

**FAMILY AND PATIENT PERCEPTION OF
PHYSIOTHERAPY CARE RENDERED TO
PATIENTS IN THE CARDIOTHORACIC
INTENSIVE CARE UNIT**

STUDENT

Melissa Naidoo

STUDENT NUMBER

304 5491

**Thesis submitted in partial fulfillment of the requirements
for a Masters' Degree in Physiotherapy in the Department
of Physiotherapy,
University of the Western Cape**

December, 2018

SUPERVISOR

Dr Farhana Karachi

Abstract

Background: Physiotherapists are involved in the management of patients in the cardiothoracic Intensive Care Unit (ICU). Patient and family perception of care has become an important measure in evaluating the quality of care, including care in the intensive care setting.

Overall Aim: To explore and describe the family and patient perception of physiotherapy care rendered in a public sector cardiothoracic ICU in the Western Cape, South Africa.

Method: This study was conducted in two phases. Phase 1 (scoping review) identified and described available outcomes for measuring family perception of ICU care by searching six databases from inception to the 20th June 2018. Results from the scoping review informed the discussion schedule for the first primary study of Phase 2. Phase 2 (two exploratory descriptive qualitative primary studies) explored and described i) family perception and ii) patient perception of physiotherapy care in a cardiothoracic ICU. Audio-taped, individual face to face semi-structured interviews were conducted with family and patient participants that met the inclusion and exclusion sampling criteria (purposive sampling). Data was transcribed verbatim and analysed using deductive-inductive thematic content analysis. The data was coded, categorised and themes were generated. Trustworthiness of the data was ensured through methods addressing credibility, dependability, confirmability and transferability.

Results: A total of ten full text studies were included in the scoping review. Included studies were published between 2006 and 2017, were conducted in both developed and developing countries, in different ICUs (except cardiothoracic ICU) and all used different quantitative outcome measures to measure family perception of ICU care.

Thirteen cardiothoracic ICU patients and their respective family members partook in the studies describing patient and family perception of cardiothoracic ICU physiotherapy care.

The median patient age was 62 years; the mean ICU length of stay 6 days and the median family age was 55. Themes arising from the family perception of care data analysed included:

i) understanding of physiotherapy care (the role of the physiotherapist, perceived benefit of physiotherapy and communication), family involvement in physiotherapy care (physical presence during physiotherapy sessions and decision-making), and satisfaction of physiotherapy ICU care. Themes arising from patient perception of care data analysed included: i) Physiotherapy management of patients, ii) The Physiotherapists – skill, iii) knowledge and professionalism, iv) Continuity of Care, v) Tangibility, vi) Physiotherapy benefits, vii) Decision-Making, viii) Communication, ix) Satisfaction of Physiotherapy ICU care.

Overall, family and patients were satisfied with the physiotherapy care in the cardiothoracic ICU. However, there were areas of improvement such as the understanding of physiotherapy care, communication, family involvement in the physiotherapy care and decision-making.

Conclusion: While there are multiple quantitative measures for measuring family perception of ICU care there is no “gold” standard measure that has been identified. A qualitative measure and research design would allow richer in-depth information on family perception of ICU care. The findings from the family and patient perception of cardiothoracic ICU physiotherapy care are influenced by many factors. While family and patients perceive cardiothoracic ICU physiotherapy care both positively and negatively, the majority of patient and family were satisfied overall with the care the patient received. Family perception of ICU physiotherapy care should be evaluated in order to identify areas for improvement in quality of care and could add to the body of evidence in ICU physiotherapy practice.

Keywords: Cardiothoracic Intensive Care Unit, Physiotherapy, Family perception, Patient perception, Quality of care, South Africa

539 Words (excluding abstract titles)



Declaration

I hereby declare that “Family and Patient perception of Physiotherapy Care Rendered to Patients in the Cardiothoracic Intensive Care Unit” is my own work, it has not been submitted, or part of it, for any degree or examination in any other university, and that all resources I have used or quoted have been indicated and acknowledged by complete references.

Melissa Naidoo

Signature: *MNAIDOO*

Date: December 2018

Witness:

.....



UNIVERSITY *of the*
WESTERN CAPE

Acknowledgements

I would like to thank Lord Krishna for granting me the ability to complete this study.

“In all activities just depend on Me and work always under My protection. In such devotional service, be fully conscious of Me. If you become conscious of Me, you will pass over all the obstacles of conditioned life by My grace.” Bhagavad-Gita As It Is, Chapter 18 Text 57-58.

I would like to express my gratitude and sincere appreciation for and acknowledge the following people for their continuous support, encouragement, patience, sacrifice, guidance and advice during the completion and writing up of this research study.

SUPERVISOR

Dr Farhana Karachi (PhD Physiotherapy; Stellenbosch University), Physiotherapy Lecturer
UWC.



PHYSIOTHERAPY DEPARTMENT AND CARDIOTHORACIC ICU, TYGERBERG HOSPITAL

To all the staff members of the Physiotherapy Department and the Cardiothoracic ICU.

PHYSIOTHERAPY DEPARTMENT, UNIVERSITY OF THE WESTERN CAPE

The staff of the Physiotherapy Department of the University of the Western Cape.

THE PATIENT AND FAMILY MEMBERS

For participating in the study and sharing their experiences – without you, this would have not been possible.

MY FAMILY

To my parents (Madhuka Debram-Moodley, David Naidoo and Colin Moodley) and my sisters' (Alicia Naidoo and Sameera Mahomed) and my furry friends Olly and Carter.

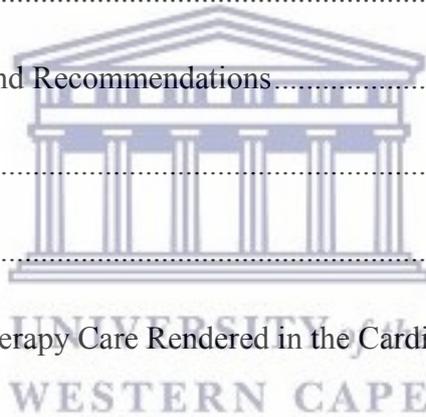


Table of Contents

Abstract.....	i
Declaration.....	iv
Acknowledgements.....	v
Table of Contents.....	vii
List of Figures.....	xiii
List of Tables.....	xiv
Abbreviations.....	xv
Glossary.....	xvi
Chapter 1.....	1
Introduction.....	1
1.1 Background.....	1
1.2 Problem Statement.....	5
1.3 Overall Project Aim.....	5
1.4 Significance of Study.....	6
1.5 Thesis Overview.....	7
Chapter 2.....	10
Measuring Family Perception of care in the Intensive Care Unit: Scoping Review.....	10
2.1 Introduction.....	10
2.2 Method.....	12
2.2.1 Design.....	12



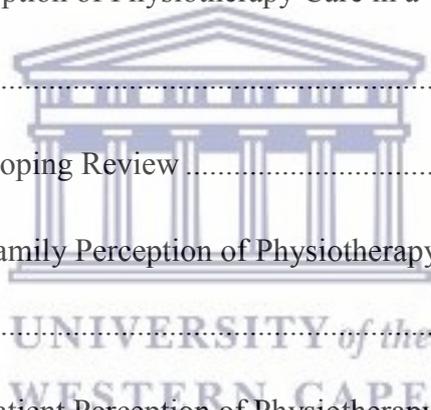
2.2.2 Search Strategy	13
2.2.3 Article Selection	13
2.2.4 Article Review	14
2.2.5 Data Extraction Process	14
2.3 Results	15
2.3.1 Description of the Included Studies	17
2.3.2 Outcome Measures for Measuring Family Perception of ICU Care	21
2.3.3 Components of Care/Services Measured	24
2.4 Discussion	29
2.5 Limitations, Strengths and Recommendations	33
2.6 Conclusion	33
Chapter 3	35
Family Perception of Physiotherapy Care Rendered in the Cardiothoracic ICU	35
3.1 Introduction	35
3.2 Methods	37
3.2.1 Study Design	37
3.2.2 Research Setting	38
3.2.3 Population	38
3.2.4 Sample	39
3.2.5 Instrumentation	39
3.2.6 Procedure	40



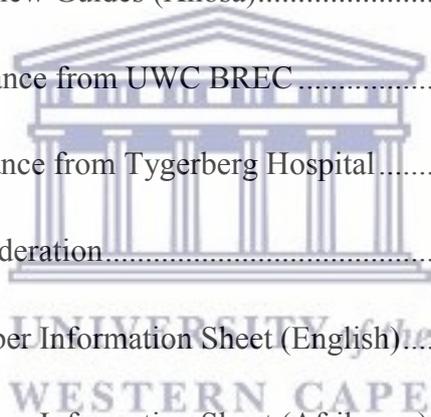
3.2.7 Data Capturing and Analysis	42
3.2.8 Trustworthiness: Credibility, Conformability and Dependability, Transferability	42
3.3 Results	43
3.3.1 Themes.....	43
3.4 Discussion	51
3.5 Limitations, Strengths and Future Recommendations	56
3.6 Conclusion.....	56
Chapter 4.....	58
Patient perception of Physiotherapy Care Rendered in the ICU.....	58
4.1 Introduction	58
4.2 Methods.....	60
4.2.1 Study Design.....	60
4.2.2 Research Setting	61
4.2.3 Population.....	61
4.2.4 Sample	61
4.2.5 Instrumentation.....	62
4.2.6 Procedure	63
4.2.7 Data Analysis.....	65
4.2.8 Trustworthiness: Credibility, Conformability, Transferability, Dependability.....	65
4.3 Results	66
4.3.1 Themes.....	67



4.4 Discussion	78
4.5 Limitations, Strengths and Recommendations.....	82
4.6 Conclusion.....	83
Chapter 5.....	84
Overall Discussion of Family and Patient Perception of Physiotherapy Care.....	84
5.1 Preface.....	84
5.2 Describing a Measure for Family Perception of ICU Care.....	84
5.3 Describing Family Perception of Physiotherapy Care in a Cardiothoracic ICU.....	86
5.4 Describing Patient Perception of Physiotherapy Care in a Cardiothoracic ICU.....	88
5.5 Limitations	90
5.5.1 Limitations of the Scoping Review	90
5.5.2 Limitations of the Family Perception of Physiotherapy Care in Cardiothoracic ICU	90
5.5.3 Limitations of the Patient Perception of Physiotherapy Care in Cardiothoracic ICU	91
5.6 Strengths of the Study	91
5.6.1 Strengths of the Scoping Review.....	91
5.6.2 Strengths of the Family Perception of Physiotherapy Care in Cardiothoracic ICU	91
5.6.3 Strength of the Patient Perception of Physiotherapy Care in Cardiothoracic ICU..	92
5.7 Recommendation for Future Studies:.....	92
5.8 Summary of Findings	93



Chapter 6.....	94
6.1 Project Conclusion	94
Reference List.....	97
APPENDIX A -Filters Used for Each Data Base	109
APPENDIX B - Data Extraction Sheet with Extracted Data.....	113
APPENDIX C - Components of Care Measured in Outcome Measures.....	114
APPENDIX D - Family Interview Guide (English)	115
APPENDIX D -Family Interview Guide (Afrikaans).....	116
APPENDIX D - Family Interview Guides (Xhosa).....	117
APPENDIX E - Ethical Clearance from UWC BREC	118
APPENDIX F - Ethical Clearance from Tygerberg Hospital.....	119
APPENDIX G - Ethical Consideration.....	121
APPENDIX H - Family Member Information Sheet (English).....	122
APPENDIX H - Family Member Information Sheet (Afrikaans)	124
APPENDIX H - Family Member Information Sheet (Xhosa).....	126
APPENDIX I - Family Members Consent Forms (English)	128
APPENDIX I - Family Member Consent form (Afrikaans).....	129
APPENDIX I - Family Member Consent form (Xhosa)	130
APPENDIX J - Glasgow Coma Scale.....	131
APPENDIX K - Standardised 5 Questions (S5Q).....	132
APPENDIX L- Patient Interview Guide (English).....	133



APPENDIX L - Patient Interview Guide (Afrikaans)	135
APPENDIX L -Patient Interview Guide (Xhosa).....	137
APPENDIX M- Patient Information Sheet (English).....	139
APPENDIX M -Patient Information Sheet (Afrikaans)	141
APPENDIX M - Patient Information Sheet (Xhosa).....	143
APPENDIX N -Patient Consent Form (English).....	145
APPENDIX N - Patient Consent Form (Afrikaans)	146
APPENDIX N - Patient Consent Form (Xhosa).....	147
APPENDIX O - Plagiarism Report from Turnitin.....	148



List of Figures

Figure 1.1 Diagrammatic Representation of Thesis Overview.....	9
Figure 2.1.PRISMA Flow Diagram of Selection Process	16
Figure 2.2.Geographical Distribution of the Included Studies	17
Figure 2.3.The Study Settings.....	18
Figure 2.4. Outcome Measures Used to Measure Family Perception of Care in the ICU.....	22
Figure 3.1. Family Perception Themes	44



List of Tables

Table 2.1 Inclusion and Exclusion Criteria.....	14
Table 2.2 Characteristics of Included Studies.....	189
Table 2.3 Reliability and Validity of Studies.....	24
Table 2.4 Tabulated Components of Care/Services Used to Measure Family Perception of Care in the Included Studies	28
Table 3.1: Characteristics of Family Members.....	434
Table 4.1 Patient Characteristics.....	67



Abbreviations

CCFNI: Critical Care Family Needs Inventory

FS-ICU: Family Satisfaction ICU Survey

FSCQ: Family Satisfaction Critical Care Questionnaire

GCS: Glasgow Coma Scale

ICU: Intensive Care Unit

OM: Outcome Measure

SA: South Africa

S5Q: Standardised 5 Questions

USA: United States of America



Glossary

Care - Providing that which is needed to maintain health and safety (Merriam-Webster, 2015).

