THE NEEDS OF FAMILIES OF PATIENTS ADMITTED INTO THE INTENSIVE CARE UNIT IN THIRD WORLD COUNTRIES: AN INTEGRATIVE LITERATURE REVIEW

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A research report submitted to the

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of

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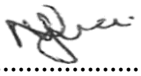
DECLARATION

I, Nomthandazo Ngema, declare that this research report being submitted for the degree of Master of Science in Nursing at the University of the Witwatersrand, Johannesburg is my own work. It has not been submitted before for any degree or examination at this or any other university.



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Nomthandazo Ngema

Signed at Johannesburg

On the ....25th ..... day of .....June..... 2021

Protocol number: W-CBP-210114-01

DEDICATION

I dedicate this work to the Almighty God Jesus Christ, the God of the impossibilities. Thank you for loving me and shining your light throughout my studies. To my fiancé Teboho Ranketsi, thank you for your support and always believing in me. You've always set the bar high for me.

To my biggest cheer leaders Nomathemba and Mbalenhle, your love kept me going. You guys are my everything. I lastly dedicate this work to my parents Timothy Ngema and Fisani Siziba, thank you for all motivations and love.

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ABSTRACT

Background: The sudden admission of a patient with life-threatening illness into the intensive care unit has a profound effect on the family members of patients. While the needs of familiesof patients admitted in the intensive care unit have been examined from various perspectives, the needs of patient's families in third world countries are yet to be explored through this review. This will be unique to the body of knowledge

Aim: The aim of this review was to gather evidence related to the needs of families of patients admitted in the intensive care unit in third world countries.

Methods: An integrative literature review methodology was used. The review was guided by the five stages outlined by Whittemore and Knafl. Literature search was conducted using databases: SCOPUS, PubMed, CINAHL, MEDLINE and Psycho INFO. Keywords used included: *family, needs, intensive care unit, and third world countries.* A total of 492 studies were retrieved after using the search filters and date limits. Ten articles were finally included as they met the inclusion criteria set for the review.

Results: Ten studies were included in this review. The need domains were synthesised under five themes: 'assurance'; 'information'; proximity'; 'comfort' and 'support'.

Conclusion: In third-world countries, family members of critically ill patients in the ICU perceive and share similar needs just as those in the first and second world countries, especially in the domains of assurance and information. Family members form an integral part of patient care in the ICU. The multidisciplinary team need to recognise the needs of family members and develop supportive structures to attend to their needs. Paying attention to these needs will enhance effective communication.

Keywords: Family needs, third world country, intensive care unit

TABLE OF CONTENTS

Contents

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

This chapter provides an overview of the study. This includes the background of the study, problem statement, research question, purpose and objective of the study, the significance of the study and operational definitions. A brief overview of the research methods and ethical considerations of the study will be discussed.

The intensive care unit (ICU) has seen immense changes in science, technology and practice over the past years. Due to the nature and layout of the environment, admission into the ICU affects the admitted patient and the family members. Being a family member to a critically ill and dying patient is one of the distressful events in life (Al Mutair *et al.*, 2013). A family is the basic unit of society. Families comprise of interrelated and integrated units where an event affecting one family member impacts other members. When a loved one is suddenly admitted to an intensive care unit due to a life-threatening illness, families may get dysfunctional (Ozbayir, Tasdemir & Ozseker, 2014) and thus their wellbeing is affected (Chhetri & Thulung, 2018).

Families may have limited or impaired abilities to cope with traumatic and sudden situations (Chhetri & Thulung, 2018). Gundo, Bodole, Lengu and Maluwa (2014) and Ahmad (2018) also pointed out that most admissions come as emergencies and families are not emotionally and psychologically prepared for such sudden emergencies. Families' lives could, therefore, become tremendously disorganised and disrupted because of this sudden, shocking occurrence (Akhlak & Shdaifat, 2016). The latter may have a negative impact on the critically ill patient's

outcome. Kean and Mitchell (2014), indicated that emotionally distressed families may be incapable of giving emotional, psychological, and social support to their family members. They may also transfer their stress and anxiety to the patient, which worsens the condition of a patient. When family needs are met timely, they will gain the ability to cope and strive through traumatic situations. In turn, they can provide their loved one with relevant support during his or her hospital stay.

In the United States of America, more than five million patients are admitted to ICU yearly (Kohi, Obogo & Mselle, 2016). This means that their families' perceived needs are also proportionally high. It is the intensive care nurses' responsibility to assess the families' needs competently and implement strategies to reduce disequilibrium. Akhlak and Shdaifat (2016) indicated that intensive care nurses need to employ their unique skills, experience, knowledge and empathic attitudes to alleviate suffering for both the patient and family.

The majority of patients admitted in intensive care units are physically and psychologically compromised and therefore, unable to make sound decisions about their health (De Beer, Alnajjar, Elarousy & Mowalled, 2017). Given that, critically ill patients need families to advocate, support, and decide on their health, as their close families know them better than nurses do (De Beer & Brysiewicz, 2016). Kynoch, Cabilan and McArdle (2016) also explained that the family's coping abilities influence the recovery process of a patient. Therefore, families need to acquire skills that will enable them to adapt to this sudden horrific situation quickly. Long term emotional distress and fear of death of a loved one can lead to a post-traumatic stress disorder, which can lead to health issues, employment and relationship problems for family members (Kynoch *et al.*, 2016).

Families prefer spending more time in intensive care units with their loved ones (Kynoch *et al.*, 2016). They can offer physical care to their loved ones and gain more information on their loved one's progress or state of illness. Emotional attachment can then be restored when families are granted a chance to help their loved with their basic needs, such as bathing and feeding. Families of patients admitted to intensive care units remain an integral part of the healthcare system. This is evidenced by a study conducted by Gundo *et al.* (2014) where it was indicated that families have a unique contribution towards patient care and healing as they act as advocates for the intubated and sedated patients. Families bring their cultural and religious therapies to the patient, and health care providers should consider that. They provide information about the patient since they know the patient better in the light of their preferences, religious and cultural affiliations. Family involvement is undoubtedly one of the most significant parts of the therapy the patient in intensive care needs. When patients see their families' familiar faces, they become less anxious and frightened (Padilla Fortunatti, 2014).

Effective communication is a fundamental aspect of caring (Padilla Fortunatti, 2014). Interpreting and explaining information, maintaining eye contact and having a positive attitude are competent aspects of care that health care providers need (Shamloo, 2012). When communication is poor, quality care provision is hindered, resulting in families and patients in intensive care units being dissatisfied (Padilla Fortunatti, 2014). Kynoch *et al.* (2016) pointed out that some families find social support in other ICU waiting areas useful as they share their experiences with other families facing similar crises. This, in turn, indicates that some ICU waiting areas facilitate a supportive atmosphere.

De Beer and Brysiewicz (2016) explained that family-centred care promotes participative decision making and respect of family cultures and religious affiliations. Health practitioner

should respect patients' rights and remain culturally sensitive to all cultural and religious affiliations. According to research done by Shamloo (2012), patient-family centred care has shown to bring positive outcomes amongst patients and families. However, health care professionals in intensive care units appear to be slow to adopt it. Family-centred care approach calls for intensive care nurses to recognise the importance of including patient's families in the process of care (De Beer & Brysiewicz, 2016). Furthermore, families are productive in the intensive care unit as they contribute towards patient care. Intubated, sedated, and confused patients cannot communicate with nurses effectively, which hinders effective care (Gundo *et al.*, 2014; Chhetri & Thulung, 2018; De Beer *et al.*, 2017).

The Critical Care Family Needs Inventory (CCFNI) states that the family's basic needs are information, support, assurance, comfort and closeness. These needs were originally designed by Molter (1979), and revised by Leske (1991). Meeting these needs is a core responsibility ofa multidisciplinary team in an intensive care unit. Numerous studies reveal that many family members display an intense need for information and emotional support (Alsharari, 2019; Brysiewicz & Chipps, 2017; De Beer *et al*., 2017; Kynoch *et al*., 2016).

