Analysis

The data used in this study was analysed using Braun and Clarke's (2006) thematic analysis. The thematic analysis used in this study is inductive, as it explores the training nurses undergo in South Africa to perform adequately in their profession. There were no analytical preconceptions which were required to be met nor did the data fit into an existing framework.

Phase 1: Familiarising self with data

In order to decide whether to include certain articles in the study, it required me to read all the articles while keeping the research question in mind. According to Braun and Clarke (2006) the first step of thematic analysis involves reading and re-reading the selected data in order to

familiarise oneself with the data. This helped me to understand the articles in-depth and if they would help to respond to my research question. The re-reading also assisted with a better comprehension regarding the type of study of each article and in what way was the data relevant to my research question. While reading through the articles for the third time, I extracted any data which I is relevant to the research question. The extracted data was then transferred onto a new document, with reference to the article and the page number from which it was extracted.

Phase 2: Generating initial codes

The second step of thematic analysis is to start generating initial codes (Braun & Clarke, 2006). A code was developed by reading through the extract and writing down the idea that was communicated in the extract (Braun & Clarke, 2006). While reading through the articles, I came across some interesting information with regards to training of nurses in South Africa. After familiarising myself with the data I began generating initial codes such as: *shortages*; *poor*; *upscaling* and *failing*. I then placed all the codes which I extracted into the new document. This then led to the next step of thematic analysis, which was to find emerging patterns.

Phase 3: Searching for themes

According to Braun and Clarke (2006) something counts as a theme if it is a recurring subject and one that is relevant to the research question. I used this as a guideline to assess whether the data was sufficient to be a theme in this research. The third step of the thematic analysis, searching for themes, happens after the codes have been collected and arranged into similar groups. This helps to see which codes fit with each other and if any patterns start to emerge from the data. The groups then become the basis of the overarching themes (Braun & Clarke, 2006). The themes start out as being broad in nature, but are later refined. The refinement of these themes is what takes place in the next step of thematic analysis. From the codes that was extracted for example, “*shortages*” and “*failing*” this gave rise to a possible theme, *Nursing Crisis*.

Phase 4: Reviewing themes

During the fourth step of the thematic analysis, I reviewed the initial themes that I had found, by combining the themes that were similar to each other, which was done in accordance to Braun and Clarke (2006). This step is a lengthy process as it requires refining themes. Themes are refined in

order to avoid any overlapping themes or ambiguity. According to Braun and Clarke (2006) there must be a clear distinction between themes and if there is more than one theme about a similar idea, these themes should be grouped into one theme. They suggest that subthemes could be provided if necessary. During this step, I ensured that the themes were representative of the dataset. The next stage involved naming the themes. This step was a lengthy process, I will provide an explanation on how I completed this step. Theme 1 of this thesis is, *Nursing Crisis*, however a large amount of data was extracted that could form part of this theme. I therefore included sub-themes under theme 1, they are: *Brain drain; Declining interest/ Shortages and Aging workforce*. This ensured that there was no overlapping of themes. The three sub-themes were all linked and relates a “story” of the nursing crisis in South Africa.

Phase 5: Defining and naming themes

During this stage, the final review happened and themes were named. Braun and Clarke (2006) suggest that themes should correctly represent the data and it is important to go back to the coding stage to see if anything was missed. Braun and Clarke (2006) recommend a review of the final themes to confirm whether they correlate with the extracts from the data that were chosen to represent the themes. This stage is important as it helps relate themes to each other as if they are telling a “story” as the “story” answers the research question (Braun & Clarke, 2006). All five themes that were created linked to each other and provided a clear answer to the research question. A few cause-and-effect relationships were also established in the analysis, for example training gaps could result in challenges later on while working or in-service training can result in more competent nursing staff or training gaps can result in nurses being ill-equipped to handle a pandemic.

Phase 6: Producing the report

According to Braun and Clarke (2006) the last step of the thematic analysis is where the research question is answered in a manner in which the reader can understand. To answer the research question, a total of 5 themes emerged some of the themes comprised of sub-themes as well. Chapter 3 engages with the last step of thematic analysis in more detail and answers the research question.

Although Melnyk et al. (2010) has seven steps, this chapter only covered five of the seven steps of ensuring a detailed systematic review. This is because step six and seven are about synthesising

the findings and formulating conclusion statements and these will be done in the following chapter (chapter 3) which covers the analysis and discussion of the findings.