Experience - Observations and events that make an impression on a person; the process of personally perceiving occurrences (Merriam-Webster, 2015).

Intensive Care Unit (ICU) - “An isolated confined ward in the hospital where the most critically ill patients are located together and managed using specialised personnel and equipment” (Leligdowicz et al., 2016).

Perception - “The way you think about or understand someone or something, the ability to understand or notice something easily or the way that you notice or understand something using one of your senses” (Merriam-Webster, 2015).

Satisfaction - “The quality or state of being satisfied” (Merriam-Webster, 2015).

Tangibility's - “Aspects such as environment, equipment, appearance” (Parasuraman, Zeithaml, Berry, Servqual, & Retailing, 1988).

Quality of Care - “Doing the right things right and making continuous improvements, obtaining the best possible clinical outcome, satisfying all customers, retaining talented staff and maintaining sound financial performance” (Leebov, 2013).

Chapter 1

Introduction

1.1 Background

South Africa (SA) is amongst the poorest performing countries in terms of their healthcare systems, and there is a growing recognition that the access to healthcare facilities will not improve, if the quality of care in healthcare facilities remain inadequate (Moyakhe, 2014; Das & Hammer, 2014). However, there are steps towards improving the quality of care in SA that has reflected in recent reforms, including the White Paper on universal coverage. The White Paper acknowledges that there are concerns about the quality of care in the public sector and the Department of Health will fund improvements (National Department of Health, 2014).

For the past thirty years studies have looked into quality of care and have demonstrated that quality of care in healthcare can be measured (Brook, McGlynn & Shekelle, 2000). Current studies about measuring quality of care through the evaluation of physiological data, have rarely evaluated patient or family perception of care (Gonzalez, Carroll, Elliot, Fitzgerald & Vallent, 2004). “Perception,” is defined as a “belief or opinion, often held by many people and based on how things seem” (Cambridge Dictionary, n.d.).

Quality healthcare is often described as the care provided to the patient that fits their needs and preferences, with the correct treatment administered that does not cause mental or physiological harm (Ndambuki, 2013). Quality of care can be measured through the patient perception and satisfaction of care (Dansereau, Masiye, Gakidou, Masters, Burstein & Kumar, 2015). Patient satisfaction is said to be “the perception of patient needs and

expectations being met” (Ndambuki, 2013). Patient satisfaction is one of the components of patient perception, as patient satisfaction is seen as a quality of care indicator from the perspective of the patient (van Campen, Sixma, Friele, Kerssens & Peters, 1995).

Medical practitioners are still making the shift to patient-centred care that today is not always practiced. Thus, they are not seeing the importance of patient perception of care (Soafer & Firminger, 2005). As described by Stiller and Wiles (2008) patient perception is equally important in research and practice when measuring quality of care compared to measuring quality of care using physiological outcomes. Evaluation of patient perception is important for medical professionals, including physiotherapists, as this will allow health care professionals to determine the quality of their care and identify areas for improvement within the care and services that they render to patients (Al-Abri & Al-Balushi, 2014).

Although a diverse range of healthcare settings have been included in studies on patient perception of care, measuring patient perception of care is an under-utilised outcome evaluated in the Intensive Care Unit (ICU) as it is still in its early days of research. This may be because ICU patients in the past were often given large dosages of sedatives that may have affected their level of participation and memory of the care received (Boev, 2012). However, there have been changes in ICU practices that include reduced sedation practices in order to promote early awakening, breathing control and mobilisation (Stiller, 2013; Schweickert, Pohlman, Nigos, Pawlik & Esbrook, 2009). Reduced sedation therefore has facilitated the opportunity to access the patients’ perceptions of the ICU experience and the services rendered during their ICU care (Huges, McGrane & Pandharipande, 2012; Mistraretti et al., 2018).

However, on the other hand, it is recognised that patients are critically ill when admitted to the ICU, and in some circumstances some are more critical than others. In the instances

where patients are more critical, they deemed unable to participate in decision-making about their treatment. These patients are unable to provide information relating to the quality of care they perceive to have received and their satisfaction with this care. In these circumstances, family members become surrogate decision-makers. Thus, the family's perception of care becomes central in understanding and measuring satisfaction with care provided (Venkataraman, Ranganathan, Rajnibala, Abraham, Rajagopalan & Ramakrishnan, 2015). Family perception of care is essential and is accepted as an appropriate substitute for the patients' perception of care (Stricker, Kimbreger, Brunner & Rothen, 2011).

Family members play this vital part in the ICU care of the patient by providing a source of psychological and emotional support for the hospitalised patient. Moreover, the role of family is crucial in maintaining the quality of life in hospitalised patients as the family can satisfy the basic needs of the patient in the hospital to a large extent (Bellou & Gerogianni, 2007). Assessing family perception of care of the critically ill patient will allow medical professionals to identify areas of concern and implement processes of improvement (Allen, 2004). This information provides opportunities for health care facilities to better meet the family's expectations in making the hospitalisation a positive experience for both the patient and their family.

Family perception of care has recently been explored and evaluated in healthcare. Family perception of care evaluation has been limited but is increasingly being recognised as an important outcome of quality of care and services (Heyland & Tranmer, 2001). Recently studies have been conducted in ICU settings in which the family perception of care has been measured. Outcome measures for the family perception of ICU care do exist; however, there is a lack of synthesis of the available outcome measures for measuring family perception of ICU care. A scoping review of the literature would therefore be beneficial to determine what available outcomes measures there are to measure family perception of ICU care and whether

they are specific to particular health care professionals working in the ICU team or generic in nature. It is not clear what aspects of family perception of ICU care are included in the available measures, and therefore a scoping review would provide important information that can be used to measure family perception in the ICU setting.

In the cardiothoracic ICU setting, the multidisciplinary team is involved in the care of critically ill patients. This team includes the physiotherapist (Gosselink, Clerkx, Robbeets, Vanhullebusch, Vanpee & Segers, 2011). The role of the physiotherapist in the cardiothoracic ICU is to mobilise the patient as early as possible. To mobilise the patient to the chair first and thereafter progress to walking and lastly stair climbing as well as working on cardiovascular endurance. The physiotherapy sessions in addition includes range of motion exercises for the upper limbs and breathing exercises (Westerdahl & Moller, 2010).

It is not known how patients or family members perceive physiotherapy care and services in the cardiothoracic ICU. This is especially so in a resource limited healthcare setting such as South Africa. There are approximately eight public sector cardiothoracic units in SA to which physiotherapists render services. Two of these units are found in the Western Cape Province. In order to evaluate the quality of care and services rendered in these cardiothoracic ICUs, patient and family perception care should be included in this evaluation. It is important for physiotherapists to evaluate the quality of care and services they provide from the patient and family perspective (Latchem, Kitzinger & Kitzinger, 2015; Sottile, Nordon-Craft, Malone & Schenkman, 2015) in order to identify areas of improvement within the care and services they provide in this setting, especially in SA where healthcare resources are limited and the healthcare system is undergoing transformation. Evidence for patient and family perception of physiotherapy care in a cardiothoracic ICU is limited especially in the South African context. A study of this nature has been conducted in a surgical ICU in SA (van Nes, 2016) however; there is a vast difference in the condition and management, including physiotherapy

management in surgical versus cardiothoracic ICU patients. Therefore, exploring family and patient perception of physiotherapy care rendered in a cardiothoracic ICU in SA is timely and will add new knowledge to this body of evidence.

1.2 Problem Statement

Every day research is being conducted to find new ways to improve patient outcomes, including patient outcomes in the ICU. However, current studies assessing patients in the ICU evaluate these patient outcomes from the perspective of the healthcare professionals and through quantitative evaluation of physiological and clinical outcomes. An improvement in patient outcomes does not necessarily allude to quality of care and services. Few studies have focused on exploring and evaluating family and patient perception of ICU care and services. There is a dearth of studies available that explore or evaluate family and patient perception of physiotherapy care and services rendered specifically in the cardiothoracic Intensive Care Unit. In South Africa, minimal studies explore or evaluate family and patient perception of physiotherapy care and services in the ICU and none focus on the cardiothoracic ICUs. Therefore, it is not known how family and patients perceive the physiotherapy care in the cardiothoracic ICUs specifically in the public sector. There is no clarity on how family perception of ICU care is measured. A synthesis of the available outcome measures and what they measure would be beneficial to determine which aspects or domains to include when measuring the family perception of ICU care and to identify if an intensive care physiotherapy specific measure is available.

1.3 Overall Project Aim

To explore and describe family and patient perception of care rendered in a cardiothoracic Intensive Care Unit in the Western Cape, South Africa. In order to achieve the aim of the project, the project was conducted in two phases with three central questions:

Phase 1: i) How is family perception of care in the Intensive Care Unit measured?

Phase 2: ii) What is the family perception of physiotherapy care in the cardiothoracic Intensive Care Unit?

iii) What is the patient perception of physiotherapy care in the cardiothoracic Intensive Care Unit?

The following research aims addressed each phase of the study. The aims were to:

1. describe how family perception of Intensive Care Unit care is measured (Phase 1);
2. describe the family perception of physiotherapy care in the cardiothoracic Intensive Care Unit (Phase 2); and
3. describe the patient perception of physiotherapy care in the cardiothoracic Intensive Care Unit (Phase 2);

These aims contributed to the overall research question of this study.

1.4 Significance of Study

The results of the study will add new information to the ICU evidence base regarding the best-practice outcome measure for family perception of ICU care. The results of the study will add new information to the patient and family perception and satisfaction with physiotherapy care in Tygerberg Hospital's cardiothoracic ICU, a transforming and resource limited public sector cardiothoracic ICU in a developing country in Cape Town, South Africa. Physiotherapists and other healthcare professionals in other public sector cardiothoracic ICUs in the country can use this information to benchmark their own practices with regard to the involvement of family in ICU patient care. Family and patient perceptions will allow the public sector cardiothoracic ICU physiotherapists to identify areas for improvement in the physiotherapy care and services rendered in the selected cardiothoracic

ICU. The information from the primary study can benefit the physiotherapists working in the cardiothoracic ICU as it will enable these physiotherapists to identify areas of improvement with the care and services they provide to the patients in the cardiothoracic ICU. Therefore, the areas of improvement will benefit the patients whom are admitted to the cardiothoracic ICU as they will receive improved care and services. The study will not only be able to identify areas of improvement but enable the physiotherapists to further develop as professionals. Patients may therefore benefit through improved care and services by receiving a higher quality of patient-centred physiotherapy services that may lead to the improvement of their health status. This can lead to increased patient satisfaction which can result in patients being more compliant and willing to follow treatment plans. The results would provide baseline evidence for which future studies could emanate. By conducting research on family and patient perception of physiotherapy care in the ICU, it is considered that the quality of care delivered by the healthcare professionals including physiotherapists can be improved. Patient perceptions will allow physiotherapists to plan better treatment and management programmes that will allow for improved participation from the patient. Family perceptions of care in the ICU will broaden our insight as to the needs of the family of the ICU patient in assisting the patients' recovery.

1.5 Thesis Overview

The information is documented according to the three study aims using different methods. The chapter/s for each aim is presented in article format that will be edited according to the specific journal guidelines for publication in the appropriate journal for each topic. A reference list for each individual article will be prepared when submitting for publication however, for ease of reading; one reference list has been prepared and presented following the conclusion chapter. The thesis consists of six chapters described below and outlined in Figure 1.1.

Chapter 1 comprises of the thesis introduction providing the background for the study, problem statement and significance (motivation) for the study including the research question, aim, objectives and thesis overview.

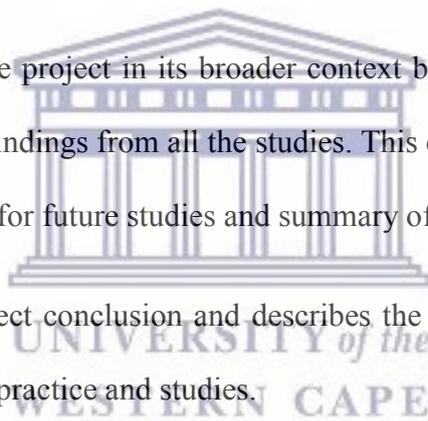
Chapter 2 is a scoping review, mapping out the current literature on how family perception of care is measured in the Intensive Care Unit (Phase 1)

Chapter 3 explores and describes the family perception of physiotherapy care rendered in the cardiothoracic ICU (Phase 2)

Chapter 4 explores and describes the patient perception of physiotherapy care rendered in the cardiothoracic ICU (Phase 2)

Chapter 5 describes the entire project in its broader context by means of an overall project discussion and integrates the findings from all the studies. This chapter includes the strengths, limitations, recommendations for future studies and summary of findings.

Chapter 6 is the overall project conclusion and describes the main findings and how these findings can be used in future practice and studies.