Intensive care practices vary considerably across the globe. These variations and differences are based on geographical location, religion, societies, regions and cultural factors. Likewise, roles and responsibilities also differ across cultures and societies. The needs of families of patients admitted to the ICU in first world countries will also differ from those in third world countries. The poverty rates, healthcare coverage and services, economic instabilityand access to healthcare are factors that may affect the needs of family members of patients admitted into the ICU.

1.2 PROBLEM STATEMENT

Several studies have reported on the needs of families of ICU patients from different perspectives. These needs although similar, also differ in terms of cultural background, religion, region and geographical locations. Intensive care practice also varies immensely across the globe. The needs of families from developed, first world countries, will differ from that of developing and under-developed third world countries. Existing reviews have focused broadly on the needs of families of ICU patients. There is a substantial number of literature that focused on family needs of ICU patients from a third-world country perspective. Considering the uniqueness of such countries in terms of poverty rates, basic human resources, and economic instability compared to the rest of the world, such family needs may be unique. This review focused on family needs of ICU patients in a third world country in order to bring to light the unique challenges and tailor appropriate interventions.

The review was guided by the research question: "*What are the needs of families of patients admitted in intensive care units in third World countries?"*

1.3 PURPOSE

The purpose of this review was to gather evidence related to the needs of families of patients admitted in the Intensive care unit in third world countries.

1.4 OBJECTIVE

The objective of this study was:

To describe the needs of families of patients admitted in the ICU from a third world country perspective.

1.5 SIGNIFICANCE OF THE STUDY

Understanding families, identifying their needs and meeting them may contribute to positive outcomes for families and patients. Evidence from this review will help understand the needs of families while relatives are admitted into the ICU. This will lead to the development of interventions and supportive systems to meet family needs and improve the quality of care rendered by intensive care nurses. A review focused on family needs of ICU patients in a third world country will bring to light the unique challenges from cultural and religious perspectives and help tailor appropriate interventions. The findings will also project grey areas for further research and attention.

1.6 DEFINITION OF KEY VARIABLES

The list of terms for the purpose of this study are as follows:

- **Intensive Care Unit**

  The World Federation of Societies of Intensive and Critical Care Medicine (Marshall *et al.*, 2017) defines an ICU as an organised system within the hospital setting essential for the provision of intensive specialised medical and nursing care to critically ill patients through continuous monitoring and interventions to enhance and support organ system failure. In this study, intensive care unit (ICU) refers to specialised sections in the hospital, staffed and managed by specialised health professionals using specialised equipment to rescue patients with life-threatening illnesses.

- **Critically ill patient**

Adult patient admitted to intensive care unit due to life threatening illness or injury and has an APACHE II score of 11-15 (Schmollgruber, 2002). In this study, it refers to patients with life-threatening and chronic conditions that need urgent intensive care in order to survive.

- **Intensive care nurse**

A licenced professional nurse with specialised training in intensive care that enables him or her to manage and monitor those patients who are the most seriously ill or injured (American Association of Critical Care Nurses, 2012). For the purpose of the study, intensive care nurse refers to nurses with or without additional qualification in intensive care and working in the ICU.

- **Family**

Adults 18 years or older who visit the patient frequently and are related to the patient by blood, marriage, adoption or a significant other (Schmollgruber, 2002). For the purpose of the study, family refers to persons that are related to patient, visit and care for the patient.

1.7 OVERVIEW OF THE RESEARCH METHODOLOGY

An integrative review method was utilised. The research approach allows for the combination of diverse study methodologies (i.e. experimental and non-experimental research) to fully understand a subject of interest (Whittemore & Knafl, 2005). A well-done integrative review can serve the purpose of a primary study and directly apply to practice and policy. The five-stage integrative review process proposed by Whittemore and Knafl (2005) was used. These phases include: problem identification, literature search, data evaluation, data analysis and

presentation of findings. This framework presents a systematic approach and process that enhances the rigour of the review and strengthens the findings.

1.8 ETHICAL CONSIDERATIONS

Prior to commencement with the study, the protocol was submitted for peer review to the Department of Nursing Education to assess the feasibility of the study. Title approval was obtained from the Health Sciences Postgraduate Research Committee (**Appendix C**). An ethical clearance waiver (**Appendix B**), was obtained from the University of Witwatersrand Human Research Ethics Committee (Medical). The researched adhered to the developers' terms of usage for the quality appraisal tools (**Appendix D & E**).

1.9 LAYOUT OF THE STUDY

The chapters of the review are structured according to Whittemore and Knafl's (2005) five stages. The whole report is organised into six chapters. The first five chapters follow the Whittemore and Knafl (2005) stages; thus, chapter 1 to 5 are organised as Problem identification, literature search, data evaluation, data analysis and presentation of findings.

The current chapter, Chapter one, provides research information on the background of the study, the identification of the research problem, study purpose and objectives. It ends with an overview of the research methodology that was used.

In Chapter two (2), the literature search process and methods are discussed in detail. The chapter begins with an introduction, followed by brief information on the integrative review methodology. Subsequently, the chapter discusses in detail, the literature search strategies,

databases used, eligibility criteria followed, search terms and strings, literature selection and documentation process.

In Chapter three, Data extraction and evaluation are discussed. The chapter begins with a short introduction of the chapter, followed by the data extraction procedure. This is followed by the quality appraisal of the included data. The chapter ends with a discussion of the strategies followed to ensure rigour in the process.

Chapter four, data analysis, discusses the analysis stage of the review. The process followed: data reduction, data display, data comparison and verification and conclusion are all discussed. Strategies to ensure methodological rigour are also discussed.

Chapter five presents the findings as aggregated from the review. The various study characteristics and themes are presented. The chapter ends with the discussion of findings in relation to existing research literature, current guidelines and policies.

Chapter Six, the last chapter, focuses of the summary of the review, strengths and limitations. Finally, the chapter ends with the recommendations for research and practice.

1.9 SUMMARY

Chapter one presented the introduction and background of the study, the problem identified, purpose and objectives of the study, review question, significance of the study, definition of key concepts, an overview of the research methodology and ethical considerations. The next chapter will focus on the literature search of the study in question.

CHAPTER TWO

LITERATURE SEARCH

2.1 INTRODUCTION

The chapter discusses the literature search process and methods used in the study. The chapter begins with a brief exposition on the literature search and follows with search methods.

2.2 LITERATURE SEARCH

Literature search comprises an organised and step-by-step approach to retrieve existing research data either published or unpublished to ascertain the extent of relevant references on a subject of interest (Korsah, 2019; Rau, 2004). This part of the review is crucial when it comesto the quality of the review. Following a complete, well-thought-through and unbiased search using consistent search criteria and keywords helps achieve an exhaustive literature search (Conn *et al*., 2003; Ganong, 1987; Russell, 2005; Whittemore & Knafl, 2005). The use of several search strategies also helps maximise the number of studies retrieved during the literature search. For example, the use of electronic databases, manual hand search from appropriate journals, ancestry search, reference list of existing studies, contacting known researchers in an area and the use of grey (unpublished) literature (Conn *et al*., 2003; De Souza *et al*., 2010).

The description of the target and the accessible population is also vital in the literature search process (Russell, 2005). All previous studies that focused on needs of families of patients formed the intended target population, while those that were retrieved after an exhaustive literature search was the accessible population. In order to enhance the validity and ensure

rigorous literature, several research authors (Korsah, 2019; Russel, 2005) recommend discussion of the data collection process such as databases used, eligibility criteria, search terms, data selection process and documentation of data.

2.4 SEARCH METHODS

The data collection process followed is discussed in the sections below:

2.4.1 Eligibility Criteria

Formulating eligibility criteria defines the type of information that will be included or excluded in the review. It is recommended that the criteria agree with the research question, the sample of interest, intervention and the context (De Souza *et al.*, 2010).

2.4.1.1 Inclusion criteria

- All empirical literature published between January 2009 and July 2020
- Articles published in English
- Articles that contain the search terms *family, needs, and intensive care unit*
- Articles published within third world countries
- Studies conducted in the adult ICU

2.4.1.2 Exclusion criteria

- Literature review, commentaries, editorials and expert opinions
- Studies conducted in the neonatal or paediatric ICU
- Studies published in other languages apart from English language

2.4.2 Search Strategy

The review and literature search was guided by the research question: "*What are the needs of families of patients admitted in intensive care units in third World countries?"* The search strategies used in this review included: A preliminary search to define the search terms and keywords

i. A comprehensive computerised database search

ii. Specific journal hand search

iii. Reference list search

A strategic and well-defined keywords are vital when commencing the literature search. A qualified librarian was consulted during the data search process. A preliminary search was done using databases (PubMed and CINAHL) to define reliable key words for a detailed literature search. The main concepts used in the search included family, needs and intensive care unit. Synonyms of these words were also used in addition to the indexed keywords. The literature search was conducted using the Wits Health Sciences Library online databases.