2.5 Validity and reliability of the study

Moher, Lierati, Tetzlaff, and Altman (2010) suggest that the credibility of a systematic review is dependent on the validity and the reliability of the articles that are included in the study. This systematic review employed Russell and Gregory's (2003) guidelines to assess the validity and reliability of the articles selected for the study. Their guidelines consist of five questions to ask when assessing the validity of a study. In this section I describe the five questions followed by an explanation of how I responded to them. Russell and Gregory's (2003) questions are as follows: *(1) Is the research question clear and adequately substantiated?* After receiving feedback on my research proposal, I had to alter my research question slightly so that it could resonate more clearly with the data I was starting to extract. Initially the research question was, "What are the themes that emerge from a systematic review of research that surrounds nurses training in South Africa". The data which I started extracting resonated more with the nursing profession therefore, the research question had to be altered.

(2) Is the design appropriate for the research question? Yes, an inductive thematic analysis was adopted as an appropriate fit to answer the research question. The codes extracted from the literature which was analysed, linked directly to the data and did not fit into an existing framework nor did the researcher have any analytical preconceptions which were required to be met.

(3) Was the method of sampling appropriate for the research question and design? The design and sampling method involved using appropriate and credible source engines and search words. The inclusion and exclusion criteria further helped to refine the sampling of articles so the chosen articles spoke directly to the research question.

(4) Was the data collected and managed systematically? Majority of the articles used was from Google Scholar. While analysing a few of the articles, I realised that they were not South African articles, I then had to go back and find replacement articles, which matched the inclusion and exclusion criteria.

(5) Was the data analysed appropriately? The articles included in this systematic review met all five guidelines for validity and reliability. It was therefore appropriate to be used in this systematic

review as the validity and reliability of articles used ensured the overall validity of this review. I used Braun and Clarke's thematic analysis to analyse the data. I followed all six steps, starting by gathering and reading articles that related to the research topic. Some articles needed to be re-read in order to familiarise myself with the data. After familiarising myself with the data I began generating initial codes such as: *shortages*; *poor*; *upscaling* and *failing*. Step 3 involved searching for themes, this took place after the codes were collected and arranged into similar groups, this step helped to see whether the codes extracted linked with each other, which later resulted in patterns starting to emerge. This then became the basis of the overarching themes. Step 4 required that the themes be refined in-order to avoid any ambiguity or overlapping. I struggled with this, but with feedback from my supervisor, this step became clearer and I was able to classify the data into distinctive themes and create subthemes where necessary. The themes were named and the relevant data was placed under the appropriate themes. During this step it was important to ensure that the themes correlate with the research question. Lastly a report was produced which includes five themes that answers the research question, and provides recommendations.

2.6 Ethical Considerations

The Research Proposal and Ethics Review Committee (RPERC) and Rhodes University Ethical Standards Committees (RUESC) requires Ethical Reviews of all postgraduate research (Department of Psychology Honours Handbook, 2020). Systematic Review projects do not involve data collection from participants and work instead with data which has already been published. This kind of project is categorised as "Code Yellow" (pg. 40) level of risk, indicating that the project presents minimal risk to humans, as they are not directly sampled and instead is focused on texts that have already been published (Department of Psychology Honours Handbook, 2020). The Ethical Protocol of a systematic review is regarded as a "Query Review" (pg. 39) and therefore ethical clearance is not required; the Query Review was attached to the research proposal which was submitted in August 2020. Since this thesis is a systematic review, the main issue in this study was around plagiarism as the data that was used is from other sources, therefore citations are provided at the appropriate places and a comprehensive reference list is included to give due credit to the authors.

2.7 Conclusion

This study consists of a systematic review of the literature that explores the themes that emerge surrounding nurses training in South Africa. The data is extracted from articles that is available between the time frame of 1994 and 2020. Using Melnyk et al. (2010) seven steps, this chapter described the process of data collection that ensured a detailed systematic review. The following was included in this chapter: the search strategy, the inclusion and exclusion criteria and the type of analysis utilised. The result of this section was a detailed and systematic search of the information available on the topic of nurses training in South Africa, in order to answer the research question.

Chapter 3: Analysis and Discussion

Introduction

In order to respond to the research question of this study which is, “what are the themes that emerge from a systematic review of research that surrounds nurses training and profession in South Africa?”, an inductive thematic analysis was adopted as an appropriate fit to answer the research question. The codes found from the literature was analysed and did not fit into an existing framework nor did the researcher have any analytical preconceptions, which were required to be met (Braun & Clarke,2006). In this chapter I elaborate on how Braun and Clarke’s (2006) thematic analysis helped me to respond to the research question while following the 6 steps outlined.