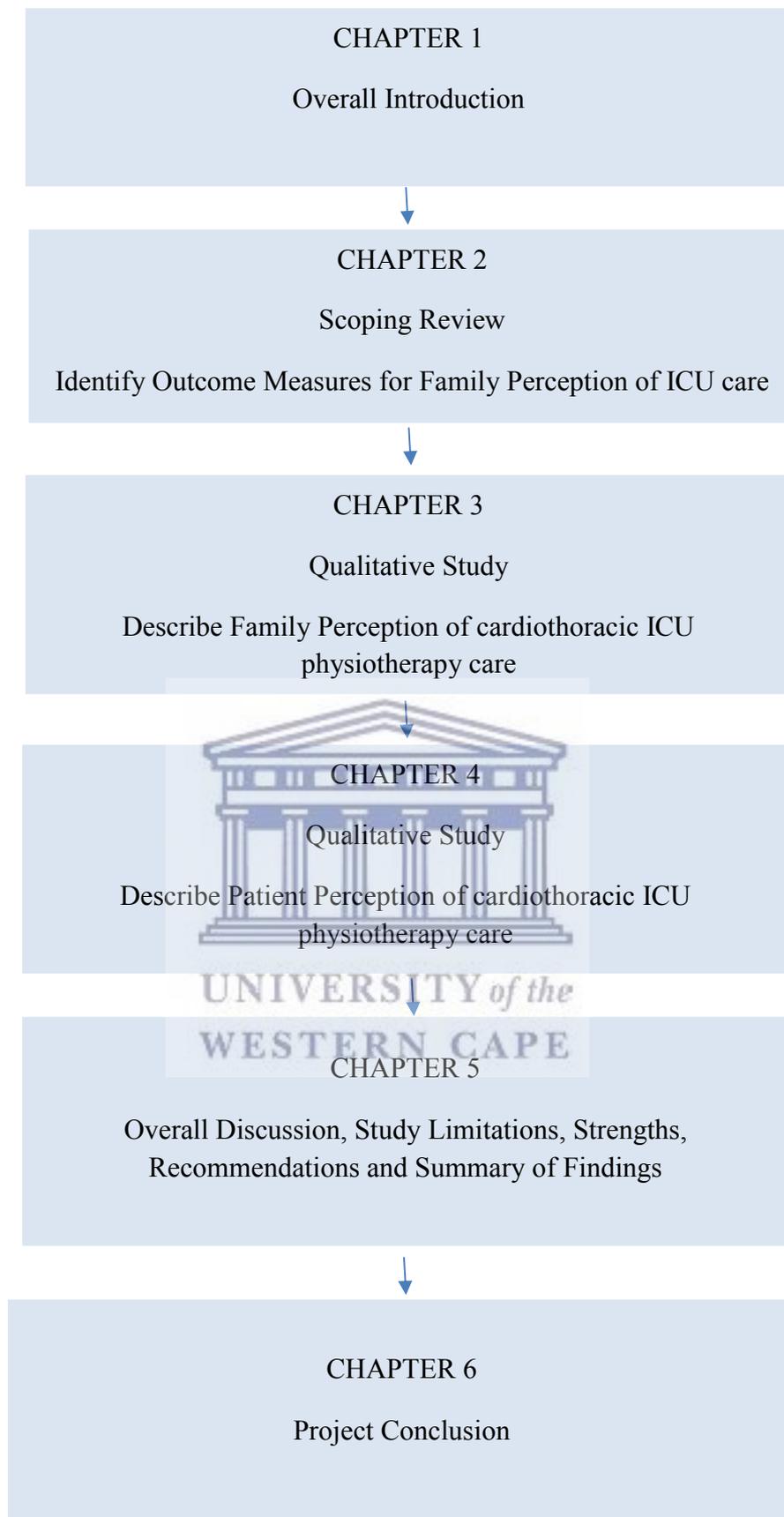


Figure 1.1 Diagrammatic Representation of Thesis Overview

Chapter 2

Measuring Family Perception of Care in the Intensive

Care Unit: Scoping Review

2.1 Introduction:

Over the past few years there has been a rapid increase in studies conducted on quality of care (Curtis et al., 2006), especially in the intensive care setting (Garland, 2005; Pronovost, Nolan & Zegers, 2004; Angus & Black, 2004). Quality of care is defined by Ovretveit (1992) as “provision of care that exceeds patient expectations and achieves the highest possible clinical outcomes with the resources available”. Quality of care is deemed an essential measure as it has been reported that measuring or assessing quality of care, may assist in identifying areas of improvement and allows a better patient outcome (Chelluri, 2008) thus, promoting continuous motivation for medical professionals to improve the care they provide (Herzer & Pronovost, 2015).

Quality of care can be measured by the patient outcome by looking at the physiological data or perception of care (Donnabedian, 1990). Due to healthcare moving towards patient-centred care, perception and satisfaction of care has become an area of interest in healthcare settings including the intensive care setting. Perception is defined as “uniquely individualised experience. One can draw from what is known to oneself” (Anderson, 1989). The terms perceptions and satisfaction have often been used together and are thought to be the same (Sofaer & Firminger, 2005). This can lead to considerable conceptual confusion. Satisfaction is only one of the examples under perception, but it is not the only example. Satisfaction can be defined as fulfilling expectations, needs, or desires (Sitziä & Wood, 1997).

Recently, family perception of care has become an important outcome in the evaluation of quality of healthcare and services (Tilden, Tolle, Drach & Hickman, 2002). In nursing care, there has been a shift from patient to family-focused care, although this shift has been difficult in the ICU setting due to the complexity and stressful nature of the ICU environment, technology and complexity of care that take priority over relational approaches (de Beer & Brysiewicz, 2016).

Families go through a great deal with the patient when they are admitted to the ICU (Stricker, Kimberger, Schmidlin, Zwahlen, Mohr & Rothen, 2009). Their life goes into disarray as they need to balance their life at home and much more is expected from them with the care of the patient. Due to the critical condition the ICU patient is in for majority of the time, they are unable to communicate and cannot make decisions for themselves (Cai et al., 2005). Therefore, the families are often involved as a surrogate decision-maker (Auerbach, Kiesler, Wartella, Rausch, Ward & Ivatury, 2005), which adds to the family members' stress and anxiety (Obringer, Hilgenberg & Booker, 2012).

Family members play an important part in the care of the patient by promoting psychological well-being in the patient through their interaction with the patient, and their familiar and caring presence when visiting the patient (de Beer & Brysiewicz, 2016). Due to the lengthy period of time family members spend with the patient, quality of care can be measured through the family members' perception of the care provided to a loved one. As family members are not mere bystanders in the ICU, they witness and experience the process of care with the patient (Alvarez & Kirby, 2006; McAdam, Arai & Puntillo, 2008). Therefore, the perceptions of the family members are particularly important in the ICU setting, as an outcome measure to assess the care provided to the patient (Wall, Engelberg, Downey, Heyland & Curtis, 2007). Family perception is important and is accepted as an appropriate substitute for the patients' perception, (Stricker, Kimberger, Brunner & Rothen, 2010).

Internationally there have been studies that have investigated family perception of care in the various ICU settings (Sottile et al., 2015). There are different outcome measures that were used in the various studies. There were mixed findings with regard to family perception of care with positive and negative remarks. The predominant theme that emerged from the studies found related to communication and the lack thereof and how this could be improved. A study by Sottile et al. (2015) pointed out that even with the quantitative outcome measure that was used in their study; a qualitative outcome measure would prove beneficial to obtain a deeper understanding of the family members' perception of care.

Family perception of ICU care and services has been evaluated and studies have been published (van Mol, Bakker, Nijkamp, Kompanje, Bakker & Verharen, 2014). Although the family perception of ICU care has been investigated and outcome measures for measuring the family perception of ICU care are available, there has been no synthesis of these studies. It is not clear whether current available outcome measures for family perception of ICU care are valid and reliable, what components of care/services are necessary to be used when measuring the family perception of ICU care. Therefore, the purpose of this scoping review was: i) to describe the outcome measures used to measure family perception of care rendered in the ICU, and ii) to describe the ICU care/services investigated when measuring family perception in the intensive care setting.

2.2 Method

2.2.1 Design

A scoping review is a form of knowledge synthesis that incorporates a range of study designs to comprehensively summarise and synthesise evidence (Pham, Rajic, Greig, Papadopoulos, Sargeant & Mc Ewen 2014). The aim of a scoping review is answering a research question posed and potentially identifying a literature gap, and then to summarise current literature. A

five-step framework as described by Arksey and O'Malley (2005) was used. The five steps are as follows: i) a research question was established, ii) relevant studies were identified and selected, iii) the results were charted and iv) finally summarised, and v) reported.

2.2.2 Search Strategy

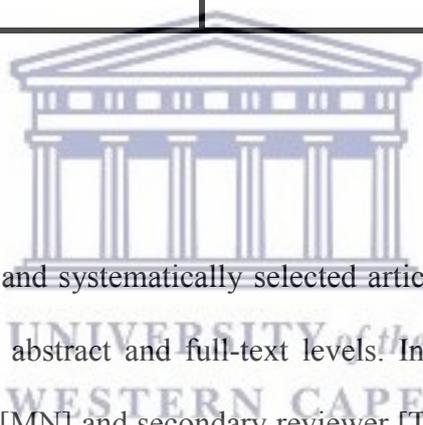
Five electronic databases were searched by the primary reviewer [MN], namely EBSCOhost (Academic Search Complete, CINAHL Plus with Full Text, E-Journals, Health Source: Nursing/Academic Edition, MEDLINE, PsycARTICLES), Science Direct, PubMed, Scopus, and Web of Science. Search terms included in the search were “*Physiotherapy, Intensive Care Unit, Critical Care, Outcome Measures, Family Perception, Perception, Family Experience, Care or Services*”. Databases were searched from inception of each database up to and including the 20th June 2018. Language was not set as a limitation for the search. There were two articles that were published in languages other than English which was translated by a translator and the relevant data could be easily sourced. The search strategy for each database is documented in Appendix A. Pearlring of reference lists of included full texts articles was conducted but no other full text articles were found and included. Hand searches were not conducted as we did not envisage finding many articles on this new topic and the journals in which this topic is discussed are all in online databases available in UWC Library.

2.2.3 Article Selection

Inclusion and exclusion criteria to retrieve the most relevant studies for inclusion in this scoping review was used [Table 2.1].

Table 2.1 Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> • Studies that measure family perception of care • Studies conducted in Adult Intensive Care/ Critical Care Units • Hospitalised environments • Any language 	<ul style="list-style-type: none"> • Perceptions other than the family’s (e.g. patient, physiotherapist, nurse or doctor) • Studies investigating end of life care or palliative care • Not conducted in ICU • Conducted in Paediatric Intensive Care/Critical Care Units • Study protocols



2.2.4 Article Review

Two reviewers independently and systematically selected articles according to the inclusion and exclusion criteria at title, abstract and full-text levels. In the event of a disagreement between the primary reviewer [MN] and secondary reviewer [TC], a third reviewer [FK] was used as a consensus reviewer. Articles were included or excluded through discussion and joint agreement.

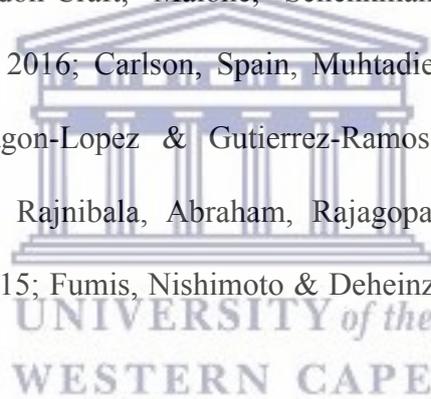
2.2.5 Data Extraction Process

The primary reviewer extracted and charted relevant data from the 10 included papers in customised spreadsheets (Refer to an Appendix B). The data extracted and charted included country of study in which the study was conducted; year of publication; author; country of study being conducted in; the outcome measure used in the study; the services investigated; ICU setting; method of data collection; data collection time points; data analysis; components of care/services investigated and reliability and validity. For those studies that were in a

foreign language other than English the primary reviewer first had the articles translated and then data was extracted.

2.3 Results

A total number of 3732 hits were obtained following the electronic databases searches [Figure 2.1]. Following the review process, 1790 duplicates were removed. At title level 1871 were excluded as the articles did not meet the selection criteria. A further 49 of 71 potential articles were removed at abstract level for not meeting the selection criteria. At the full text level 12 of 22 potential articles were removed for not meeting the selection criteria. Ten articles were finally included in the review (Jensen, Gerritsen, Koopmans, Zijlstra, Curtis & Ording, 2017; Sottile, Nordon-Craft, Malone, Schenkman & Moss, 2015; Hagerty, Velazquez, Schmidt & Falo, 2016; Carlson, Spain, Muhtadie, McDade-Montez & Macia, 2015; Martos- Casado, Aragon-Lopez & Gutierrez-Ramos, 2014; Pena et al., 2017; Venkataraman, Ranganathan, Rajnibala, Abraham, Rajagopalan & Ramakrishnan, 2015; Mosleh, Alja'afreh & Lee, 2015; Fumis, Nishimoto & Deheinzelin, 2008; Fumis, Nishimoto & Deheinzelin, 2006).