2.4.2.1 Databases

One important rule in literature is to use a wider number of computerised databases to ensure proper research literature coverage (Conn *et al*., 2003; Jadad *et al*., 1998). After formal consultation with the librarian and the supervisor, the databases used included: SCOPUS, PubMed, CINAHL, MEDLINE and Psycho INFO. These electronic databases have broader coverage, contain multidisciplinary full-text database and have over million citations.

2.4.3 Search Terms and Search Strings

The search terms and search strings were derived from the four main concepts: ***family, needs intensive care unit, and third world countries***. Synonyms such as relative, next-of-kin and critical care unit were also included. The search terms were framed by the researcher in consultation with a librarian, and a preliminary search trial included the search words: ***family/ families, relatives', next-of-kin, needs, intensive care unit or critical care unit, third-world countries or developing countries.*** The search words "third world" or "developing countries" were specifically used because third world countries appear to be less liberal around family issues in ICU while most developing countries talk about family-centered care. Boolean terms (AND, OR and NOT) were used to separate the key terms and synonyms. The search strings used are displayed in figure 2.1 below.

("family" OR "next-of-kin" OR "relatives")
AND
("needs" OR "family needs")
AND
("intensive care unit" OR "critical care unit")
AND
("third world countries" OR "developing nations")

Figure 2.1: Search Strings

2.4.4 The Search Process

An exhaustive literature search was completed in each electronic database (SCOPUS, PubMed, CINAHL, MEDLINE and Psycho INFO). The search terms, as indicated, were used at all times. The researcher adhered to the rules of each database for consistency. Specific journals such as South African Journal of Critical Care, Intensive and Critical Care Nursing and Nursing in Critical Care were also manually searched. Reference lists of earlier retrieved literature were also individually searched for relevant articles.

2.4.5 Supplement Search methods

Additionally, the google search engine was also used to search for literature. The phrase "*the needs of patients' families in the intensive care unit"* was used interchangeably in the search engine.

2.4.6 Search Outcome: Results from the Electronic Search

The detailed search outcome was described using the PRISMA flow diagram.

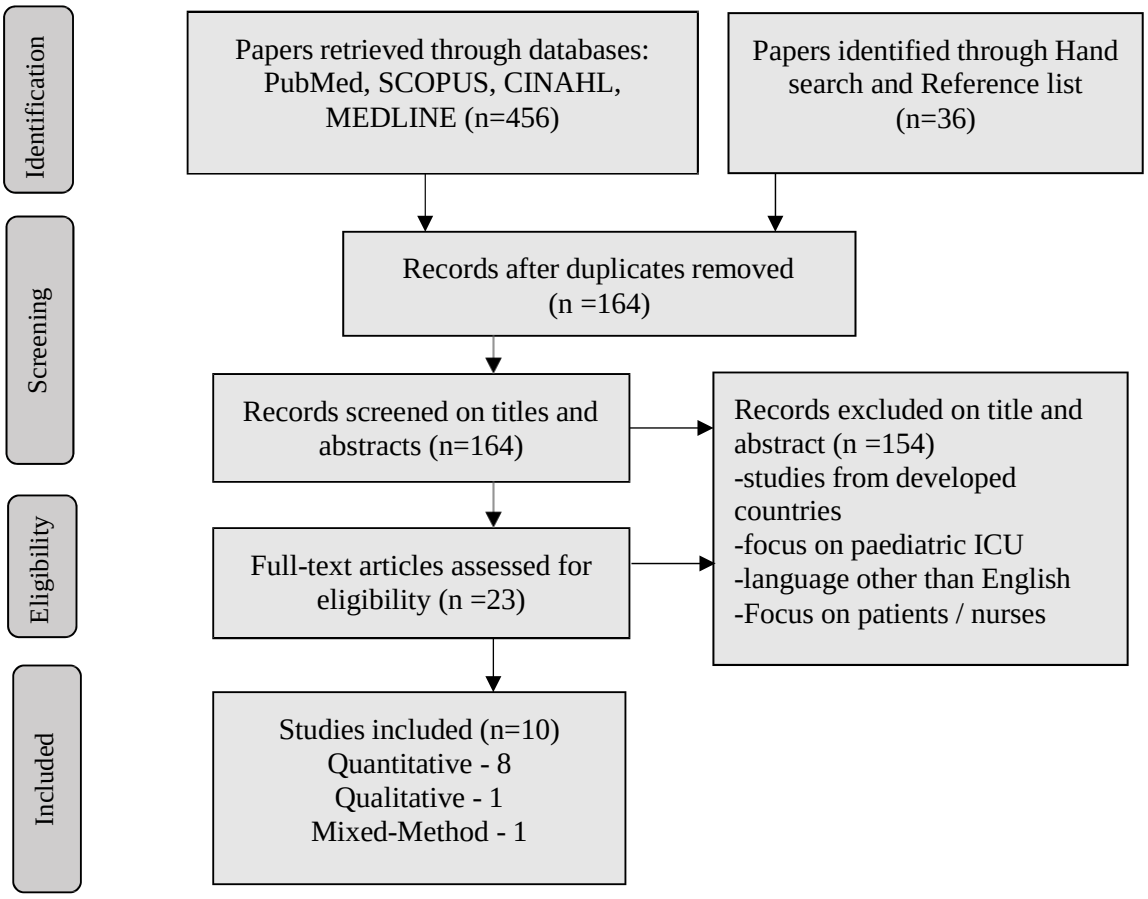

Figure 2.2: PRISMA flow diagram of articles reviewed

2.4.7 Literature Selection and Screening

The eligibility criteria were followed thoroughly for data selection and screening. Study titles and abstracts were screened for selection. The full-text of eligible literature was further read for final inclusion. Duplicates were also removed during the process. Two independent reviewers screened each study separately (NM and NK). Where any disagreement emerged, a third independent reviewer (KK) was brought in to settle matters. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flow diagram was used to map the search process (see Figure 2.2).

2.5 REASONS FOR STUDY EXCLUSION

Studies were excluded based on their title, abstract, language, context, year of publication and subject of interest. Duplicates were removed during the literature screening process. Studies that did not have the main concepts (family needs, intensive care unit) in their titles were excluded. Studies published in other languages apart from English were also excluded. Some of the studies were conducted within the acute care and paediatric setting. These were also excluded. Studies that were conducted in developed countries were also excluded as they did not form part of inclusion criteria.

2.6 METHODOLOGICAL RIGOUR

Literature search forms a crucial part of the review. Several strategies were followed to limit any threat to the validity and scientific integrity of this review. These measures included:

- A broad search strategy was outlined prior to the literature search. This included the main concepts of the review, key terms, eligibility criteria, literature selection process and documentation.
- Several databases were used to broaden the literature search. The use of less than three databases limits the search
- Validated tools were used to critically appraise the studies included in this review
- The reviewers agreed to use a mid-score (5/10 and 50%) as a cut- off point to grade studies
- An experienced and qualified librarian was consulted during the literature search process for assistance and guidance.

2.7 SUMMARY

This chapter discussed the literature search briefly as the second stage of the review framework informed by Whittemore and Knafl (2005). This was followed by a detailed discussion of the literature search process, search strategies, study selection and documentation. The chapter ends with a discussion of the strategies used to protect the scientific integrity of the literature search methods.

In the next chapter, the data evaluation stage is described and discussed.

CHAPTER THREE

DATA EVALUATION

3.1 INTRODUCTION

This chapter discusses the evaluation of the individual studies included in the review. The chapter begins with a brief description of the data evaluation stage of the review. The data extraction process is also discussed in detailed before the data evaluation. The chapter ends with the strategies to ensure a rigorous process.