The first stage of the analysis consists of reading the articles (sometimes re-reading) and familiarising oneself with the selected data. During stage two I generated initial codes. The following are examples of codes which were generated: *shortages; poor; upscaling and failing*. Codes gives rise to themes. Stage three is concerned with organizing the codes into potential themes. To cite an example of the process of coding, based on the codes mentioned, an emerging theme was one of ‘Challenges’ or ‘Conflicts’ or ‘Difficulties’ in nursing or faced by nurses. This needed further refinement. The fourth stage consists of checking whether the themes relate to the coded information. During the fifth stage, the themes are named and defined. The following are some of the themes which were found: *Nursing Crisis, Training Gaps, Transformation in Nursing and Challenges in Nursing*.

In applying the inclusion and exclusion criteria, the process resulted in 17 articles being included in the review. Apart from the inductive analysis from which themes emerged, I also specifically analysed the data in terms of affiliations of authors, provinces and timeframes in which the research was conducted; and also, research methods used.

While the chosen timeframe for this study was 1994-2020, much of the literature that was used in the thematic analysis was between 2000-2020, with most of the articles published in 2014 and the second the greatest number of articles published in 2015. A possible reason for this may be because talks about a transformation in nursing education and the phasing out of legacy programmes was happening around that time period. All seventeen of the articles that were analysed for this systematic review was qualitative in nature. Semi- structured interviews were mainly used in those

articles. Majority of the articles were published by authors from WITS university in Gauteng, North West University (NWU) in the North West province, University of Kwa-Zulu Natal (UKZN) in KZN and University of Western Cape (UWC) and University of the Cape Town (UCT) in the Western Cape each had authors who published 3 articles that were used in this analysis. Interestingly there was only 1 article from the Eastern Cape that met the criteria and was therefore included in this analysis.

A total of 5 themes were found, some of these themes had sub-themes. The sub-themes assisted in distributing the relevant data without creating any ambiguity or over-lapping themes. The following section provides a description of the themes and extracts to justify each theme.

3.1 Theme 1: Nursing crisis

This theme centres around a crisis that the nursing staff are faced with in their profession. Studies, excerpts of which are included below, indicate that nurses experience a great deal of stress from being overworked and underpaid; not receiving enough support from their colleagues; and also having to provide essential services without having sufficient medical resources (medications, syringes) and protective resources (masks, gloves). This is a reality in many of the public hospitals and clinics in South Africa, especially those facilities situated in rural areas. Hence, I termed this theme *Nursing Crisis* because it encapsulates the crisis which the profession is currently faced with. This theme was a large theme and therefore required three sub-themes which were named; *Brain drain, Declining interest in the profession and an Aging workforce*.

Subtheme 1(a): Brain drain

Brain drain refers to the emigration of skilled professionals. The main reasons are broadly two-fold: firstly, there is a demand for nurses in first world countries (as highlighted in excerpt one); and secondly a desire for nurses in a country to look for better prospects overseas, as is the case with nurses in SA (as highlighted in excerpt three). When looking closely at what motivates nurses to relocate, a number of issues surface, which inevitably lead to a brain drain of nurses. I narrow in on these issues after highlighting excerpts from articles that led to the development of this theme.

“...Nursing shortages in first-world countries and the ability of these countries to offer attractive remuneration packages to nurses from South Africa and various economic, political and professional factors in South Africa may influence nurses’ decisions to leave South Africa to work in other countries” (Oosthuizen & Ehlers, p.17, 2007).

“...Brain drain has resulted in SA facing a critical shortage of registered ICN’s (Intensive Care Nurses). This can be attributed to multiple factors, which include inadequate salaries, limited career opportunities, poor nursing leadership, the poor public image of nursing, the huge workload as a result of insufficient staff, poor working conditions and lack of safety and security in the workplace” (de Beer et al., p. 8, 2011).

As seen in above the extract (2), there is a shortage of ICN’s. In the current time that we find ourselves in, the Covid-19 pandemic, this could have a disastrous impact on the already strained healthcare system, as there are thousands of patients in a critical condition but not enough nurses to care for them. To add onto this, many nurses have fallen sick and aggravated the shortage of nurses.

“...nurses’ inadequate remuneration, poor working conditions, excessive workloads, lack of personal growth and career advancement possibilities and inability to meet their safety and security needs were major factors that influenced nurses’ decisions to emigrate” (Oosthuizen & Ehlers, p.14, 2007).

“...there are disturbing signs that nursing is in trouble, with many nurses leaving the public sector, the profession or the country and the education system failing to produce the nurses we need most” (Breier, Brysiewicz, & Bhengu, p.1, 2015).

This theme relates to previous literature that suggests that brain drain leads to the depletion of skilled people who are vital to the functioning of the economy, which hinders the development of the economy. This point is further emphasised in the next sub-theme.