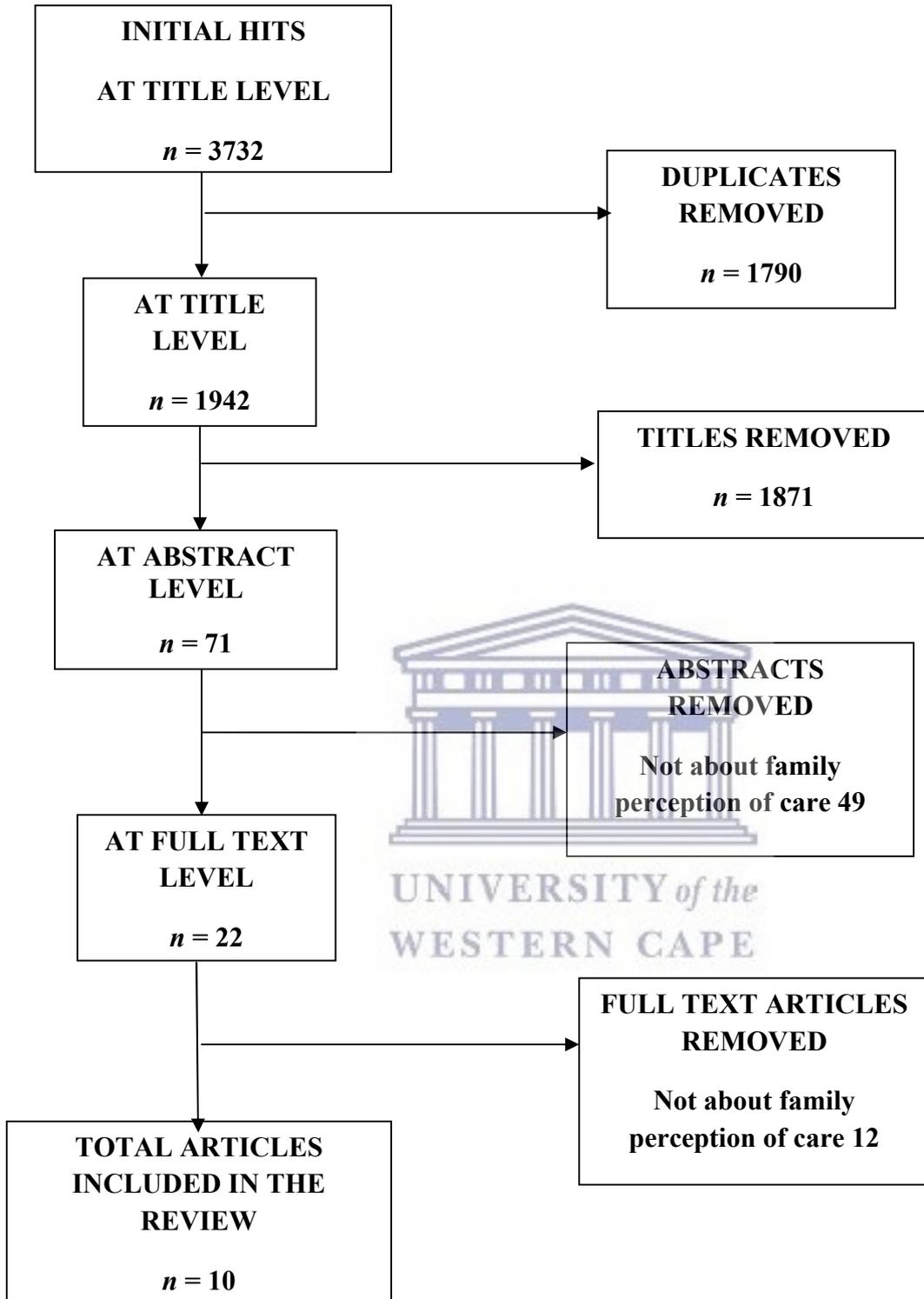


Figure 2.1 PRISMA Flow Diagram of Review and Selection Process

2.3.1 Description of the Included Studies

2.3.1.1 Geographical Distribution

Six studies (Jensen et al., 2017; Sottile., et al, 2015; Hagerty et al., 2016; Carlson., 2015; Martos- Casado et al., 2014; Pena et al., 2017) were conducted in developed countries and four studies (Venkataraman et al., 2015; Mosleh et al., 2015; Fumis et al., 2008; Fumis et al., 2006) were conducted in developing countries [Figure 2.2].No studies were published in Africa or South Africa.

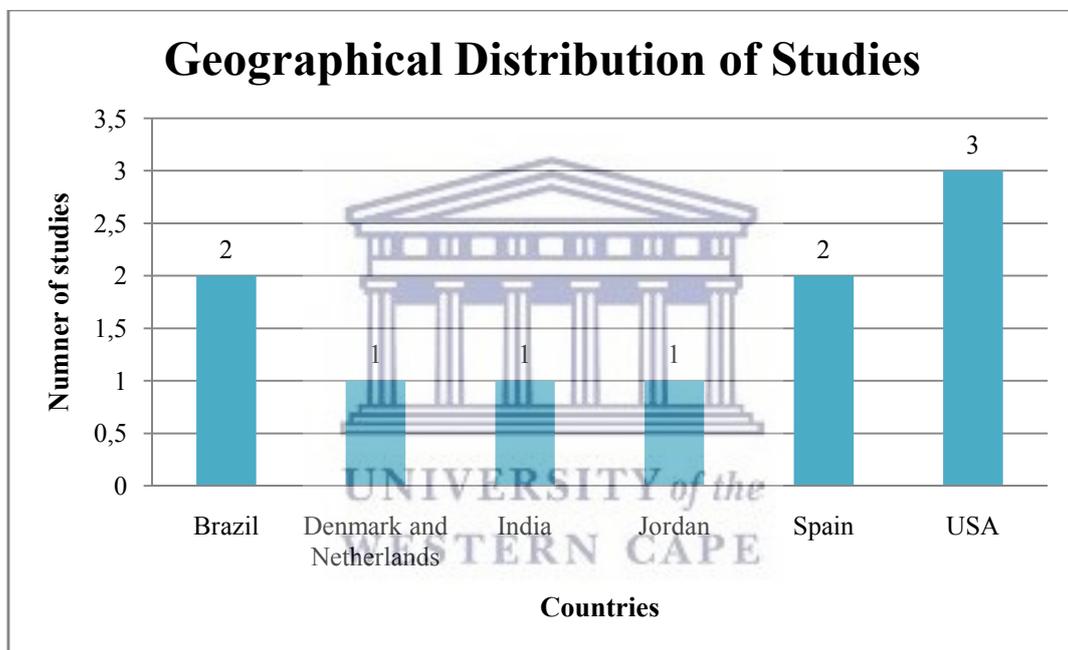


Figure 2.2: Geographical Distribution of the Included Studies

2.3.1.3 Study Settings

Seven studies (Jensen et al., 2017; Fumis et al., 2008; Mosleh et al., 2015; Fumis et al., 2006; Venkataraman et al., 2015; Martos-Casado et al., 2014; Pena et al., 2017) were conducted in a mixed ICU. One study was conducted in a “Neuroscience” ICU (Hagerty et al., 2016), one in a Surgical ICU (Carlson et al., 2016) and one in a Medical ICU (Sottile et al., 2015).

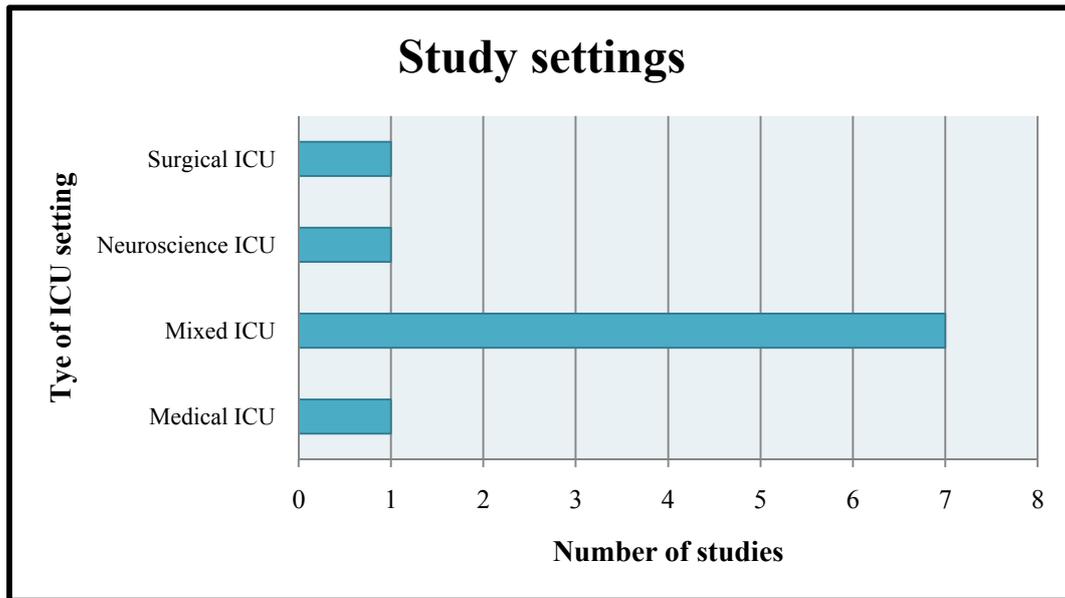


Figure 2.3: The Study Settings

2.3.1.4 ICU Healthcare Professional Services/Care Investigated:

Nine of the included studies (Jensen et al., 2017; Fumis et al., 2008; Mosleh et al., 2015; Fumis et al., 2006; Venkataraman et al., 2015; Martos-Casado et al., 2014; Hagerty et al., 2016; Carlson et al., 2016; Pena et al., 2017) evaluated family perception of services or care of the ICU multidisciplinary team, consisting of doctors, nurses, the physiotherapist, occupational therapist, and dietician. However, only one study (Sottile et al., 2015) evaluated the family perceptions of physiotherapy care only in the ICU.

Table 2.2 Characteristics of Included Studies

Author	Country	Sample size	Patient description	Outcome Measure Tool	Time of data collection	Study inclusion/exclusion criteria
Fumis et al., (2006)	Brazil	n=164	Male = 64, Female =100 Median age = 64.5	CCFNI	Between the 3rd and 4th day of the ICU and remaining up to the 6th day	Inclusion Family members were enrolled 2 days after patient ICU admission Patient and family member over the age of 16 Exclusion Lacked a comprehensible reading ability
Fumis et al., (2008)	Brazil	n=164	Male= 64, Female = 100 Median age = 64.5	CCFNI	Between the 3rd and 4th day of the ICU and remaining up to the 6th day	Inclusion Patient stayed in the ICU for more than 2 days Patient and family member was over the age of 16 Exclusion Lacked a comprehensive reading ability
Martos – Casado et al., (2014)	Spain	n = 78	Male = 50, Female 28 Age was not mentioned	Validated survey developed by Cardenas, Gomez, Herranz, Gonzalez & Gonzalez	15 days after discharge	Inclusion Family members over the age of 18 years Family members who normally visited Telephonic detail was available
Venkataraman et al., (2015)	Chennai, India	n = 200	Males 131, Females 69 Age was not mentioned	FS-ICU	Day 4 of patient's ICU admission	Inclusion Patients who stayed in the ICU for more than 3 days Exclusion Younger than 18
Carlson et al., (2015)	Stanford, USA	n=29	Male 6, Male = 23 Median age = 48	FSCCQ	SPTSS and BDI-SF given 1 to 14 days after patient's admission FSCCO was given 2 months after patient's ICU admission	Inclusion Experiencing distress in response to the event

Author	Country	Sample size	Patient description	Outcome Measure Tool	Time of data collection	Study inclusion/exclusion criteria
Mosleh et al., (2015)	Jordan	n= 246	Male = 133, Female = 113 Median age (years) 36.4	FS-ICU	Between the 3 rd and 5 th day following the patient's admission	No criteria mentioned
Sottile et al., (2015)	Colorado, USA	n=49	Male = 8, Female =41 Age was not stated	Self-developed	End of 28 days of therapy or at discharge	Inclusion Observed a session of PT Patient required a minimum of 4 days mechanical ventilation Exclusion Patient is 18 years or younger, pregnant, had an underlying disorder
Hagerty et al., (2016)	New York, USA	n= 73	No participant description stated	FS-ICU	Pre-negotiated period of time, no specific day specified	Inclusion Family members 18 years and older Mechanically ventilated patients in the Neuroscience ICU for 48 hours or greater Family members visited the patient at least once during their ICU stay Exclusion Could not comprehend the questions because of language, cognitive or cultural barriers Poor prognosis of patient
Pena et al., (2017)	Spain	n= 148	Male =45, Female = 103 Age mean = 46.23	FS-ICU	At least 24 hours after discharge from the ICU to the ward	Exclusion 18 years and older Relative of patient who died in the first 24 hours of stay following ICU discharge Patient moved to another hospital centre within 24 hours of the ICU admission Unable to read or understand Spanish

Author	Country	Sample size	Patient description	Outcome Measure Tool	Time of data collection	Study inclusion/exclusion criteria
Jensen et al., (2017)	Denmark and Netherlands	n = 1077	Male= 353, Female = 724 Median age = 57	Euro FS-ICU	Three weeks after patient discharge from the ICU family members received the questionnaires by mail	<p>Inclusion</p> <p>Family members of patients admitted to the ICU for more than 48 hours</p> <p>Up to three family members could participate</p> <p>Exclusion</p> <p>Under the age of 18 years, Cognitive impairments</p> <p>Unable to read or write Dutch</p>



2.3.1.5 Sample Size and Characteristics

There was a considerable variety in the participant numbers ranging from 29 to 1056 participants. Hagerty et al. (2015) did not mention the participant description. The age of the participants ranged from 36.4 to 64.5 years old. For the purpose of the scoping review an adult was defined as specified in each study. The general trend was that there were more females in the study populations than males.

2.3.1.6 Timing of Data Collection

The timing of data collection is essential to obtaining the best quality of information as it is essential to ensure the family members have good exposure to the care to provide an appropriate perception of the care. There was a considerable variety in the timing of when the data was collected in each study. One study issued a questionnaire as early as day one after admission to the ICU. The latest administration of a questionnaire was two months after discharge.