3.2 DATA EVALUATION

The integrity of the review is enhanced when the quality of individual literature is appraised based on checklists. This can be done after the relevant features of each study are extracted in the form of a data matrix. The data extraction and quality appraisal stages are described in the sections below.

3.2.1 Data extraction

Whittemore and Knafl (2005) describe data extraction as a process to generate important research information based on eligible studies' headings. In this case, a summary of each study characteristics is displayed in a data matrix format. Russell (2005) and De Souza *et al*. (2010) recommend using a valid data extraction tool. This enhances easy capturing of all relevant data according to headings from individual studies and guarantees precision in information verification stage (Whittemore& Knafl, 2005). In this study, a data extraction tool developed by the reviewer according to preferred data was used. The data were extracted according to:

- Author(s) and year of publication
- Setting,
- Objective(s),
- Methodology
- Population and sample,
- Data collection techniques and
- Key findings.

Table 3.1 summarizes the study characteristics of the studies that were included.

Table 3.1: Study characteristics of included studies

	Author(s),yr., setting	Research objective	Research method	Population/sample/Data collection	Key findings
1	Brysiewicz and Chipps (2017) South Africa	The needs of next of kin of critically injured trauma patients admit-ted to ICU	Quantitative cross-sectional survey	162 next of kin of trauma patients in ICU Using the Critical Care Family Needs Inventory (CCFNI)	-The highest rated need was **assurance** need: to be assured of the best possible care for patient -This was followed by information needs: to know specific facts concerning patients progress -Proximity needs were rated the least important: to be alone at any time
2	Salameh *et al.* (2020) Palestine	To determine the needs of ICU patients' family members	Cross-sectional and analytic design	A sample of 240 family members from four major hospitals Convenience sampling The Critical Care Family Needs Inventory (CCFNI)	-Assurance needs was ranked as most important -Followed by proximity -Information -Comfort -Support: the least important -older relatives place more emphasis on proximity than the younger ones
3	Alsharari (2019) Saudi Arabia	To identify the needs of family members of patients admitted in the ICU	Cross-sectional study	233 adult family members of ICU patients Using the “Critical Care Family Needs Inventory (CCFNI)” questionnaire	-The most important needs of family members of ICU patients is the need for assurance, followed by information, proximity, comfort and finally support. -to be assured of the best care possible for patient was most important to family members

					-the least important items for family were to have good food available in the hospital and to have another person with you when visiting
4	Bandari *et al.* (2015) Iran	To describe the support needs of family members of patients hospitalised in the ICU	Descriptive cross-sectional survey	450 family members in 27 ICUs A self- administered questionnaire " The Critical Care Needs Inventory (CCFN) tool	The perceived needs of family members in order of importance included: -Assurance needs, to have honest answers and assurance of the best of care for patients -the least important was support needs, to have a pastor, be encouraged -The majority of the perceived needs items were related to assurance, the least related to support.
5	Al-Mutair *et al.* (2013) Saudi Arabia	To identify the perceived needs of families of ICU patients in relation to culture and religion	A descriptive, exploratory qualitative design	12 family members Using a semi-structured interview	The perceived needs of family members included -Information needs: honest and understandable information using simple terms -Assurance needs: honest conversations, maintain optimism and hold onto hope -Support needs through spiritual healing: Faith in God, meditation, and reading the Qur'an to relatives -Maintaining close proximity: remaining close to relative in the ICU, flexible visiting hours -Involvement in care: Given the opportunity to participate in patient care

6	Kohi *et al.* (2016) Tanzania	To explore family members perceived needs and level of satisfaction with care of their critically ill patients in the ICU	A descriptive cross-sectional study	110 Family members Using semi-structured questionnaire	-The need to have a specific person to call at the hospital when a family member is not available was perceived the highest need (comfort needs) -Followed by the need to be called at home about changes in the patient's condition (information) -the need to talk about the possibility of the patient dying was perceived the lowest for family members
7	Munyiginya & Brysiewicz (2014) Rwanda	To explore the needs of patients family members admitted into the ICU	Quantitative exploratory design	40 family members Using the Critical Care Family Needs Inventory (CCFNI)	-The majority of respondents rated the need for assurance the highest: to honestly answer questions -This was followed by the need for comfort -The need for information was ranked the third most important by participants -Need for proximity -Need for support
8	Omari (2009) Jordan	To identify the perceived needs of family members of adult ICU patients	Descriptive, exploratory design	139 Family members and 89 critically ill patients Using the Critical Care Family Needs Inventory (CCFNI) and Needs Met Inventory (NMI)	-21 out of the 44 items were ranked very important to family members -The ranking order in order of importance was assurance, information, proximity, comfort and support -Family members perceived assurance and information needs as the most important needs -The least important needs were related to support: to be alone at any time

9	Noor Siah *et al*. (2012) Malaysia	To determine the family members information needs of critically ill patient in ICU	Mixed method	200 family members Face to face interview and questionnaire was used (CCFNI)	-Support need was ranked highest followed by proximity, information, assurance and comfort need. -There was significant differences in support needs between families. -also assurance and information needs varies between families with age. -Educational level had no much significance on the family needs
10	Hashim & Hussin (2012) Malaysia	To identify the needs of the family members and prioritise the needs To identify the person/ caregivers who met the needs of the family members	Quantitative study Descriptive	100 family members Questionnaires (CCFNI)	Family members ranked assurance as the most needs followed by proximity and information. - Hope and trust of the family members on the health care workers were top priority for them. -Support need was the least ranked need by family members and was the least met need. -Nurses were identified as the most important health professionals that met the needs of family members.

3.2.2 Quality Appraisal

Critical appraisal refers to the careful assessment of the methodological quality of the included research studies. This involves a careful, complete examination of each study to judge its strengths, weakness, meaning, credibility and significance for practice, as well as their inclusion (Burns & Grove, 2011). This phase of data evaluation requires a structured method to assess the rigour and characteristics of each study.

There is no standard rule for evaluating and interpreting the quality of primary studies with different research designs. In most cases, it often depends on the sampling frame. Strict adherence to the eligibility criteria is recommended (Whittemore & Knafl, 2005). According to Conn and Rantz (2003), evaluating the extent to which each study design conducts and analyses systematically to avoid or minimise potential bias can also be used. The calculated scores can either be part of the inclusion criteria or presented separately and displayed graphically. In this review, due to the limited number of studies retrieved, it was displayed graphically. To enhance the validity of this stage, two independent reviewers evaluated the quality using a validated quality rating instrument. Instances of disagreement, a third party was consulted.

The quality assessment rating process is discussed in the section below:

3.2.2.1 Critical Appraisal of Qualitative studies

The Critical Assessment Skills Programme (CASP) critical appraisal tool was used to determine the quality of the included qualitative studies. The checklist tool consists of a 10-question that assesses qualitative study-based validity of the results and the usefulness of the

research result in informing practice and expanding existing knowledge (CASP, 2020: https://casp-uk.net/casp-tools-checklists/). The tool requires reviewers to check whether each included study meets the criteria set in the ten questions by selecting 'yes,' 'no,' 'can't tell' for each question. The criteria included and covered the statement of clear research aim, appropriate qualitative methodology, appropriate research design, appropriate recruitment strategy, data collection approach, study reflexivity, ethical issues, rigorous data analysis, a clear statement of research finding and research usefulness or value. Every included paper was independently appraised by two independent reviewers (NM and NK) using a standard and validated checklist. Summary of the individual quality rating score is presented in Table 3.2

Table 3.2: "Quality appraisal of Qualitative studies using the Critical Appraisal Skills Programme (CASP, 2020)

	Clear aims /purpose	Methodology appropriate	Research design appropriate to answer the aim	Sampling strategy appropriate to the aims	Data collection address issue	Reflexivity, researcher considers participants relationship	Have ethical issue been taken into consideration ?	Was the data analysis sufficiently rigorous?	Clear statement of findings	How valuable is the research?	Score
Al-Mutair *et al*. (2013)	√	√	√	√	√	*	√	√	√	√	9/10

CASP (Critical appraisal skill program) - Key to ratings: √ = Yes, detailed coverage of the screening question; X = No, screening question not addressed; * = Can't tell, screening question indicated but not clear in the write-up