Subtheme 1(b): Declining interest/shortages

A big challenge that the nursing profession is faced with is declining interest in the profession resulting in a shortage of nurses. There are many reasons responsible for this challenge, nurses are looking for better career incentives in other countries, the younger generation are no longer interested in the nursing profession and there is just a genuine shortage of nurses in South Africa. The below extracts from various articles highlight this sub-theme.

“...the country faces a ‘nursing crisis’, characterised by shortages and declining interest in the profession” (Bruce & Rispel, p.118, 2015).

“... critical shortage of nurses poses numerous challenges” (de Beer et al., p. 8, 2011).

“... Serious concerns have been raised about the number of nurses registered to practise in South Africa and why so many of them seem to drop out of the profession” (Breier et al., p.1, 2015).

“...A global shortage of nursing professionals educated at baccalaureate level and beyond exists and the impact of this shortage is apparent on each continent” (Comiskey et al., p.647, 2015).

“...shortages of nurse educators were seen as another significant challenge” (Armstrong & Rispel, p.5, 2015).

Subtheme 1(c): Aging workforce

Another challenge that plays a big role in the nursing crisis is that a large percentage of nurses are reaching retirement age. This means that more nurses will start retiring which may result in a greater shortage of nurses in the country. The extracts below highlight the challenges presented by an aging workforce.

“... Nursing is an aging profession less than 10% of nurses are under 30 and many might have retired, fallen ill or died” (Breier et al., p.3, 2015).

With regards to the Covid-19 pandemic we see that an aging workforce is an issue, especially because they are classified as “high risk” individuals due to their age and possibly having a comorbidity. If they contract the virus, or succumb to the virus, this will increase the shortage of nurses.

“...Another challenge is an ageing nursing workforce. The current national nursing strategy indicates that 43.7% of professional nurses are over 50 years of age” (Bruce & Rispel, p.118, 2015).

“...the advanced age of students on commencement of training, which reduces the pool of nurses for further specialised training” (Armstrong & Rispel, p.6, 2015).

In South Africa many students are unable to afford tertiary education, they therefore work prior to commencing a qualification in order to pay for their studies. This results in students commencing their studies at an older age, hence entering the working environment at an older age.

When re-reading the subthemes, it is evident that a vicious cycle is created that begins with *Poor Nursing Conditions* leading to *Shortages in the Profession* exacerbated by an *Aging Workforce* all these factors lead to a “nursing crisis” as highlighted in theme 1.

3.2 Theme 2: Challenges in Nursing

This theme speaks about challenges in nursing and has two sub themes, namely: *challenges in nursing education* and *challenges in the nursing profession*. The education that nurses receive has a direct influence on their experience in nursing profession. What is evident is that the challenges faced by the profession commence at the time of training and have a ripple effect into the work environment and inevitably the healthcare system.

Subtheme 2 (a): Challenges in nursing education

“...nursing education continues to experience underinvestment, static and rigid curriculum, lack of inter-professional preparation of nurses and lack of coordinated collaboration and support from stakeholders” (Bvumbwe & Mtshali, p. 2, 2018).

“...The South African Nursing Counsel (SANC) was also criticised for the perceived delays in the implementation of the revised scopes of practice for the different nursing categories and the related training” (Armstrong & Rispel, p.4, 2015).

“...delays stifle attempts to improve or expand nursing curricula and contribute to a state of inertia in the nursing education system, which had remained static instead of changing to meet the needs of the population or the health system” (Armstrong & Rispel, p.4, 2015).

In the extract above, we notice that the curriculum has mostly stayed the same and hence is not adapted to meet the changing health needs of the population; and there is decreased interest and support from stakeholders due to continued delays in implementing new scopes of practice for nurses and shifts in training programmes. When nurses qualify as an auxiliary; midwife or general nurse it appears that they join the workforce only to be met with further challenges, as highlighted in the theme below.

Subtheme 2 (b): Challenges in nursing profession

The salaries remain a low incentive for nurses and the expectations placed on them remain high. These are expectations both from doctors as well as the public, since most often nurses are the first point of contact for patients.

“... Salaries are a major source of unhappiness, despite substantial increases recently for some categories of nurses” (Breier et al., p.3, 2009).

“... complained about the low salaries for qualified nurses, the high fees they paid while also providing labour in the wards, the doctors treatment of them, and patients “unreasonable” demands” (Breier et al., p.3, 2009).

“... Another weakness in the system of nursing education has been the dual status of the student as both learner and employee” (Mekwa, p.273, 2000).