2.3.1.7 Inclusion and Exclusion Criteria

Each study had its own inclusion and exclusion criteria to determine their sample. However, Mosleh et al. (2015) did not mention having an inclusion or exclusion criteria in their study. Six studies (Venkataraman et al., 2015; Jensen et al., 2017; Hagerty et al., 2016; Sottile et al., 2015; Martos-Casado et al., 2014; Pena et al., 2017) used an adult-only population and two studies (Fumis et al., 2006; Fumis et al., 2008) allowed participants to be 16 years and older Carlson et al., (2015).

In five studies (Pena et al., 2017; Hagerty et al., 2016; Jensen et al., 2017; Fumis et al., 2006; Fumis et al., 2008) patients were excluded due to inability to read and understand the questionnaire. Only two studies (Hagerty et al., 2016; Jensen et al., 2017) mentioned that family members would be excluded due to cognitive impairments. Surprisingly only one

study (Martos-Casado et al., 2014) stated family members had to have normally visited the patient to be included.

2.3.2 Outcome Measures for Measuring Family Perception of ICU Care

All the studies included used quantitative outcome measures to measure family perception [Figure 2.4]. However, Venkataraman et al. (2015) included an open-ended question in their outcome measure but analysed it quantitatively. Family Satisfaction with ICU (FS-ICU) questionnaire was used by three studies (Hagerty et al., 2016; Venkataraman., et al, 2015; Mosleh et al., 2015; Pena et al., 2017). Respectively each study used the FS-ICU in a language which was appropriate for the study population. Venkataraman et al. (2015) used the FS-ICU, which was adapted and modified. Venkataraman et al. (2015) added a qualitative component in which they asked for suggestions and comments that was analysed using a quantitative method. Pena et al. (2017) modified the FS-ICU by asking each question about the physiotherapy care, the nurse's care and the rest of the multidisciplinary team.

Fumis et al. (2006) and Fumis et al. (2008) used The Critical Care Family Needs Inventory (CCFNI) to measure family perception of care in the ICU. In contrast, The European Family Satisfaction ICU (euroFS- ICU) questionnaire was used by Jensen et al. (2017) to measure family perception of care in the ICU. The Family Satisfaction with Critical Care Questionnaire (FSCQ) was used by Carlson et al. (2015) to measure family perception of care in the ICU. Whereas Sottile et al. (2015) used a self-developed questionnaire that was validated through an iterative process by a panel of experts in survey design. Martos-Casado et al. (2014) used a validated survey developed by Cardenas, Gomez, Herranz, Gonzalez & Gonzalez (2004).

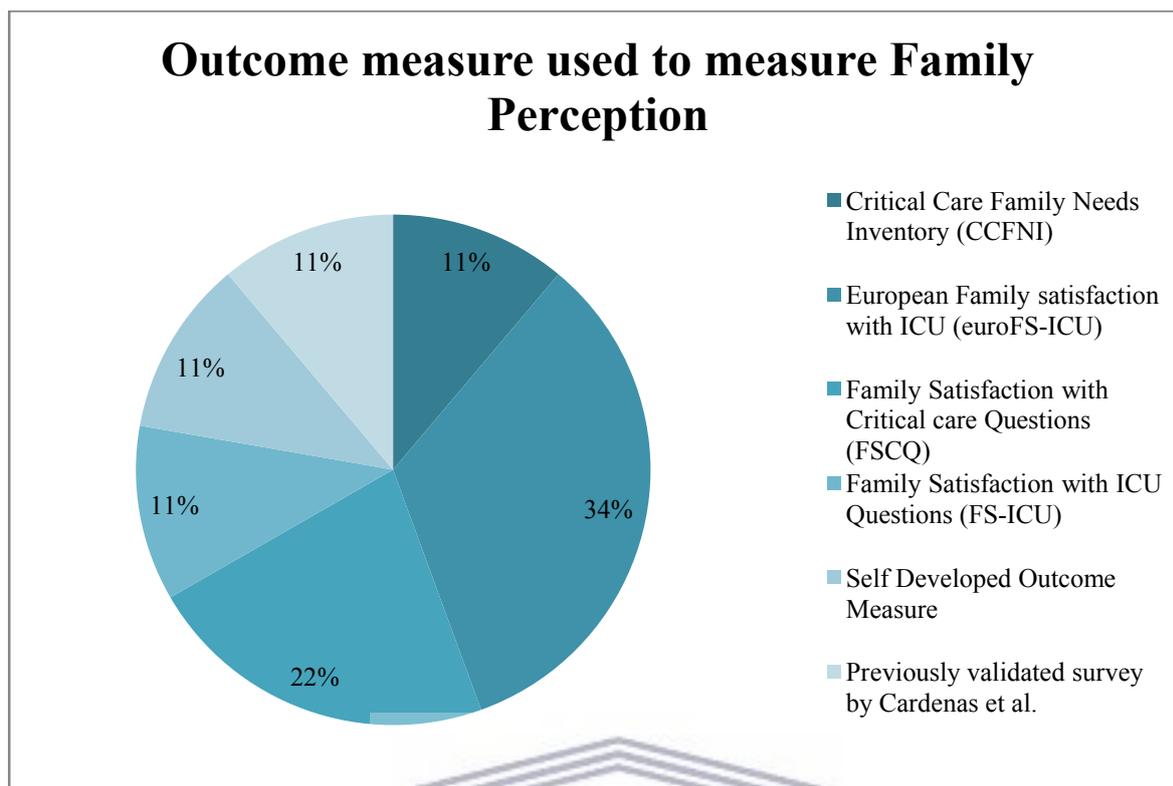


Figure 2.4: Outcome Measures Used to Measure Family Perception of Care in the ICU

The majority of the studies reported on validity and reliability (Fumis et al., 2006; Fumis et al., 2008; Martos-Casado et al., 2014; Mosleh et al., 2015; Sottile et al., 2015; Carlson et al., 2015; Hagerty et al., 2016; Jensen et al., 2017) of the instruments used while two studies (Venkataraman et al., 2015; Pena et al., 2017) did not state the validity or reliability of the measures used [Table 2.3].

Venkataraman et al. (2015) used the FS-ICU in which they adapted and modified it to suit their setting, but did not specify if validity and reliability was re-tested after the modifications.

Pena et al. (2017) used the FS-ICU, Spanish language version, and made some concrete changes to adjust the instrument to their specific ICU setting. Modifications were made but the article did not specify if validity and reliability was re-tested.

Hagerty et al. (2016) used the FS-ICU in which they stated it is a valid, reliable questionnaire.

Jensen et al. (2017) used the euro-FS which is a well-known validated tool. The article states the OM tool was developed and validated in North America as there are cultural differences between North America and Europe, the use of the instrument without cultural adaption may decrease validity of the study conducted by Jensen et al. (2017).

Sottile et al.'s (2015) questionnaire was self-developed and validated through an iterative process by a panel of experts in survey design, critical care medicine, physiotherapy, and clinical research. Carlson et al. (2015) used the FSCCQ which was deemed valid and reliable but Carlson et al. (2015) did not go into further detail to say how this was established.

Mosleh et al. (2015) used the FS-ICU which was refined and validated by Wall et al. (2007). For the use of this study the FS ICU was not previously validated in a Middle Eastern context. It was translated into Arabic according to international guidelines by a panel of researchers and then to ensure accuracy translated back into English by an independent researcher. A modified version was subsequently piloted.

Fumis et al. (2006) and Fumis et al. (2008) both used the CCFNI questionnaire which is an internationally recognised OM tool, in which this study had all questions back-translated into Portuguese in order to be applied.

Martos-Cassado et al. (2014) used a valid survey used by Cardenas, Gomez, Herranz, Gonzalez & Gonzalez (2004) in which four questions were deleted because they were not relevant to their ICU setting.

Table 2.3: Reliability and Validity of Studies

Quantitative studies	Reliability and validity testing		
	Validity	Reliability	Not specified
Fumis et al (2006)	√	√	
Fumis et al (2008)	√	√	
Martos-Casado et al (2014)	√	√	
Venkataraman et al (2015)			√
Mosleh et al (2015)	√	√	
Sottile et al (2015)	√		
Carlson et al (2015)	√	√	
Hagerty et al (2016)	√	√	
Pena et al (2017)			√
Jensen et al (2017)	√	√	

2.3.3 Components of Care/Services Measured

There were nine ICU components of care/services that were used to assess family perception of care, namely communication, staff skills, support, needs, the atmosphere of ICU, management of the patient, visiting hours, facilities and decision-making [Table 2.4]. The nine ICU components identified in the included article were not the exact components used within each outcome measurement tool but are general categories across the identified Outcome Measure tools (Refer to Appendix C).

Of the nine ICU components of care/services used, communication and management of the patient was highlighted; as it was the two most commonly used components to measure family perception of care [Table 2.4].

2.3.3.1 Communication

Fumis et al. (2006) measured communication through the understanding and expectations of family members. Whereas Carlson et al. (2015) and Hagerty et al. (2016) measured communication through just the frequency of information. Mosleh et al. (2015) and Jensen et al. (2017) measured communication through the frequency, but in addition looked at understanding, consistency, completeness, honesty, and ease of getting information. In contrast Fumis et al. (2008) measured communication by the manner in which the information was given about diagnosis and illness

2.3.3.2 Management of Patient

When measuring the management of the patient Hagerty et al. (2015) and Jensen et al. (2017) both looked at pain, breathlessness, and agitations. Mosleh et al. (2015) looked at the same items as Hagerty et al. (2016) and Jensen et al. (2017), but in addition he considered the needs of the patient. Sottile et al. (2015) measured the management of the patient through the difficulty, exertion, discomfort, frequency, and enjoyment of the care. Pena et al. (2017) measured patient management through pain dyspnoea anxiety, cold and heat experienced by the patient.

2.3.2.3 Staff Skill

Hagerty et al. (2016) and Pena et al. (2017) measured the staff skills through directly asking about the staffs' skills and competency whereas Carlson et al. (2015) measured staff skills by just asking family members what they thought about the staff skills.

2.3.2.4 Support

In the studies done by Mosleh et al. (2015) and Hagerty et al. (2015) support was measured by asking specifically about the emotional support the medical professionals provided. In the Pena et al. (2017) study, one question was asked about support in general provided by the medical professionals whereas Jensen et al. (2017) asked about the emotional support provided and the support during the decision-making.

2.3.2.5 Decision-Making

Only one study (Jensen et al., 2017) asked about the decision-making in which they asked about being included in the decision-making.

2.3.2.6 Needs

Carlson et al. (2015) measured the needs of the family members by asking if the informational needs were met. Whereas, in the study conducted by Hagerty et al. (2016) family members were asked if the medical professionals took their needs into consideration.

2.3.2.7 Atmosphere of the ICU

Jensen et al. (2017) measured the atmosphere of the ICU by means of a Likert scale ranging from poor to excellent. The atmosphere of the ICU was measured by asking whether it was clean and had sufficient furniture (Martos-Casado et al., 2017).

2.3.2.8 Visiting Hours

Venkataraman et al. (2015) measured the visiting hours by asking if the visiting hours were suitable and adequate. Martos-Casado et al. (2014) measured visiting hours by asking whether it was sufficient and how they felt about open hours.

2.3.2.9 Facilities

The facilities Venkataraman et al. (2015) referred to in their study were the waiting room, in which they asked if the waiting room was comfortable.



Table 2.4 Tabulated Components of Care/Services Used to Measure Family Perception of Care in the Included Studies

Authors	Communication	Staff skills	Support	Needs	Atmosphere of ICU	Management of patient	Visiting hours	Facilities	Decision Making
<i>Fumis et al. (2006)</i>	√								
<i>Fumiset al. (2008)</i>	√								
<i>Martos-Casado et al. (2014)</i>	√				√	√	√	√	
<i>Venkataraman et al. (2015)</i>	√					√	√	√	
<i>Mosleh et al. (2015)</i>	√		√			√			√
<i>Sottile et al. (2015)</i>						√			
<i>Carlson et al. (2015)</i>	√	√	√						
<i>Hagerty et al. (2016)</i>	√	√	√	√	√	√			
<i>Pena et al. (2017)</i>	√	√				√			
<i>Jensen et al. (2017)</i>	√		√		√	√			√

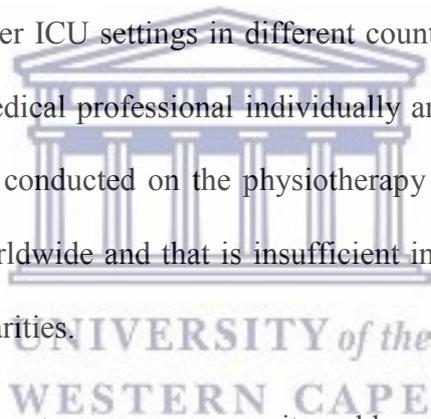
2.4 Discussion

Family perception of ICU care has been a topic of study since 2006 however; only ten studies have been published regarding family perception of ICU care since then.

Family perception of ICU care has been measured in both developed and developing countries and in different ICU settings. It cannot be assumed that ICU care and practice, or similar patient demographics and conditions in the ICU, are the same in all countries all over the world. It has been documented by several studies, perception of care is influenced by gender, (Clark, 2007) age, (Garrouste-Orgeas, Willems, Timsit, Diaw, Brochon & Vesin, 2010; Sun, Adams, Orav, Rucker, Brennan & Burstin, 2000), culture and language (Goldwag, Berg, Yuval & Benbassat, 2002). For this reason, results of the included studies are not necessarily transferable to a different population group for example, from a developed to a developing country setting. Thus, additional studies are needed in developing countries like South Africa. The South African public healthcare system is undergoing transformation and healthcare reform including redistribution of healthcare resources may provide different findings to the studies included in this scoping review.