3.2.2.2 Critical Appraisal of Quantitative studies

The McGill Mixed Method Assessment Tool (MMAT), 2011 version, developed by Pluye *et al*. (2011) was used to provide a systematic approach for quality assessment of the quantitativestudies included in this integrative review. The tool provides a 5-items checklist for evaluatingquantitative descriptive studies. The tool obliges independent reviewers to respond "Yes" OR"No" OR "Can't tell" to each of the items provided. For the sake of this review, the quantitative descriptive component was used for critically appraising the included quantitative studies. The criteria included a relevant sampling strategy, the sample representative of the target population, appropriate measurements, low risk-response bias and appropriate statistical analysis approach. The reviewers respond by selecting 'yes,' 'no,' 'can't tell' for each question. A summary of the individual quality rating score is presented in Table 3.3

Table 3.3: Quality assessment of Quantitative studies using MMAT-version 2011 (Pluye *et al*., 2011)

Criteria Study	Relevant sampling strategy to address the research question	Is the sample representative of the population understudy?	Are measurements appropriate?	Is there an acceptable response rate (60% and above)?	Quality (%)	Comment (s)
Brysiewicz & Chipps (2017)	√	√	√	√	100	
Salameh *et al.* (2020)	√	√	√	√	100	
Alsharari (2019)	√	√	√	√	100	
Bandari *et al.* (2015)	√	√	√	√	100	
Kohi *et al.* (2016)	√	√	√	√	100	
Munyiginya & Brysiewicz (2014)	√	X	√	*	50	Sample not representative of the population
Omari (2009)	√	√	√	√	100	
Hashim & Hussin (2012)	√	*	√	√	75	Sample not representative of the population

Key to ratings: √ = Yes, detailed coverage of the screening question; X = No, screening question not addressed; * = Can't tell, screening question indicated but not clear in the write- up"

3.2.2.3 Critical Appraisal of Mixed method studies

The McGill Mixed Methods Appraisal tool (MMAT), 2011 version, developed by Pluye and colleagues was used (Pluye *et al*., 2011). This tool (MMAT) permits research reviewers to critically appraise studies using diverse designs, and can be used for appraising quantitative, qualitative and mixed-method studies.

Table 3.4: "Quality assessment of mixed method using MMAT (Pluye *et al.*, 2011)

MMAT critical appraisal component		Study	Comments
		Noor Siah *et al.* (2012)	
Qualitative component	Are the sources of qualitative data relevant to address the research question (objective)?	√	
	Is the process for analysing qualitative data relevant to address the research question (objective)?	√	
	Is appropriate consideration given to how findings relate to the context, in which the data were collected?	√	
	Is appropriate consideration given to how findings relate to researchers' influence, e.g., through their interactions with participants?	*	
Quantitative component	Is the sampling strategy relevant to address the quantitative research question?	√	
	Is the sample representative of the population understudy?	√	
	Are measurements appropriate (clear origin, or validity known, or standard instrument)?	√	
	Is there an acceptable response rate (60% or above)?	√	
Mixed method	Is the mixed methods research design relevant to address the qualitative and quantitative research questions (or objectives)?	√	

	Is the integration of qualitative and quantitative data (or results*) relevant to address the research question (objective)?	√	
	Is appropriate consideration given to the limitations associated with this integration?	*	

Overall rating- 75%

Key to ratings: √ = Yes, detailed coverage of the screening question; X = No, screening question not addressed; * = Can't tell, screening question indicated but not clear in the write-up"

3.3 METHODOLOGICAL RIGOUR

The section discusses the strategies that were implemented during the data evaluation phase to ensure methodological rigor and minimise bias. These included:

- Valid and standard quality rating tools were used to appraise each study critically.
- The CASP (2018) and MMAT tools, were both used in this review.
- Since the authors of the CASP and MMAT tools indicate no cut-off point for rating the studies as low or high quality, the reviewers used the mid-score (5/10 and 50%) as a cut-off point to grade the studies
- Two independent reviewers assessed each study separately.
- Ratings were compared and discussed. Any misunderstanding was resolved using a third independent reviewer.

3.4 SUMMARY

This chapter focused on the data evaluation stage. The data extraction and quality appraisal process was also discussed. Lastly, the strategies to ensure methodological rigour was also discussed. The next chapter discusses the data analysis stage.

CHAPTER FOUR

DATA ANALYSIS

4.1 INTRODUCTION

The chapter discusses the data analysis component of the integrative review. This included the processes: data reduction, data display, data comparison and data conclusion and verification. Measures that were taken to ensure methodological rigour are also discussed.

4.2 DATA ANALYSIS

This part of the integrative review allows the reviewers to organise the data gathered from individual study, reduce them under headings and make a conclusion about the research problem. In order to ensure a rigorous data analysis, Whittemore and Knafl (2005) recommend using a thought-through standard approach. The four-stage data analysis framework outlined by Whittemore and Knafl (2005) was followed. They included: data reduction, data display, data comparison and data conclusion and verification. These are discussed further in the next section.

4.2.1 Data Reduction

Reducing the data under heading such as author(s), and research objective is important to identify common threads. In this study, the important characteristics from each study were extracted under headings for easy understanding. This is vital when answering the research question. The data extraction tool guided data reduction. Refer to the data matrix, table 3.1.

4.2.2 Data Display

The final data extracted using the agreed data extraction tool was displayed in a table format for easy comparison. Each article with its individual features according to author, setting, aim, methodology and findings were tabulated. This makes it easy to identify similar patterns and differences. Refer to table 3.1.

4.2.3 Data Comparison

Data extracted, as shown in the data matrix were examined further for common items and differences. Before that, the reviewers familiarised themselves with the data extracted, read them thoroughly to identify patterns. Similar patterns were grouped under one category, and separate ones stood as different categories. Attention was paid to the section labelled ‘key findings’ as relevant to answering the research question.

4.2.4 Data conclusion and verification

The themes generated were again compared with the individual study characteristics, especiallythe key findings. This was to verify the theme against the key findings and ensure that it reflected the exact points indicated in the data matrix. Several discussions and examinations were also held to cross-examine the process that lead to the generation of themes.

4.3 METHODOLOGICAL RIGOUR

This section discusses the strategies that were followed to avoid biases that may have occurredduring data analysis phases.

- An explicit and systematic data analysis approach proposed by Whittemore and Knafl (2005) was followed to avoid any bias.
- Themes generated were cross-examined thoroughly against the individual study characteristics displayed in the data matrix.

4.4 SUMMARY

This chapter discussed the data analysis stage as informed by the Whittemore and Knafl (2005) data analysis approach; data reduction, data display, data comparison, and data conclusion and verification. The methodological rigour, as ensured, was also discussed. In the following chapter, findings and themes synthesised from the integrative review are discussed.

CHAPTER FIVE

PRESENTATION AND DISCUSSION OF FINDINGS

5.1 INTRODUCTION

This chapter presents the results of the integrative review. It begins with brief information on the review's interpretation and presentation phase, followed by the presentation of findings. The chapter finally discusses the review findings in relation to existing research literature

5.2 INTERPRETATION AND PRESENTATION

This is the final part of the integrative review. Findings gathered from the process are presentedfor easy understanding. It can be presented as a summary or in a synthesis format. Whittemore and Knafl (2005) recommend presenting findings as a synthesis due to its high level of data abstraction. The results presented according to literature must also reflect the depth and breadthof the included articles. It is vital to present the significant design characteristics, population, variables and outcomes (Whittemore & Knafl, 2005).

The next section provides a detailed discussion of the review findings

5.3 RESULTS

Ten (10) studies were included in this review from the initial 492 papers retrieved. All these studies were primary research focusing on the needs of family members of admitted patients in the ICU and within a third world country. Out of the ten studies included, eight (8) were

quantitative, one (1) qualitative and one (1) mixed-method. The quantitative studies predominantly used the Critical Care Family Needs Inventory (CCFNI) tool to collect data from family members.

The studies included presented data from eight (8) different countries. Three (3) of the studies were conducted in Africa, represented by South Africa, Rwanda and Tanzania. The majority studies (7) presented research findings from Asia (Saudi Arabia-2, Malaysia-2, and one each from Palestine, Iran and Jordan). The target population was only family members with a total sample size of 1547 family members (Quantitative – 1535 and Qualitative -12).