“...the most severe stressors for professional nurses included staff shortages, inadequate salaries and excessive administrative duties. Work overload, fellow workers not doing their job, health risks posed by contact with patients and demands of patients were also identified as stressors” (van der Colff & Rothmann, p.375, 2014).

“... challenges include the following: the mismatch between professional competencies and patient and population health priorities; poor teamwork; insufficient emphasis on primary health care (PHC); maldistribution of health-care professionals; and weak stewardship and leadership to improve health system performance” (Armstrong & Rispel, p.1, 2015).

“...The post-apartheid era also brought broader challenges for nursing that needed to be considered in the revision of the nursing qualifications. These included increased service demands, easier international migration, staff shortages, decline in the image and status of the profession, difficulties in attracting good recruits, an ageing workforce, and generally low staff morale” (Blaauw et al., p.6, 2014).

The extracts above highlight how challenges within the nursing education system led to challenges later on in the nursing profession, with the last extract succinctly summing up the links between the different issues faced. To elaborate, inadequate salaries seem to be a major challenge within the nursing profession. These challenges experienced result in a decline interest in the profession and this links to theme 1. It is clear that one challenge leads to another. The second excerpt under 2(a) speaks about the SANC delaying implementation of new training programmes. As previously mentioned in this review, 2019 was supposed to be the last year for completion of legacy qualifications. However, since COVID-19 has hit the country there is the possibility that there will

be delays in tertiary education programmes. This means that there will be further delays in the phasing out of legacy qualifications.

3.3 Theme 3: Training Gaps

Theme 3 addresses certain ‘training gaps’ which were picked up while analysing the literature. Aspects under this theme are two-fold: there are gaps as a result of inter-provincial disparities (as seen in excerpt 1 below); and gaps that exist in the training itself (as seen in excerpt 2, 3 and 4 below) that speaks to reasons behind the loss of nurses to careers overseas. This theme links with theme 1, which is *Nursing Crisis*.

“...In addition to too few nurses being trained in primary care, there is a large inter-provincial disparity in the distribution of primary care nurses. There is better coverage in the more affluent Gauteng and Western Cape provinces” (Strasser et al., p.135, 2005).

“...training gap has been worsened by the loss of primary care nurses to the private sector and to careers overseas. The problem is a lack of enough nurses with primary care skills” (Strasser et al., p.135, 2005).

Nurses are hardworking individuals and are attracted to better salary packages which is mostly offered in the private sector or a career overseas. This means that there will be less nurses training in the public sector.

“...The expanded role of nurses within primary care has long been recognized, yet training has not kept up with demand” (Strasser et al., p.134, 2005).

“...Course work should not be heavily classroom-based, but should address developing clinical expertise and current practice, programme management, consultancy, and shifting practice to an evidence-based model” (Duma et al, p. 8, 2012).

The first excerpt above specifically mentions the inter-provincial disparity and better coverage in Gauteng and Western-Cape, which in itself indicates that inter-provincial disparities are a major issue with regards to training gaps. South Africa has nine provinces, of which if only two are producing a sufficient quality of nurses can exacerbate the issue. Provinces such as the Eastern Cape, Northern Cape and Mpumalanga, which are already neglected, will struggle further. This links with the first theme of the analysis that underscored various crises faced in the nursing sector. Inter-provincial disparity would result in a shortage of nurses and declining interest. Nurses,

especially the younger generation, are looking for better opportunities to improve their quality of life. Therefore, job opportunities in provinces with better coverage such as Gauteng and Western-Cape are more attractive to them. What become evident from the theme ‘training gaps’ is the need for a regulatory body and good leadership (highlighted in the two extracts below).

“...The regulation of nursing practice and education is needed to ensure consistent, high-quality, safe and accessible healthcare to the public” (Duma et al., p. 2, 2012).

“...Nursing leaders have been challenged to spearhead a successful translation of scientific knowledge that links nursing education to professional practice in the delivery of high-quality health care” (Bvumbwe & Mtshali, p. 7, 2018).

Nurses who are under-experienced will not be able to provide competent services to patients. Hence, there is also a need for avenues to be made available to nurses both during pre-service and in-service training. I elaborate on these in the next two themes that follow.

3.4 Theme 4: Transformation in Nursing

This theme is about the transformation which is being seen in nursing with regards to the education programmes offered to prospective nursing students. According to the various articles that have been analysed, a transformation is required to ensure that nursing graduates are flexible and equipped to work successfully with the ever-change health demands of the population. While analysing the articles it is clear that nursing in South Africa is undergoing a transformation, and a phasing out of legacy qualifications has already began.