The study evaluating the family perception of physiotherapy ICU care was conducted majority in a mixed ICU and none were conducted in a cardiothoracic ICU. There are different types of patients admitted to different ICU settings and the patient management is different in every ICU setting (Haupt et al, 2003). Therefore, due to the differences in the ICU settings family perceptions may not always be the same. Thus, more studies should be conducted in different ICU's including cardiothoracic ICUs. Information with regard to similarities or differences in family perception of care in different ICU's can be synthesised. It would be valuable to understand the family perception of physiotherapy care in a setting such as the cardiothoracic ICU.

From the scoping review it was identified when measuring family perception of care in the ICU, the studies mainly looked at the multidisciplinary team as a whole and not individually. Each medical professional provides a different type of care towards the critical patient in the ICU (Lilly & Katz, 2016). Therefore, we cannot generalise that family perception of care towards each medical professional would be the same. Only Sottile et al. (2015) did a study purely on family members' perception of physiotherapy care in the ICU. There are variations with physiotherapy practices across regions, ICU settings and countries (Hanekom, Coetzee & Louw, 2012). Thus studies about family perception of physiotherapy care that are conducted in different countries could obtain different results. Therefore, the study by Sottile et al. (2015) on family members' perception of physiotherapy care in the ICU is not necessarily transferable to other ICU settings in different countries. It is recommended that future studies look at each medical professional individually and the care they render in the ICU. More studies should be conducted on the physiotherapy care in the ICU as there has only been one study done worldwide and that is insufficient information apply to each ICU globally due to many dissimilarities.



All studies used a quantitative outcome measure as it could possibly be deemed as a “better” outcome measure to determine family perception of ICU care. This can be attributed to the fact that a quantitative measure, is easier and more appropriate for describing the relationship of phenomena at a single point in time as well as to determine the associations between variables (Hopkins, 2008; Smith, 2001). However, it can be argued that a qualitative outcome measures should be used as it allows in-depth interviews with the family and would allow a deeper understanding of the family perception of ICU care by creating a complete impression of the experiences of the family members that cannot necessarily be obtained from a quantitative outcome measure (Rahman, 2017).

While multiple measures of family perception and satisfaction with ICU care were used in the included studies, no “gold” standard exists. This may be due to the limited studies available and the lack of diversity of quantitative and qualitative studies given that studies on family perception of care is still in its infancy. Even though majority of the included studies used existing outcome measure tools, modifications had to be made to the content of the OM tools in order for it to be specific to the study setting. The content of the OM tools used in the ten studies were very specific to the ICU setting and the care being assessed. Due to the many OM tools available to measure family perception of care there is no consensus as to which measures of family perception of ICU care should be used to measure this and therefore no gold standard measure exists.

In general, reliability and validity of the outcome measures tools used were reported. However in two of the studies, (Venkatraman et al., 2015; Pena et al., 2017) reliability and validity were not mentioned, which can compromise the reliability of these studies.

Data was collected through means of a questionnaire as early as day one ICU and as late as two months after the patients has been discharged from the ICU. According to Smith (2010), the timing of the administration of the questionnaire is important as the family needs appropriate exposure to the care as their perception of the care rendered may change over a long period of time. No study gave a recommendation on when is a suitable time to collect the data. However, two studies (Sottile et al., 2015; Fumis et al., 2006) observed that the timing of the data collection was a limitation. As a variable timing of the data collection may result in the families perception changing over in time and result in a risk of bias.

Components of care/services used in each study varied in the questionnaires. The component of care/service used in each questionnaire may have varied depending if it suited the study population. Knowing what components of care/services each questionnaire used allowed the

researcher to have some insight with regards to the type of questions that may be asked when developing the semi-structured interview guide and how to adapt the question to suit the population.

While updating the scoping review the primary reviewer came across a systematic review on family satisfaction of care by Fortunatti and Silva (2018). The study explored the characteristics of questionnaire of studies used to measure family satisfaction of care in the ICU. The study by Fortunatti and Silva (2018) was different to the scoping review conducted as firstly it was a literature review. Secondly the study only explored family satisfaction, whereas this study looked at family perception and satisfaction of ICU care. Thirdly the scoping review conducted by the primary reviewer looked at different databases compared to the study by Fortunatti and Silva (2018). The study conducted by Fortunatti and Silva (2018) had different search terms to the scoping review conducted by the primary reviewer study. The search terms used by Fortunatti and Silva (2018) were “family satisfaction, intensive care unit, critical care, family, ICU”, whereas the search terms used by the primary reviewer were “Physiotherapy, Intensive Care Unit, Critical Care, Outcome Measures, Family Perception, Perception, Family Experience, Care or Services”. Lastly, Fortunatti and Silva (2018) set a 15-year limit for their searches whereas this study looked searched from inception up to and including the 20th June 2018. Even though a study of a similar nature was done in comparison to the scoping review they were very different but essential.

From the scoping review it was identified additional qualitative studies on family perception of care rendered in the cardiothoracic Intensive Care Unit in South Africa is needed. Due to the scarcity of studies conducted in South Africa and the information available on family perception of ICU care in developing countries like South Africa. Furthermore, a study should be done in a cardiothoracic Unit as a study on family perception of ICU care has not been conducted in this specific setting. It would be valuable to understand family perception

of physiotherapy care in the cardiothoracic ICU in the public healthcare sector in South Africa. It would be valuable due to the differences in healthcare resources available and diversity of the country's population and culture.

2.5 Limitations, Strengths and Recommendations

The databases used in this review were limited due to limited databases available and accessible to the researcher on the University website although databases such as Pubmed and EBSCOhost including Medline would have provided most papers included in smaller databases and therefore this may be a minor limitation. A strength of the review was that studies were not limited to English articles. Another strength of the review is that the search was conducted from inception of the databases up to and including the 20th June 2018. It is recommended that future reviews include other databases and include both perception and satisfaction as part of the search strategy as the two concepts are interrelated.

2.6 Conclusion

Outcome measures for the evaluation of family perception of ICU care do exist. There are multiple measures including the FS-ICU, EuroFS-ICU, CCFNI and FSCQ. However, no consensus on which measure is most appropriate and therefore no “gold” standard outcome measure for measuring family perception of ICU exists. However, measuring family perception of ICU care is an important patient and family-centred approach to healthcare and is recognised as integral in identifying improvements in the quality of care within the critical or intensive care setting. The outcome measures were all quantitative measures. Qualitative outcome measures or studies focused within a qualitative paradigm may provide richer data and more insight into this relatively new area of research within the ICU setting. Although studies have been conducted in both developed and developing countries and in different ICU settings, no study conducted in Africa, including South Africa and the cardiothoracic ICU

setting was identified in this review. The family perception of physiotherapy care in the intensive care has been minimally investigated and this is an area of research that can be developed as physiotherapists are health promotive and preventative and can provide family members with insight into the future rehabilitative needs of their loved ones who have been critically ill.



Chapter 3

Family Perception of Physiotherapy Care Rendered in the Cardiothoracic ICU

3.1 Introduction

Quality of care is defined by Leebov (2013) as “doing the right things right and making continuous improvements, obtaining the best possible clinical outcome, satisfying all customers, retaining talented staff and maintaining sound financial performance”. As per the definition, continuous improvements need to be made to provide the best quality of care and improvements can only be made by measuring quality of care. By measuring quality of care one can identify the areas of improvement (Al-Abri & Al-Balushi, 2014). Quality of care can and has been measured using both patient and family’s perception of the health care and health services provided, thus looking at satisfying the patient (Sottile, Nordon-Craft, Malone, Schenkman & Moss, 2015). Perception is defined as “a belief or opinion, often held by many people and based on how things seem” (Cambridge Dictionary, 2013). Patient satisfaction is said to be “the perception of patient needs and expectations being met” (Ndambuki, 2013). Thus, patient satisfaction is merely one of the components of patient perception. In the ICU setting patient perception of care has been measured to evaluate quality of care and services (van Nes, 2016). However, recently family perception of ICU care has become an important indicator of the quality of ICU care and services.

Patients are usually seen as the consumers of care and therefore it is important for us to know how patients perceive the care provided. However, measuring patient perception is not always possible when patients are unresponsive or cannot remember their ICU stay. This is

where family perception is then seen as an important and appropriate substitute when patients cannot communicate for themselves (Brunner, Rothen & Stricker, 2010). Understanding family perception is important as family members act as a surrogate decision-maker regarding the patient care when the patient is unable to speak for themselves (Venkataraman, Ranganathan, Rajnibala, Abraham, Rajagopalan, & Ramakrishnan, 2015). Family members spend a large amount of time in the ICU with the patient and therefore are considered to experience the care with the patient thus the perception of the ICU care is deemed essential.

The ICU care provided to the patient is rendered by multiple medical professionals. They form a multidisciplinary team that work together in providing the best quality of care to produce the best possible outcome for the patient. A physiotherapist forms part of this ICU multidisciplinary team.

Physiotherapists are involved in the care of critically ill patients in the ICU. The role of the physiotherapist is to maintain and improve respiratory function through chest physiotherapy, promote early mobilisation and prevent secondary complications of patients (Denehy & Berney, 2006; Brasher, McClelland, Denehy & Story, 2003).

Hanekom, Louw and Coetzee (2012) reported that it is the obligation of the physiotherapy profession not only to find methods to measure the value of the physiotherapy service in the ICU environment but to include a description of the quality of this service. Physiotherapists can describe the quality of their service through family perception of ICU physiotherapy care. It is important for physiotherapists to evaluate the quality of care they provide so that they can continuously improve on the care they provided by pin pointing the areas of improvement identified in order to improve overall quality of care and services (Al-Albri & Al-Balushi, 2014).

It has been identified that in a scoping review (chapter 2) conducted by Naidoo and Karachi, (2018) there is no “gold” standard outcome measure or “best-questionnaire” to measure family perception of ICU care (Naidoo & Karachi, 2018). All studies in the scoping review used a quantitative measure that does not necessarily provide in-depth rich information to understand or identify problem areas, whereas a qualitative study would. Only one study looked into family perception of physiotherapy care, which was conducted in a developed country and no study was conducted in the South African context.

In South Africa, the healthcare system in the public sector is transforming and resources are limited therefore the family perception of physiotherapy care in a developed county cannot be translated as the ICU conditions are different. It is not known to what extent family members are part of the care process and decision-making in the care of the ICU patient and how they perceive this care specifically in a cardiothoracic ICU setting in a country such as SA where the healthcare and patient context are different to countries such as India, Brazil, United States of America and the Netherlands.

Therefore, the purpose of this study was to explore and describe the family perception of physiotherapy care rendered in a cardiothoracic ICU in the South African context thereby providing an in-depth understanding of the family perception of ICU physiotherapy care in this context and adding new knowledge to the evidence base.

3.2 Methods

3.2.1 Study Design

A descriptive exploratory qualitative research design was used. The advantage of this design is that it allows the researcher to describe an event that has been observed and seeks to understand it and to explore factors that influence it (Polit & Beck, 2010).

3.2.2 Research Setting

The research setting for this study was the cardiothoracic Intensive Care Unit (ICU) at a central; university-affiliated academic hospital in the Western Cape, South Africa (SA). The cardiothoracic ICU has 24 ICU and high care beds. There is a multidisciplinary team consisting of the cardiothoracic surgeon and doctors, anaesthetist, ICU nurses, dietician, and physiotherapist. There is one physiotherapist allocated to the cardiothoracic ICU. The physiotherapist however, is not exclusively allocated to the ICU but has ward duties as well. The physiotherapists rotate through this unit on a quarterly basis. During the study there were therefore two physiotherapists that worked in the unit, one every quarter. During the week there were physiotherapy students working in this unit as well. During the week the physiotherapists managed the patients in the unit mainly in the morning and would go back in the afternoon if needed. Over the weekend different physiotherapists rotated and worked in the cardiothoracic ICU. The referral policy for weekend physiotherapy in the unit states that only three patients can be referred for weekend physiotherapy. There is a physiotherapist on call (after hours) on a rotation basis during the week and weekends as well. The physiotherapists do not include the family members in any part of their management or care of the patient in the cardiothoracic unit. Families are only there for visiting and will only know about receiving physiotherapy and what it entails if the patient discusses it with the family.

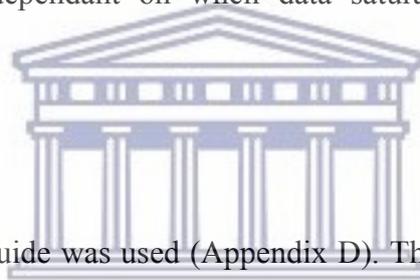
3.2.3 Population

The study population consisted of all family members (spouse, child or sibling) of patients admitted to the cardiothoracic ICU. A total of 627 patients were admitted during the study period of which 627 family members were therefore available for selection.

3.2.4 Sample

Sampling Method: A purposive sampling method was used based on specific inclusion and exclusion criteria. Inclusion criteria: i) a family member had to be 18 years and older, ii) the family member must have been involved in the patient's care (visited and had knowledge of the patient's physiotherapy sessions). Exclusion criteria: i) a family member that was younger than 18 years older, ii) a family member that had not visited the patient nor had knowledge of the patient's physiotherapy sessions.

Sample Size: According to Crouch and McKenzie (2006) approximately 20 participants have been suggested for quantitative studies. We aimed to recruit for 8-15 participants. However, the final sample size was dependant on when data saturation occurred (no new data emerging).