Details of the included studies' quality appraisal are presented in tables 3.2, 3.3 and 3.4, respectively. Using the CASP tool, the only included qualitative study scored 9 out of 10 (Table 3.2). There was a lack of reflexivity in the study report. Using the MMAT appraisal tool, the quantitative studies quality score ranged from 50% to 100% (see Table 3.3). The only mixed-method study scored 75% out of 100% (see Table 3.4).

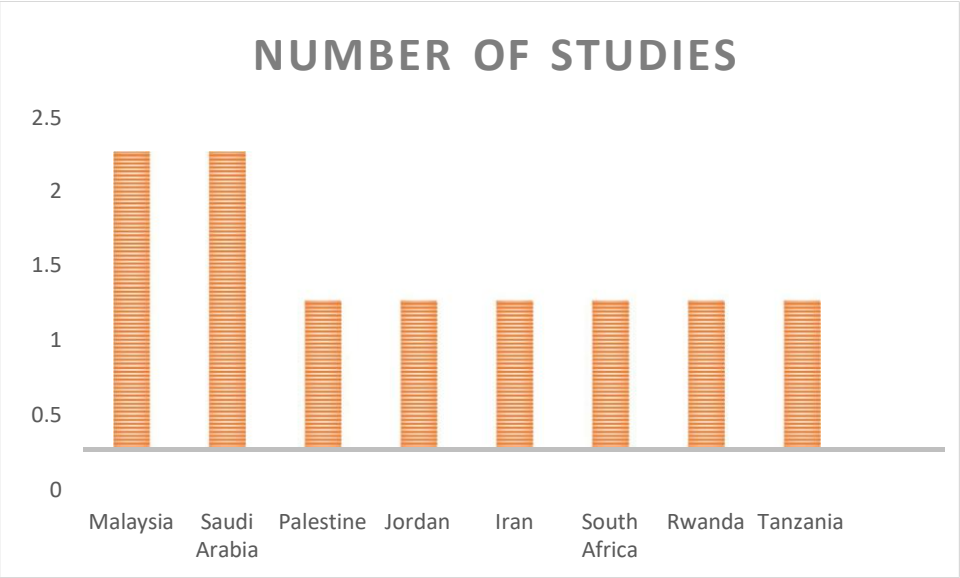

Figure 5.1: Countries where the studies were conducted.

5.4 THEMES

Following a comprehensive analysis of these included articles, several recurrent family needs emerged. They included assurance s, information, proximity, comfort, and support needs. The highest-rated need was assurance need, followed by information needs, need for proximity, comfort needs and support needs. The frequency of the five themes that emerged in this study are summarised in figure 5.2 below.

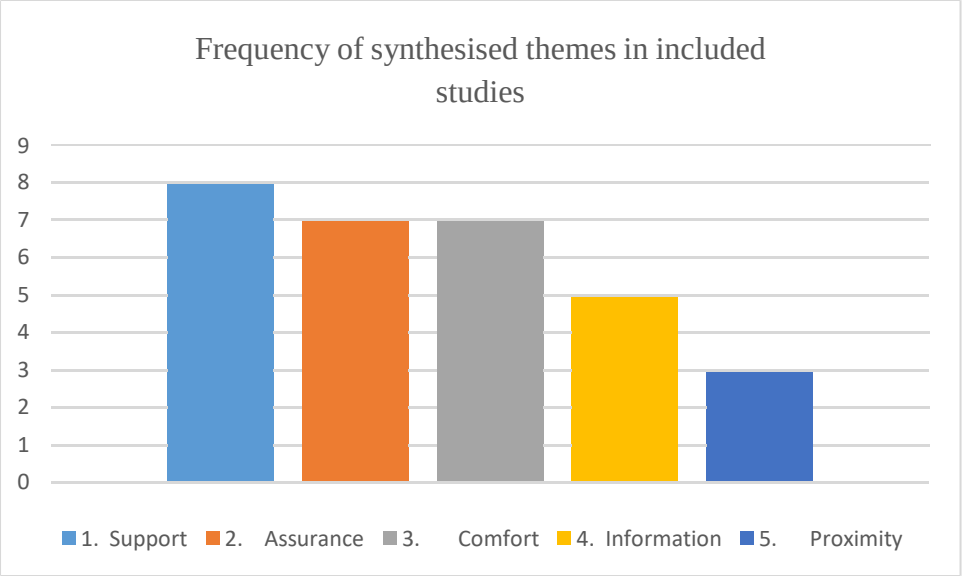

Figure 5.2: Frequency of synthesised themes in included studies

5.4.1 Theme one: Assurance needs

The theme "assurance needs" was the most perceived need reported by family members in most of the included studies. Family members from five studies (identified the need for assurance the highest-rated need for most family members. Participants in Al-Mutair *et al.* (2013) also ranked the assurance needs at the second most important domain in family needs. The term assurance needs were explained as having hope in the care patient receive and the confidence to see a patient go through the length of stay with hope. The need was also described as receiving honest conversations and maintaining optimism.

5.4.2 Theme two: Information needs

Participants' need for information was also identified in one qualitative study as the most perceived needs of family members (Al-Mutair *et al*., 2013). Family members in five (5) of the studies also ranked the need for information as the second most important need (Alsharari, 2019; Brysiewicz & Chipps, 2017; Munyiginya & Brysiewicz, 2014; Omari, 2009; Noor Siah *et al.*, 2012). Hashim and Hussin (2012) ranked the information need as the third important need domain of the family needs. The participants explained this type of need as receiving honest and understandable information on patients care from caregivers using simple terms. According to family members, the information need deals with the concise, clear and unambiguous explanations they receive regarding patient's disease process, treatment options,and prognosis.

5.4.3 Theme three: Proximity

In addition to information needs, proximity need was also perceived by family members as another important item. Although ranked highest in only one study (Noor Siah *et al*., 2012), proximity need was perceived as important to some family members. Two studies (Hashim & Hussin, 2012; Salameh *et al*., 2020) also rated the proximity needs as the second most important need item for some family members. Proximity was also explained to mean closeness and involvement in patient care. Family members explained proximity needs as the ability to be close to the patient at the bedside.

5.4.4 Theme four: Comfort

The need for comfort was also identified as one of the family members perceived needs. Respondents in one study (Kohi *et al.,* 2016) perceived comfort needs as the highest need for family members. A statement such as 'to have a specific person to call at the hospital when a family member is not available' was seen important to family members in Kohi *et al*.'s (2016) study. The majority of the included studies, however, ranked this need item as the second least important for some family members (Alsharari, 2019; Al-Mutair *et al*., 2013; Brysiewicz & Chipps, 2017; Munyiginya & Brysiewicz, 2014; Noor Siah *et al*., 2012; Salameh *et al.,* 2020). Statements such as "access to a telephone in the waiting room" and "to feel accepted by the hospital staff" characterised the comfort needs. The term comfort was related to the physical environment such as private room, waiting room with comfortable chairs, bathroom and telephone access.

5.4.5 Theme five: Support

Family members also identified support need as another need domain. The need item encompasses the activities or behaviours that assisted family members to cope with the admission of a loved one. Support need was the least ranked need by most family members (Alsharari, 2019; Bandari *et al.,* 2015; Hashim & Hussin, 2012; Kohi *et al*., 2016; Munyiginya& Brysiewicz, 2014; Noor Siah *et al*., 2012; Omari, 2009; Salameh *et al*., 2020). Other studiesranked it as the second-lowest out of the five main domains of family needs. Support needs were also described as the support systems and resources necessary to assist family members of patients. Support needs were provided through spiritual healing, meditation, reading of Qur'an to relative and faith in God (Al-Mutair *et al*., 2013).

5.5 DISCUSSION OF FINDINGS

The current study described the needs of family members of ICU patients within a third world country through an integrative literature review. This is the first review to describe needs specific to families of patients from third world countries. The findings present unique needs that are special to this category of people within such a context. The needs of family membershave been extensively investigated by a variety of research approaches. The Critical Care Family Needs Inventory developed by Molter (1979) primarily has often been used in most studies to collect data. Conversely, qualitative approaches have also provided in-depth insight into understanding family needs.