“...Transformative education of nurses is critical in the move towards universal health coverage” (Armstrong & Rispel, p.8, 2015).

“...reforms in curricula are necessary to ensure that nursing education produces graduates who influence the quality of the health care system and are relevant to the needs of the population” (Bvumbwe & Mtshali, p. 4, 2018).

“...Nursing education therefore must be adapted to prepare nurses for the environment in which they will work” (Mekwa, p. 272, 2000).

“...increasing professionalisation and a shift to university education have been important features of the reform of nursing education” (Blaauw et al., p.2, 2014).

“...The nursing education system has developed over the years from a fragmented, hospital-based system to a quasi-centralised system with higher education institutions including universities and universities of technology, provincial nursing colleges and private nursing education institutions all contributing to the education of the nursing workforce” (DoH, p.9, 2018)

The above excerpts indicate the importance of transformation and the need for reform within the nursing profession. The first excerpt under this theme mentions that transformative education in nursing is critical in the move towards universal health coverage. This is especially important in South Africa, where many people in rural communities do not receive quality healthcare. This theme encapsulates the essence of the current status of nursing in SA and is in line with Mekwa (2000) who asserts that in order for nurses to be well-equipped to work in different environments such as South Africa, which has a health system that is in a state of flux, nursing education must be adapted to accommodate various environments.

Subtheme 4(a): Upscaling

This theme speaks about the upscaling of nursing education. Theme 4(a) and theme 4(b) both focus on positive shifts in nursing. While theme 4 (a) emphasises the relevance of transformation in nursing to create better quality of health service provision; theme 4(b) focus is on improving the *quality* of training which is offered to nursing students.

“...Improvements in nursing and midwifery education are recognized as essential in increasing workforce numbers and enhancing the quality of health care and health systems” (Bvumbwe & Mtshali, p. 2, 2018).

“...Effective nursing education will ensure provision of competence-based practice among nurses” (Bvumbwe & Mtshali, p. 9, 2018).

“... the predominant trend in nursing education over the last century has been towards greater professionalisation through the lengthening of training periods, and the shift from a hospital-based apprenticeship model to professional education in institutions of higher learning” (Blaauw et al., p.2, 2014).

“...In recent years, an important development in the professionalisation of nursing education has been the call for a baccalaureate degree as the minimum requirement for entry to the profession” (Blaauw et al., p.2, 2014).

“...Preparing nurses for primary care requires revamping basic education, practice settings, tutor qualifications and long-held cultural expectations” (Strasser et al., p.135, 2005).

“... To address sustainability and capacity in nations scaling up nurse education and healthcare insurance, it was recommended that top-up degrees for diploma educated nurses be developed along with, the implementation of a national nursing strategy for PhD and post-doctoral training encompassing clinical practise implementation and collaboration” (Comiskey et al., p.647, 2015).

Upscaling nursing education has been highlighted under this theme. Excerpts 1 under this theme mentions that upscaling nursing education will result in better health outcomes. Hopefully this improvement will also improve the nursing deficit currently experienced in South Africa. We need nurses who have undergone good training in order to perform adequately in their profession. Nurses training should be a combination of theory and practical experience, as this will prepare them for the environments in which they will work. Excerpts under this theme mention that nurses should have a bachelor’s degree as entry into the profession. This means that diploma programmes as entry into the profession will be phased out, this links with, *sub-theme 4 (a): upscaling*, of the analysis.

Subtheme 4(b): In-service training/ CPD points

This theme of the thematic analysis speaks about in-service training and its importance in the professional development of nursing staff. Excerpts for this theme were extracted from various articles, which is indicative of how in-service training is widely written about in nursing literature.

“...Nursing is a dynamic profession that is subject to rapid changes, hence the need for in-service training for nurses” (Norushe, Van Rooyen & Strumpher, p.64, 2004).

“... In-service training is one of the activities in the workplace that keeps nurses informed and equips them to perform to the best of their abilities.” (Letlape et al., p. 2, 2014).

“...Continuing profession development (CPD) aims to ensure that, post-graduation, Health Care Workers (HCW) have the capacity to practice safely, effectively, and competently to meet changing societal healthcare needs—advances in medicine, revised scopes of practice (task sharing), and

emerging health conditions to meet the ultimate goal of improving quality patient care” (Feldacker et al., p.2, 2017).

“...Alternative approaches to improving competence, include in-service training often as specific classes based on selective or vertical priority programs” (Strasser et al., p.135, 2005).

“... continual nurse training is essential to meet the present and future dynamic health needs of the ever-growing population of South Africa” (Poggenpoel, Myburg & Kaye-Peterson, p. 348, 2001).