3.2.5 Instrumentation

A semi-structured interview guide was used (Appendix D). The guide was developed by the researcher and the specific questions and probes were based on literacy evidence (Naidoo & Karachi, 2018) obtained from the scoping review (Chapter 2). Open-ended questions included questions on: 1) the family perception of physiotherapy care, 2) the perception of the physiotherapist and their care/services, 3) perception of communication, 4) what satisfaction meant to them and if they were satisfied with the care provided and suggestions for improvement.

Pilot study

A pilot study was conducted to ensure saliency of the semi-structured interview guide, using two family members. The pilot study was used to determine the length of the interviews which was approximately 20 minutes. This helped the researcher to give a fair indication of the amount of time they needed with the family and allowed the family to set aside the

appropriate time needed. The interviews conducted were detailed and in-depth, but were not anticipated to be as long as the patient interview due to containing fewer questions, and the fact that the family is not directly involved in the physiotherapy sessions. Therefore there would be less to discuss with the family unless they had other points to discuss that were not included in the semi-structured interview guide. The data from the pilot study was included in the study sample. Changes and additions to the semi-structured interview guides were then made accordingly for data collection in the main study. Changes made to the family specific semi-structured interview guide included rephrasing two questions to make it more comprehensible. The removal of one question: “What did you think of the knowledge and skill the physiotherapist/s displayed when treating your family member/significant other (patient) during their stay in the intensive care unit?” as it was deemed inappropriate as family members did not witness the physiotherapy sessions.

3.2.6 Procedure

3.2.6.1 Ethics

The researcher first obtained ethical clearance from the University of the Western Cape Research Ethics Committee and Biomedical Research Ethics Committee (Appendix E). Following ethical clearance, permission was granted to the researcher from the Tygerberg Hospital Research Ethics Committee and the cardiothoracic Intensive Care Unit manager (Appendix F). The study was conducted according to the ethics principles of human research as described in the Declaration of Helsinki. A further detailed explanation of the ethical procedure or considerations can be found in Appendix G.

3.2.6.2 Recruitment of Study Sample

The researcher visited the unit every second day to recruit a sample of patients. On the completion of the patient interview, the patient was asked to confirm which family members

had visited the unit and would be willing to participate. The family members were included in the study if they met the inclusion and exclusion criteria documented in 3.2.4. The participants for the study were informed (Appendix H) about the study and gave consent (Appendix I) for their participation. A further detailed explanation of the ethical procedure can be found Appendix E.

3.2.6.3 Data Collection:

Individual face-to-face interview were conducted by the researcher at a convenient time and place for the family member. Interviews took place in a private examination room in the ward once the patient was discharged from the cardiothoracic ICU. A decision was made by the primary investigator to conduct interviews once the patient was discharged from the cardiothoracic ICU so that the patient had the full experience of the ICU stay and so that they had enough time to communicate with their family members regarding the physiotherapy care they received. This method allowed the researcher to be in control of the interviews and keep the interviewee focused and on track until completion. Individual face-to-face interviews are advantageous as the interviewer is able to capture verbal and non-verbal cues (Hoffmann & Szolnoki, 2013). All interviews were audio-taped using a voice recorder. Throughout the process, the researcher summarised and confirmed data collected during the interview for verification of understanding. The primary researcher attended a lecture regarding the different data collection methods and how to conduct a face-to-face interview. Upon the first interview an experienced researcher sat in the pilot interviews and gave tips and pointers to ensure competency. A trained translator, qualified physiotherapist was available for both Afrikaans and Xhosa family members, however, no family members required to be interviewed in Xhosa, only in Afrikaans.

3.2.7 Data Capturing and Analysis

All recorded data was transcribed verbatim by an independent transcriber. The researcher verified the transcription against the audiotapes for accuracy. Data was analysed by the researcher using the six steps described by Braun and Clarke (2006). Using a deductive-inductive thematic content analysis. The researcher first familiarised herself with the data by reading the transcripts a few times. After the researcher was familiar with the transcripts, data was coded. The codes were then categorised and themes generated.

3.2.8 Trustworthiness: Credibility, Conformability and Dependability,

Transferability

The researcher established credibility and truth-value through checking the audio-taped data with that of the originally transcribed interviews. After the data collection, member checking was done (Brit, Scott, Cavers, Campbell & Walter, 2016). Eleven (85%) family members were willing to participate in the member checking which was done telephonically. The remaining two family members were unreachable telephonically. Transferability was ensured by the dense description of the results through quotations while maintaining the meaning of the participants' response.

Confirmability was established by a peer reviewer [FK] reading the transcripts and generating themes independently. A reflective diary documenting the process of the study was kept, which facilitated the researcher in avoiding, bias (Creswell & Miller, 2000; Polit & Beck, 2004). Dependability and credibility were further safeguarded through triangulation of the collected data, namely: 1) the audio-taped interviews, 2) the transcriptions and 3) the researcher's field journal.

3.3 Results

Thirteen family members were included in the study of which (69%, n=9) were female [Table 3.1]. Each age category, language and education level category were represented therefore providing a good variation of participants [Table 3.1].

Table 3.1: Characteristics of Family Members

Characteristics	<i>n=13</i>
Age (years)	
19-20	<i>n=0</i>
21-30	<i>n=3</i>
31-40	<i>n=3</i>
41-50	<i>n=3</i>
51-60	<i>n=2</i>
61-70	<i>n=2</i>
Home Language	
English	<i>n=6</i>
Afrikaans	<i>n=4</i>
Xhosa	<i>n=3</i>
Educational Level	
Tertiary Education	<i>n=4</i>
High School	<i>n=5</i>
Primary School	<i>n=3</i>
None	<i>n=1</i>

3.3.1 Themes

Three main themes emerged from the data analysed. These included: Understanding of ICU Physiotherapy Care, Family Involvement in ICU Physiotherapy and Satisfaction of Care [Figure 3]. “Understanding of ICU Physiotherapy Care” comprises of three sub-categories, namely: The role of the Physiotherapist; Benefit of Physiotherapy; and Communication.

Under “Family Involvement in Care” there are two sub-categories namely: Decision-Making and Presence during Physiotherapy sessions. Verbatim quotes have been used to support the categories and themes generated.

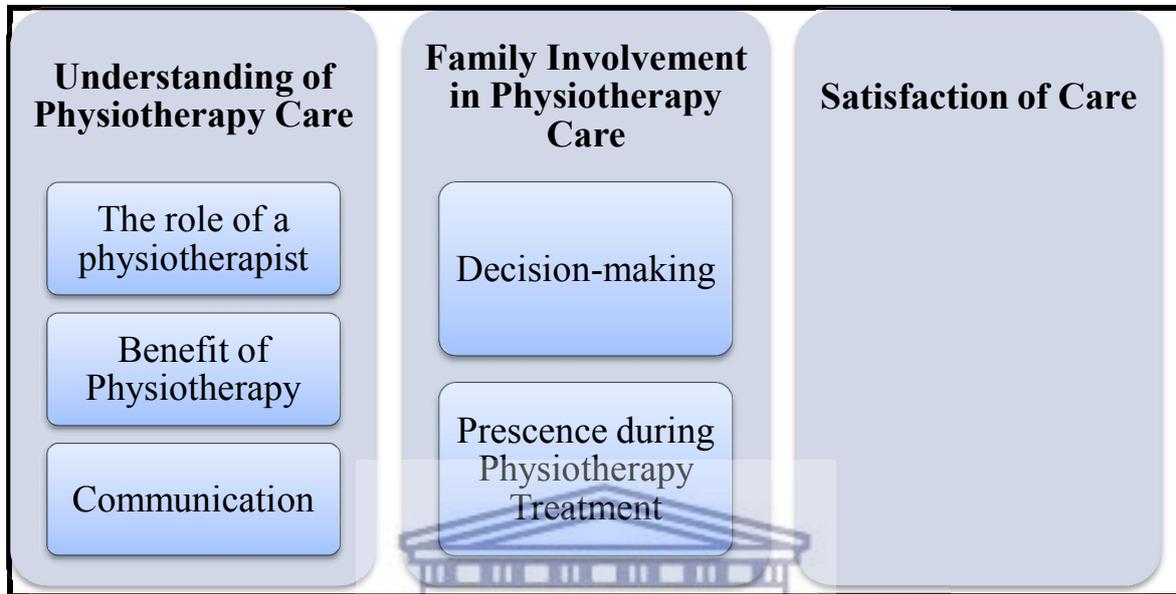


Figure 3.1 Family Perception Themes

3.3.1.1 Understanding of ICU Physiotherapy Care

There seemed to be a general lack of understanding of the physiotherapy care. Family members did not seem to understand or know what the physiotherapist’s role in the patient’s ICU care was in the cardiothoracic ICU. They therefore did not understand how physiotherapy would benefit the patient recovery.

FP01: “... but I just didn’t understand it... I think just more of an explanation of what is being done and how it will benefit him.”

FP02: “I think that if it hadn’t been for the surgery I think the only thing for them is to give more information to the family who don’t know what’s going on or haven’t been through it before if I compare.”

FP03: "I think they must explain better to the family so they understand what's going on."

The Role of a Physiotherapist

The family perception of the role of the physiotherapist in the cardiothoracic ICU varied depending whether they had prior experience or knowledge of what physiotherapy entails. If family members had prior knowledge or experience of physiotherapy care they had a better understanding of what physiotherapy entailed, and their expectations were more in line with the care their family members received.

FP04: "What I know of it, they help assist a person to start moving the parts of the body that was like laying in bed for a few days or so. And... um ja, that's what I know that they physiotherapists do. They work with the patient to start moving and doing stuff."

FP02: "Uhm... To make him walk, to help his lung function again and his basic everyday movements I guess."

FP05: "Uhm... well to my knowledge a physio helps the patient to recover physically if- to help them walk if they had an injury to their leg or something."

In contrast, family members who had no contact or knowledge of physiotherapy prior to their family members ICU admission did not know what to expect. Families who had knowledge about physiotherapy, but no experience of physiotherapy care received by the physiotherapist understood it to be predominantly about mobilising the patient and getting them to their previous level of function and, besides treatment of the lungs. Thus, the family members' responses clearly depicted the family members' lack of understanding of physiotherapy.

FP06: "Before my wife had physiotherapy I had no idea what it was. It was like a foreign concept. I now know more..."

FP07: "Well, I didn't think they would do anything because straight after a big op like that. I thought rest would be the best thing. I was sure they would let him rest for a good couple of days... They took good care of him that he was strong and it was independent and able to show himself and able to do everything for himself when he got home."

Benefits of Physiotherapy

The importance of physiotherapy care which was influenced by each family's situation (whether it was a good or bad ICU experience overall and the patient's state of health once discharged) and their understanding. Generally, family members saw the benefits of their loved ones' receiving physiotherapy, which was verified by faster recovery and returning to previous levels of function. Without the physiotherapy it would have taken the patient longer to recover as the patient would have just laid in bed. The physiotherapist was seen as a motivator and a necessity for patient recovery.

FP05: "... without the physio he would've taken more time to recover because remember the physio was there to tell him or to instruct him on which way to sleep how to sit when he must get up and just take a walk. Then without that physio being there he would have laid on that bed for a very long time."

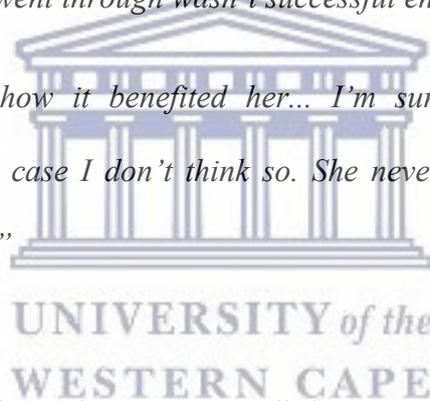
FP02: "Yes, I think after such a big surgery you need all the assistance you can to go back to your normal self, especially since he is so young and I think Physiotherapy plays a big role in getting his lungs like to function again and him to get him mobile quite soon after the op."

In contrast, there were family members who did not see the importance or purpose of their family member receiving the physiotherapy care. Family members expressed that their loved ones presented with no physical problems, therefore physiotherapy was not a necessity or they had a positive attitude to life and did not need the physiotherapist to make progress.

FP04: “My daddy, his mentality is very brave so for me it’s like nobody has to tell him to start moving or so. He is eager on his own to do stuff so I can’t say that it benefited him, not from the personality I know what my daddy got.”

FP08: “I would say she did benefit because she got better faster but that was not all of it but she got some benefit... how do I say it is not the physio is the cause of it. Its maybe the op that she went through wasn’t successful enough.”

FP09: “I don’t see how it benefited her... I’m sure it depends on each case specifically but in her case I don’t think so. She never experienced any difficulties with any of her things.”



Communication

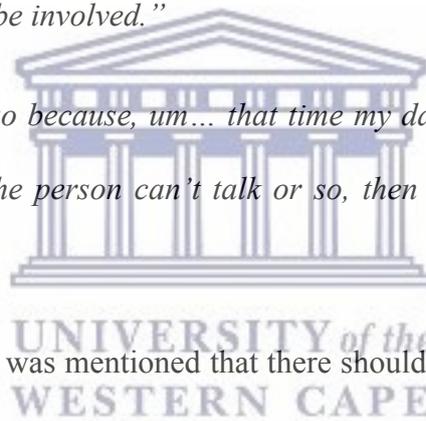
As expressed by family members, there was very little to no communication between them and the physiotherapist regarding the care rendered to their family member, or about anything else. It was understood that physiotherapists have a busy schedule, and are not always necessarily available during visiting hours to communicate with family members. However, in certain cases it was perceived to be a necessity to make the effort to be available to communicate with family members. However, there were family members who expressed that, even though there was no communication, they felt there was no importance of having any communication with the physiotherapist. They felt that their loved ones recovered well and that, in this case, was all they needed to know. Unless, in the unfortunate circumstance,

the patient is critical or has a long recovery, information should be provided by the physiotherapist to explain what care is being provided.