Family members represent a significant part of patient care in the ICU. The concept of patientand family centred care has always been emphasised and widely regarded as fundamental to the ICU's care (Ranse *et al*., 2012). Therefore, attending to their needs are equally important tointensive care practice. According to Molter (1979), family needs include assurance, information, proximity, comfort, and support. The study presented data from studies mostly conducted in Asia and Africa. This represents two continents with unique family cultures, roles, beliefs, and responsibilities regarding patient care in the hospital setting. Despite the cultural and religious differences, the domain “assurance” emerged in this review as the most consistent and most important need perceived by families of patients in the ICU. The findings of the included studies from third world countries displayed that family members perceive the need to receive the best care possible care as an essential need. This finding is consistent with Obringer *et al*. (2012) study in the United States that reported the assurance domain to be the highest domain for families.

Similarly, the assurance needs were perceived a more significant need by family members in previous studies conducted in Greece, and Spain (Chatzaki *et al*., 2012; Kinarde *et al*., 2009).

Meeting the assurance needs increased family hope, reduced stress and anxiety levels, and made

them more optimistic. Yang (2008), indicated that health professionals' ever-changing responses to the patient's condition represented a great frustration source. Meeting the assurance needs allowed family members to cope with the disease process and therapeutic interventions rendered.

Apart from the assurance needs, information needs were also regarded as a critical need domainof family members. This need was identified as the second most important need. Due to the nature of the ICU environment and the interventions rendered, family members have several challenging and unanswered questions regarding patient care. The provision of clear and consistent information on the disease process,treatment options and patients' prognosis promote satisfaction and effective communication (Efstathiou & Walker, 2014; Vanderspank-Wright *et al.,* 2011). This finding agrees with a recent review that included thirteen studies published between 2000 and 2010 (Al-Mutair *et al*., 2013). The need for assurance and information were identified as essential needs followedby proximity, comfort and support. The studies included in the review (Al-Mutair *et al*., 2013) presented data from Europe, America and Asia. This assertion seeks to mean that family members from first and second world countries also perceive the need for assurance and information as the most important needs. This also substantiates the finding that family members in first, second and third world countries all share similar needs despite the recognised differences in cultures, economic stability and literacy rates.

Family members require informational support to assist them to cope with the critical illness of their loved ones. The information need of the family members remain unmet, the family members are mostly not satisfied with the consistency of information about the patient's condition and the completeness of the information (Fateel & O'Neil, 2016). A South African study by Kisorio & Langley (2016), with a population of 17 family members found similar findings that family members were not satisfied with the information they received about their patient's progress.

Proximity needs such as family closeness and involvement in patient care was also an essential need to family members. During critical illness family members want to be close to their loved ones and see them recovering in front of them. A Saudi Arabian study by Al-Mutair *et al.* (2013) emphasises that the presence of restrictive visiting times has a negative impact on the proximity needs in ICU. According to a Palestinian study by Salameh *et al.* (2020), older relatives place more emphasis on proximity than the younger ones. This may be due to the movement restrictions placed on Palestinians practice and occupational policies. hese authors further stated that family members use religion as a coping strategy. This is contrary in other countries. Not all family members in third world countries use religion as a coping strategy. The coping strategy adopted depends on the situation and need of the family member.

A South African study by Brysiewicz and Bhengu (2010), highlighted that cultural and religious practices offer support and hope, and allow coping in family members. Through cultural and religious practices, the proximity need for the family is met as they communicate with their ancestors. Diverse cultural and religious practices offer hope and support to patients and allow family members to cope with the situation. The cultural and religious practices are believed to be improving the patient outcome, give a sense of control to the family and are perceived as a source of comfort. Cultural and religious practices bring the feeling of togetherness and the whole family supporting each other, aiming for recovery of their loved one.

In this study, the least important need domain was support and comfort needs. Family membersin most studies ranked the need for support and comfort as the least important for patient carein the ICU. Need items such as “to have good food available in the hospital” and “to have someone to help with financial problems” were reported least important when a patient is admitted in the ICU. These findings are consistent with the study conducted by Padilla- Fortunatti *et al.* (2018) in Chile on the needs of a relative of a critically ill patient. Although support needs were important, other areas such as assurance and information needs were moreimportant. This is comparable to earlier studies' findings (Chatzaki *et*

al., 2012; Yang, 2008) that also reported support needs as the least important for most family members. The assumption may be due to the prioritisation of patients' health problems over their personal needs. Support in the form of information sharing and emotional support is important for family members to enable them to participate in the decision making.

Findings from the study by Kisorio & Langley(2016) concurs that those family members of critically ill patients need emotional support to cope, however, family members reported dissatisfaction with emotional support in the ICU.

5.6 METHODOLOGICAL RIGOUR

Whittemore and Knafl (2005) suggest that reported findings should capture only the available evidence extracted in order for the readers to follow through the conclusion and assess the basisfor the conclusion drawn without exceeding the evidence. The strategies implemented by the reviewers to reduce biases and enhance the rigour of the study will be discussed below.

- Data extracted from the individual studies were cross-checked continuously to ensure they represented the exact findings reported
- The full text of each study was read by two independent reviewers (NN) and NK), with data extracted compared at any stage for any differences
- The second reviewer (NK), assisted the first reviewer during the categorisation of codes to ensure equal representation of the individual findings extracted.
- The data presentation, interpretations and findings were devoid of the reviewers' values, beliefs and biases.
- Two independent reviewers cross-examined the findings with the themes at each stage.

5.7 SUMMARY

The chapter presented the results of the research review. The findings generated were presented according to the study characteristics, participants' characteristics and methodological quality. Themes synthesised from the review were also discussed in relation to existing literature and finally, the methodological rigour as ensured discussed.

CHAPTER SIX

SUMMARY OF STUDY, LIMITATIONS AND IMPLICATIONS

6.1 INTRODUCTION

The chapter focuses on the summary of the study, the strengths and limitations and implication for practice and future research. The chapter ends with researcher's reflection along the journey

6.2 SUMMARY OF THE STUDY

The sections below summarises the study according to:

6.2.1 Purpose of the Study

The purpose of the study was to gather evidence related to the needs of families of patients admitted in the intensive care unit in third world countries.

6.2.2 Objectives of the Study

The objective of the study was :

- To describe the needs of families of patients admitted in the Intensive care unit from a third world country perspective.

6.2.3 Methodology

The study was an integrative literature review conducted according to the review framework by Whittemore and Knafl (2005). The framework namely: Problem identification; literature search, data evaluation, data analysis and presentation of findings.

Prior to commencing with the study, an ethics waiver was obtained from the Human Research Ethics Committee of Witwatersrand University (**Appendix B)**. Approval to conduct the study was obtained from the Postgraduate Committee of the School of Therapeutic Sciences (**Appendix C**).

Literature search was conducted using Wits online library electronic databases. The databases used included: SCOPUS, PubMed, CINAHL, MEDLINE and Psycho INFO. The search terms and search strings used were *family, needs intensive care unit, and third world countries.* Ten (10) studies were included in this review from the initial 492 papers retrieved. Included studies were evaluated using the CASP (**Appendix D)** and MMAT (**Appendix E)** quality appraisal tools. Data extraction was done using a standardised data extraction tool.

6.3 SUMMARY OF THE MAIN FINDINGS

After a thorough data analysis and synthesis, five themes were emerged as the major needs of patients' families in the ICU. The themes were assurance, information, proximity, comfort, and supports needs. These themes were generated from ten different studies conducted in eight third-world countries. The theme "assurance needs" was the most perceived need reported by family members in most (6) of the included studies, followed by information needs and proximity needs. The need of comfort and support, although another relevant need of family members, was reported across most the included studies as the least important item for family members.

6.4 IMPLICATION FOR PRACTICE AND RESEARCH

The needs of family members in the ICU have been well explored across the globe. It is evident from this study that family members in third world countries also perceive similar needs, just like that in first and second world countries. Family members form an important part of patient care in the ICU. There is a need for the multidisciplinary team to involve the family and attend to their needs appropriately. Supportive structures should be made available in the ICU environment to promote family centred care.