All of the above excerpts indicate the importance of in-service training in the nursing profession. With technological advances and the rise of new diseases and viruses, for example Covid-19, it is important that the nursing staff are kept up to date with the latest developments in their profession in order to perform effectively. After analysing the various articles, it is evident that in-service training is crucial for the professional development of nurses. In-service training is offered to nurses to improve themselves and to offer better services to patients. An example of in-service training which is very relevant in the current situation would be nurses undergoing Covid-19 training. With this training nurses could be informed about various infection control measures; which drugs to administer to patients; and perhaps even how nurses should communicate to the family of critically ill patients. I do believe that in-service training is important for all nurses in this profession, simply because nurses that have qualified 25 years ago may be excellent in their job but they may have difficulty using the latest blood pressure machine or have difficulty adjusting to any new machine on the market. Therefore, it is important to have in-service training. It allows nurses to be flexible, competent and well-equipped health care workers.

3.5 Theme 5: Job profile of nurses

This theme speaks about the nursing competencies. It is vital that a country has competent nurses who are able to persevere through challenging times, for example, the Covid-19 pandemic. Competence could be in-born (some nurses have a passion for providing health care to patients) or acquired through in-service training, as mentioned in theme 4(b). Nurses are not only seen as influential role-players in clinics and hospitals, but are also seen as leaders in communities where they offer health advice to their communities. Excerpt 4 speaks about this.

“... research on nursing sees competence as an early stage in the clinical skills development of a nurse” (Strasser et al., p.136, 2005).

“...It is therefore important that nurses working in ICUs are experienced ICU nurses with the additional ICU educational qualifications” (de Beer et al., p.10, 2011).

“...Another issue is whether the skills being taught to many nurses are as relevant as they could be to the nation’s health needs” (Breier et al., p.1, 2009).

“...nurses are seen as leaders in the community, and their role extends beyond the confines of clinic walls to involvement in such things as school health programs and community AIDS awareness campaigns” (Strasser et al., p.134, 2005).

“... As student populations and methods of learning continue to increase in diversity, nurse educators and administrators must be flexible and responsive with effective and innovative solutions to complex market demands” (Bvumbwe & Mtshali, p. 4, 2018).

“...Professional nurses play dual roles of service delivery and clinical teaching and mentoring” (Bvumbwe & Mtshali, p. 4, 2018).

Nurses make up the largest group of health care providers and are seen as the backbone of the health system. Nurses across the globe play a vital role in caring for critically ill patients across various domains; it is therefore imperative that nurses are competent and well -equipped service providers. It is important for nurses to be taught skills that are relevant to the health needs of the population they serve, for example patients in rural Africa have very different health needs compared to patients in the United States. In many communities’ nurses play dual-roles, that of being health care providers in clinics and also advocates for community health and awareness campaigns. All of the above excerpts relate to the competence of nurses which were extracted from the literature.

Discussion

All of the above-mentioned excerpts indicate the scary reality that the nursing profession is currently faced with. The poor state of this profession has been brought to light during the Covid-19 pandemic, which has hit South Africa since March 2020. South Africa, a country with an already compromised health system prior to the pandemic affecting us, has been forced to undergo strict lockdown measures. This is not only to curb the spread of the virus, but to also try and

stabilise the health system in order to prevent disastrous implications when the peak of the virus is reached in the various provinces. These strict lockdown measures have had adverse effects on many individuals. Individuals are severely affected financially, emotionally and physically. While many individuals infected with Covid-19 needed medical attention urgently; other patients also in need of medical attention were turned away from clinics and hospitals simply because there were not sufficient number of nurses in those clinics or resources to cope with the increasing demands. The news carried reports of patients having to sleep on the floor or being turned away from clinics and hospitals (News 24, 2020). If this was the experience during the first wave of Covid-19 experienced in South Africa, it indicates that the country would suffer dire consequences in case of a second wave of the virus. Should patients receive the correct treatment when they present with early symptoms, their ailments could be treated and later health problems could be prevented. However, what is seen in many clinics and hospitals in South Africa is patients being turned away; and when they eventually do receive medical intervention it sometimes may be too late, which burdens the already compromised health system even more.

In the next and final chapter, I provide a brief conclusion and some recommendations going forward, based on the findings from the systematic review and my comprehension of nurses training in SA.