It is evident from the review findings that the needs of patients' family members have also been explored from third world country-perspective. The majority of the studies were conducted using the quantitative research design, with only one using the qualitative approach. Qualitative studies provide an approach for participants to share their subjective experiences and feelings in their own words. Future studies may need to explore patients' family needs from the qualitative approach. Few studies have also been conducted in Africa from both research approaches. This will be an area researchers can explore considering the uniqueness in disease profile and culture.

6.5 STRENGTHS AND LIMITATIONS OF THE STUDY

The study followed the review approach by Whittemore and Knafl (2005) for conducting an integrative review. The framework guided the flow and transparency of the review process.

The review specifically focused on patient family needs within third world countries. This is a unique area and will add to the body of knowledge.

This review was, however, limited to only peer-reviewed studies published in English and between January 2009 and July 2020. Several studies published before 2009 and after July 2020 may have been missed. Some unpublished studies may have also had important findings but were excluded. Other relevant studies published in other languages might have been missed. These may also have had vital information needed to inform practice. Only five databases were used. Studies published in other databases were missed.

6.6 CONCLUSION

In third-world countries, family members of critically ill patients in the ICU perceive and share similar needs just as those in the first and second world countries, especially in the domains of Assurance and Information. Family members form an integral part of patient care in the ICU. The multidisciplinary team need to recognise the needs of family members and develop supportive structures to attend to their needs. Paying attention to these needs will enhance effective communication.

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APPENDIXES

APPENDIX A: DE SOUZA, DA SILVA and DE CARVALHO (2010) DATA COLLECTION TOOL

DATA EXTRACTION TOOL	
Author (s)	
Research objective	
Research method	
Population/ sample / data collection	
Key findings	

APPENDIX B: ETHICS APPROVAL

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

Office of the Deputy Vice-Chancellor (Research & Post Graduate Affairs)

TO: Ms N Ngema
School: Therapeutic Sciences
Department: Nursring Education
Medical School
University
E-mail: 1849287@students.wits.ac.za

CC: Supervisor: Dr N Klaas <Fikile.Klaas@wits.ac.za>
and <HREC-Medical.ResearchOffice@wits.ac.za>

FROM: Iain Burns
Human Research Ethics Committee (Medical)
Tel: 011 717 1252

E-mail: Iain.Burns@wits.ac.za

DATE: 14/01/2021

REF: *R14/49*

PROTOCOL NO: W-CBP-210114-01 (This is your ethics application study reference number. Please quote this reference number in all correspondence relating to this study)

PROJECT TITLE: *The needs of families of patients admitted into the intensive care unit in third world countries*

Please find attached the Ethics Waiver Certificate for the above project. I hope it goes well and that an article in a recognized publication comes out of it. This will reflect well on your professional standing and contribute to the Government funding of the University.

MSWorks2000/Iain0007/ClearScanWaiver.wps

APPENDIX C: POSTGRADUATE APPROVAL OF STUDY

Private Bag 3 Wits, 2050
Fax: 027117172119
Tel: 02711 7172076

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Reference: Mrs Sandra Benn
E-mail: sandra.benn@wits.ac.za

21 April 2021
Person No: 1849270
TAA

Ms N Ngema
28 St Swithins Avenue
Melville
2001
South Africa

Dear Ms Nomthandazo Ngema

Master of Science in Nursing: Change of title of research

I am pleased to inform you that the following change in the title of your Research Report for the degree of **Master of Science in Nursing** has been approved:

From:	**The perceptions of families regarding their needs while a relative is admitted in an intensive care unit**
To:	**The needs of families of patients admitted into the intensive care unit in third world countries: an integrative literature review**

Yours sincerely

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences
2001
South Africa

APPENDIX D: Critical Appraisal Tool for Qualitative Studies - Critical Appraisal Skills Programme (CASP, 2020)

	Yes	Can't tell	No
1. Was there a clear statement of the aims of the research?			
2. Is a qualitative methodology appropriate?			
3. Was the research design appropriate to address the aims of the research?			
4. Was the recruitment strategy appropriate to the aims of the research?			
5. Was the data collected in a way that addressed the research issue?			
6. Has the relationship between the researcher and participants been adequately considered?			
7. Have ethical issues been taken into consideration?			
8. Was the data analysis sufficiently rigorous?			
9. Is there a clear statement of findings?			
10. How valuable is the research?			
10. How valuable is the research?			

Note. Reproduced from The Critical Appraisal Skills Programme for use in Critical Appraisal of Qualitative Studies, Checklist for Qualitative Research (Critical Appraisal Skills Programme (CASP, 2018).

APPENDIX E: MIXED METHOD APPRAISAL TOOL (MMAT-VERSION 2011)

Types of mixed methods study components or primary studies	Methodological quality	Response			
		Yes	No	Can't tell	comments
Screening questions (for all types)	Are there clear qualitative and quantitative research questions (or objectives*), or a clear mixed methods question (or objective*)?				
	Does the collected data address the research question (objective)? E.g., consider whether the follow-up period is long enough for the outcome to occur (for longitudinal studies or study components).				
	Further appraisal may be not feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.				
1. Qualitative	1.1. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question (objective)?				
	1.2. Is the process for analysing qualitative data relevant to address the research question (objective)?				
	1.3. Is appropriate consideration given to how findings relate to the context, e.g., the setting, in which the data were collected?				
	1.4. Is appropriate consideration given to how findings relate to researchers' influence, e.g., through their interactions with participants?				
2. Quantitative randomised controlled (trials)	2.1. Is there a clear description of the randomisation (or an appropriate sequence generation)?				
	2.2. Is there a clear description of the allocation concealment (or blinding when applicable)?				
	2.3. Are there complete outcome data (80% or above)?				
	2.4. Is there low withdrawal/drop-out (below 20%)?				

3.Quantitative nonrandomised	3.1. Are participants (organisations) recruited in a way that minimises selection bias?				
	3.2. Are measurements appropriate (clear origin, or validity known, or standard instrument, and absence of contamination between groups when appropriate) regarding the exposure/intervention and outcomes?				
	3.3. In the groups being compared (exposed vs. non-exposed; with intervention vs. without; cases vs. controls), are the participants comparable, or do researchers take into account (control for) the difference between these groups?				
	3.4. Are there complete outcome data (80% or above), and, when applicable, an acceptable response rate (60% or above), or an acceptable follow-up rate for cohort studies (depending on the duration of follow-up)?				
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the quantitative research question (quantitative aspect of the mixed methods question)?				
	4.2. Is the sample representative of the population understudy?				
	4.3. Are measurements appropriate (clear origin, or validity known, or standard instrument)?				
	4.4. Is there an acceptable response rate (60% or above)?				
5. Mixed methods	5.1. Is the mixed methods research design relevant to address the qualitative and quantitative research questions (or objectives), or the qualitative and quantitative aspects of the mixed methods question (or objective)?				
	5.2. Is the integration of qualitative and quantitative data (or results*) relevant to address the research question (objective)?				
	5.3. Is appropriate consideration given to the limitations associated with this integration, e.g., the divergence of qualitative and quantitative data (or results*) in a triangulation design?				
	Criteria for the qualitative component (1.1 to 1.4), and appropriate criteria for the quantitative component (2.1 to 2.4, or 3.1 to 3.4, or 4.1 to 4.4), must be also applied.				

Scoring metrics: For each retained study, an overall quality score may be not informative (in comparison to a descriptive summary using MMAT criteria), but might be calculated using the MMAT. Since there are only a few criteria for each domain, the score can be presented using descriptors such as *, **, ***, and ****. For qualitative and quantitative studies, this score can be the number of criteria met divided by four (scores varying from 25% (*) -one criterion met- to 100% (****) -all criteria met-). For mixed methods research studies, the premise is that the overall quality of a combination cannot exceed the quality of its weakest component. Thus, the overall quality score is the lowest score of the study components. The score is 25% (*) when QUAL=1 or QUAN=1 or MM=0; it is 50% (**) when QUAL=2 or QUAN=2 or MM=1; it is 75% (***) when QUAL=3 or QUAN=3 or MM=2; and it is 100% (****) when QUAL=4 and QUAN=4 and MM=3 (QUAL being the score of the qualitative component; QUAN the score of the quantitative component; and MM the score of the mixed methods compon