Chapter 4: Conclusion and Recommendations

This is an explorative systematic review that employed Braun and Clarke's thematic analysis in order to explore the themes that emerged from literature during the time frame 1994-2020 on the training and profession of nurses in South Africa. This study started with an extensive literature review in order to contextualise nursing, nurses training and transformation of nursing training in the context of South Africa. In recent years there has been a transformation in nursing education in South Africa; this refers to the change from legacy qualifications to qualifications that now fall within the National Qualifications Framework (NQF). However, the literature highlighted that this transformation has not been smooth sailing. The effects of COVID-19 have now aggravated this transformation. Due to the national lockdown and the shutdown of tertiary institutions, many courses which should have been completed in 2020, will now be completed in 2021.

To conclude, it is clear that nursing in South Africa needs to be altered and evolve. After reviewing the available literature, the researcher was able to extract five themes which relate to the research question. Theme 1: *Nursing Crisis* and theme 2: *Challenges in Nursing* specifically speak about the crisis and challenges that this profession is faced with. In terms of articles on this topic being published in South Africa, it has been established that there is a large inter-provincial disparity with regards to the distribution of nurses. As stated under theme 3: *Training Gaps*, there is better coverage of nurses in the more affluent provinces such as Gauteng and Western Cape. This clearly indicates the need for more research in areas such as the Eastern Cape. Theme 4: *Transformation in nursing*, speaks about the need to transform nursing education in order to ensure that nursing professionals are flexible and equipped to work adequately with regards to the ever-changing health demands of the population. The last theme of this study, *Job profile of nurses*, engages with the competencies and skills of nurses, as they are seen as the backbone of the healthcare system.

4.1 Limitations

The main limitation in the study was the total number of articles. I only had 17 articles that fit the inclusion and exclusion criteria, whereas systematic reviews are generally conducted with a large

number of articles. There is wide range of articles on the topic, but only a few that met the inclusion and exclusion criteria.

It was hard to separate the literature into themes. I initially had 8 themes but because I found links between the themes, I managed to rearrange the themes into 5 themes, where 3 of the themes were further divided into sub-themes. I also found many excerpts which could go under the respective themes and hence had to choose excerpts that were most indicative of the theme. I then deleted some of the excerpts that were repetitive but just worded differently. I bring this in as a limitation to the study because in deleting several extracts and combining themes, it is possible that some aspects of the data have been conflated thereby depriving the research of a more nuanced analysis.

A minimal amount of grey literature (grey literature refers to unpublished articles on academic sites, examples include: government reports and policy statements) about 3 sources was used in this study, the majority of the literature used in this study was from peer-reviewed articles/research studies, because they are more likely to be valid and reliable than research that has not been peer-reviewed.

4.2 Recommendations

Theme 1 (a) of this review; *Brain Drain* addresses one of the crisis that the nursing profession is faced with in South Africa, and that is the emigration of nurses. Nurses are being educated and trained in South Africa, but once they have qualified and gained sufficient experience, they leave the country for better opportunities abroad. This then results in a deficit of practicing nurses in South Africa. Nurses emigrate for multiple reasons such as: a better quality of life; better remuneration; more recognition and safer living and working environments, these are just a few of the reasons why they emigrate. Nurses are essential workers to any country, and especially in South Africa. Therefore, a recommendation would be to improve the remuneration packages, working environment's and status of nurses in South Africa.

Theme 4 (b) of this review; *In-Service training / CPD points* addresses the importance of in-service training to nurses. A recommendation would be to provide nurses in-service training with incentives such as certificates so that they feel motivated in their work environment. This would

also help them to remain in-touch with the latest knowledge and technology and update their skills on-the-job.

Many nurses are over worked and under-paid, therefore a recommendation would be to allow nurses to work shorter shifts. During peak periods of the COVID – 19 pandemic experienced in South Africa, there was often reports of nurses who worked ridiculously long hours just to provide essential services to patients. Hospital and clinic managers should ensure that there are sufficient nurses to cope with the workload, or if that is not possible due to financial constraints, nurses should be allowed to work shorter shifts thereby allowing them time to recuperate and prevent burn-out.

Nurses are exposed to a lot of trauma and other factors that could negatively affect their psychosocial well-being. I would recommend that nurses are provided with free therapy sessions so they have a safe space to de-brief. Especially during the current situation that the world is faced with, where nurses are at the frontline fighting to preserve life and taking care of those who are ill. Often, nurses have to care for critically ill patients who could possibly be their friends or loved ones, this may have a negative effect on their emotional well- being.

Nurses should also be provided with opportunities for team building activities with their colleagues to cope with work-related pressures and create some sort “fun” in what is otherwise a stressful environment.

From this systematic review it is clear that not much research has been conducted in the Eastern Cape, which has also been one of the hardest hit provinces by the COVID-19 pandemic. I would recommend future researchers interested in this research topic to conduct research in the Eastern Cape.

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