FP10: "So I would prefer that one of them could be present during visiting and explain to the family member that is standing up for mom. What is the case and what they are doing? Because the communication wasn't very open or should I say there was no communication."

FP11: "Look, it is important for them to communicate during the sessions but after the patient is well and can walk and do that then I don't see a need to continuously communicate with the patient or family but during the sessions of the physio and all that the family should be involved."

FP04: "I don't think so because, um... that time my daddy could respond himself so for me it's only like the person can't talk or so, then the family member should be present."



In terms of communication, it was mentioned that there should be more information given to patients and family members. The physiotherapist should provide more pre-operative or post-operative information during the treatment timeframe to help improve the service provided, and to give a better understanding of the physiotherapy care.

FP02: "I think that if it hadn't been for the surgery I think the only thing for them is to give more information to the family who don't know what's going on, or haven't been through it before if I compare."

FP12: "But they said must tell you what you should and shouldn't do when you discharged home and exercises programme that you must follow..."

3.3.1.2 Family Involvement in Physiotherapy Care

Family involvement can be seen as being actively present during the Physiotherapy sessions and actively involved in the decision-making.

Decision-Making

There were family members who thought it was not necessary to be involved in the decision-making of the patient care, as they felt the physiotherapist was more knowledgeable and knew what they were doing. Family members felt that their loved ones were independent and would have preferred to have made decisions themselves.

FP10: *“Um not really, she’s quite an independent person. She would have liked to have made all those decisions at the end of the day she’s the one that went in with the physio’s.”*

FP04: *“...you know a physiotherapist knows what’s best for that patient and that patient... If you like, for example your physiotherapist tells the patient to get up and so. Now the patient is saying but I can’t move yet. The therapist- the physiotherapist’s job is obviously to take the time for him to actually move where a family member will, won’t know what the situation is with the patient right that moment. You see that’s why I rather prefer the patient to give his own, um... decisions, make his own decisions or that, maybe you can ask the family member for advice or so but I think that it’s the patient’s decision at the end of the day.”*

Whereas it was emphasised when the patient was elderly, or the patient could not communicate themselves, the family should be involved in the decision-making as well.

FP13: *“Since he was in the ICU and couldn’t speak for himself at least I would have liked to be involved.”*

FP10: “Mommy is 71 and she doesn't really pay attention when you speak to her because she becomes anxious. So she can't really... It would have been better if we were included in the decisions.”

Physical Presence during Physiotherapy Sessions

Family members discussed the presence and involvement of family members in the physiotherapy care. Physical presence during the physiotherapy session was not included in the questionnaire, or asked by the researcher, but family members made the researcher aware about being physically present during the physiotherapy treatment, as family members in this cardiothoracic ICU in South Africa do not allow family members to be present in during the physiotherapy treatment. However, families do discuss the physiotherapy treatment their loved one has received. It was reported that family involvement (presence) would give motivation to the patient and lessens the stress or burden put on them. In contrast it was felt the physiotherapy sessions are intimate and should be kept private.

FP08: “I think the family should be involved, this is to give motivation to the patient. To give the motivation so that the patient doesn't take all the strain upon herself and that she knows there are people who care and for moral support.”

FP13: “Since he was in the ICU and couldn't speak for himself at least I would have liked to be involved and to see if the things really won't put him in danger after some time. Won't be any consequences or after effects for certain things.”

FP02: “I think physiotherapy sessions should be kept one on one and decisions should be made with the patient.”

3.3.1.3 Satisfaction of Physiotherapy Care

Generally, family members were satisfied with the care provided by the physiotherapist, but a few suggestions for improvements were highlighted. The areas that could be improved were:

the physiotherapist should be more visible to family members in the ward, pamphlets and information sharing prior to surgery

FP11: “Yes, we were very happy. Like I said, they were attentive everyday they ask for feedback. They check that he doesn’t need any further physio when you know when the time was up. When he left there he was confident that he was doing well.”

FP10: “I would say overall I was very satisfied because mum was discharged a day earlier and she was in high spirit and seemed like she could move around quite well on her own.”

FP07: “When he got home he was he was able to shower himself completely and I gave him no homecare because he was independent. By the time he came home after the ten days after the big operation he was totally independent and he didn't need any fuss and it was a blessing to me because I was busy from 5 o'clock until 10 o'clock at night, so that was a blessing. They so to him that he was strong and it was independent and able to shower himself and able to do everything for himself. I was happy.”

3.4 Discussion

Three main themes emerged, namely: Understanding of Physiotherapy Care, Family Involvement in Physiotherapy Care, and Satisfaction of Physiotherapy Care. In comparison to the scoping review, only communication and decision-making were similar to the components of care/service investigated.

Family satisfaction of cardiothoracic physiotherapy care in the ICU was generally positive. However, there were suggested areas of improvement that could further increase the overall level of satisfaction. These areas of improvement included communication, decision-making,

and physical presence in physiotherapy sessions. In the scoping review, Pena et al. (2017), Mosleh et al. (2015) and Martos-Casado et al. (2014) similarly found that families were satisfied with the ICU care, but included areas of improvement.

One of the major themes that emerged from the analysis of the data was the “Understanding of Physiotherapy Care”. There was a general sense of a lack of understanding regarding physiotherapy care as perceived by the family members. The lack of understanding regarding physiotherapy care is specifically regarding the role of the physiotherapist and the benefit of the physiotherapy. The lack of understanding was further impaired by the lack of communication between the physiotherapist and family members.

The exact role of the physiotherapist in the care of the cardiothoracic ICU patient was not understood by the family members in general. Family members have a fair description of what a physiotherapist does but necessarily in a cardiothoracic ICU context. In the study conducted by Sottile et al. (2015) on family perception of physiotherapy care in the medical ICU, the study looked more into the management of the patient during the physiotherapy sessions. The family members were physically present during the physiotherapy sessions and therefore could comment on the exertion, difficulty, enjoyment or whether less or more physiotherapy was needed. In contrast, this study could only determine what the family members thought the role of the physiotherapist was. It is important that families understand the role of the physiotherapist so their expectations are aligned with the role of the physiotherapist and so that they can be satisfied (Abedi, Rostami, Ziaee, Siamian & Nadi, 2015).

In the cardiothoracic ICU in the selected public sector hospital, family members are not present during the physiotherapy treatment. However, families may discuss the physiotherapy treatment their loved one has received and therefore the family members are seen as proxies

for the patient perception of ICU physiotherapy care. According to Munyiginya and Brysiewicz (2014) family members need information about the care being provided to the patient so that families can educate themselves and understand what is happening to their loved one in order to prepare them for what they will encounter when visiting their loved one.

Family members brought up communication as an area of concern in this study, and family member's perceptions varied whether communication was important or not for family members to communicate with the physiotherapist. In this particular cardiothoracic unit, in this setting in South Africa, family members do not interact or communicate with the physiotherapist, nor do family members participate in the care of the patient with the physiotherapist in the setting included in the study. Therefore, there is no communication between the physiotherapist and family member in this specific cardiothoracic ICU in SA. On the other hand, in studies done by Jensen et al. (2017) and Mosleh et al. (2016), family members do interact with the medical professionals providing care therefore they could evaluate the communication and ask in-depth questions such as: the frequency of the communication, the understanding, consistency, completeness, honesty, and ease of getting information, whereas in this study we could only ask whether family members thought it was a necessity to communicate with the physiotherapist or not. According to Curtis and White (2008), it was suggested that communication is necessary, between family members and medical professionals, as it is an essential component for good medical decision-making in the ICU, therefore possible changes to physiotherapy and family relationship should be made in this specific ICU with regards to interaction and communication.

As illustrated in this study, communication is a necessary requirement before commencing with physiotherapy treatment to explain the process and the purpose of it. Family members have pointed out that communication is not only physically talking to an individual but includes information-sharing pre-operatively and post-operatively in the form of pamphlets or

exercise programmes as well. Pre-operative information-sharing reduces anxiety and creates a better understanding of what to expect. This results in patient and family being more satisfied with treatment process (Sjoling, Nordahl, Olofsson & Asplund, 2003; Whyte & Grant, 2005). Despite the benefits of providing pre-operative information, there are still numerous healthcare facilities worldwide that do not implement a formal policy or programme for giving pre-operative information (Garretson, 2004). In this specific South African cardiothoracic ICU, pre-operative information sharing is not practiced, but should possibly be looked into.

Family Involvement was a new theme that emerged from the primary study that was not specifically asked about in the interview guides. Family involvement was described as the physical presence during the physiotherapy treatment and being involved in the decision-making. It was interesting that family involvement in ICU physiotherapy care was identified as an area of improvement. As in South Africa, in this specific cardiothoracic ICU, family members are not involved in physiotherapy care, compared to other countries. Family gave a general impression that they should be physically involved in the physiotherapy care, as they provide a source of motivation and support for the patient. In the scoping review, questions regarding family physical presence during ICU care were not asked. According to Foster et al. (2012), they agreed that family should be encouraged to participate in patient care to provide support. De Beer and Brysiewicz, (2017) conducted a study in South Africa on the needs of family members in the ICU and highlighted “family as the single greatest social institution that influences a person's health” and provides a vital support to the patient and become an important voice for patients. It is the family that normally has to take care of the patient and their needs upon being discharged, so the involvement in the patient's care is of importance. The family should be educated about the patient's condition and the care

required upon discharge. Thus, they should be involved physically in the physiotherapy care and be a part of the decision-making of the care of the patient.

Family involvement in decision-making was perceived to be necessary, but only when the patient could not talk for themselves or the patient was elderly. However, even with the patient being elderly or patients who could not talk, family members were still not involved in the decision-making in the cardiothoracic ICU in this study. It is not clear whether they were approached to be involved in the physiotherapy care or if they chose not to be involved in the physiotherapy care. It was perceived that they did not need to be involved in the decision-making as they perceived patients to be independent, and that the patients may prefer to make their own decisions. In the study conducted by Jensen et al. (2017) it was stated that family involvement in decision-making of care was an area of improvement, whereas, in the study conducted by Mosleh et al. (2015), family were less satisfied when being involved in the decision-making. According to Stellson, Carr, Golden, Martin, Richmond, Delgado, and Holena (2016), it is recommended that family members should be informed and actively involved in decision-making of the care of the patient. Involving family members in healthcare delivery is desirable and necessary, and especially so in the ICU, as the family member acts as a support system to the patient (de Beer & Brysiewicz, 2016).

In SA, physiotherapists rarely interact with family members of the patient, thus this study allowed physiotherapists the unique opportunity of a deeper understanding of family members' perceptions of physiotherapy care in the cardiothoracic ICU. This is a rare opportunity that is not often available in the ICU setting due to the minimal interaction of the physiotherapist with families. Physiotherapists in South Africa can use the family members' perceptions of physiotherapy care in the cardiothoracic ICU to improve in the areas identified in this study by the family members.

3.5 Limitations, Strengths and Future Recommendations

The findings from this study are not transferable to families of other ICU patient populations, but limited to the family perception of cardiothoracic ICU physiotherapy care in a limited resource setting in South Africa where the culture, health and population context is different and cannot necessarily be generalised for all types of ICUs. The study was conducted in one tertiary hospital in Cape Town, Western Cape, so it cannot be a representation of the entire Cape Town population. Family members are not involved in the physiotherapy care in this specific cardiothoracic ICU, therefore the study is limited. The strength of the study was that there was a variety of family members who participated in the study which enabled a large pooling of different perceptions and opinions regarding physiotherapy care rendered to patients in the cardiothoracic ICU. More studies should be conducted in different ICU types to determine whether the family perceptions are transferable and more than one ICU setting should be used to getting a better representation of the Cape Town population.

3.6 Conclusion

This is one of the first studies to evaluate family perception of cardiothoracic ICU physiotherapy care in South Africa. Due to the lack of involvement of family in the cardiothoracic ICU physiotherapy care of their loved ones, the family perception of cardiothoracic Physiotherapy ICU care showed a perceived lack of understanding of physiotherapists with regard to their role, mixed views regarding the benefits of cardiothoracic physiotherapy ICU care and a perceived lack of communication between the family and the physiotherapist. A perceived lack of involvement in decision-making and presence during cardiothoracic ICU patient physiotherapy treatment was reported. Those family members who perceived their loved ones to have improved functionally and who perceived the physiotherapy treatment to be beneficial were overall more satisfied with the

cardiothoracic ICU physiotherapy care. There are definitely areas for improvement in the physiotherapy care of the patient in the cardiothoracic ICU in this resource limited healthcare setting as perceived by the family, and physiotherapists need to move towards family-focused care in the ICU setting especially in South Africa ICUs. Healthcare, including the ICU, should re-evaluate family involvement in the care of the patient especially in South Africa, where this practice has not yet been implemented. Involving the family in the ICU physiotherapy care of ICU patients may provide motivation and support to these patients during the treatment. Family members are involved in the care of the cardiothoracic ICU patient following discharge and therefore involvement of family in this care may assist with the follow through of care and rehabilitation at home. It would be beneficial to explore the perception of patients of the physiotherapy care rendered in the cardiothoracic ICU setting.



Chapter 4

Patient Perception of Physiotherapy Care Rendered in the ICU

4.1 Introduction:

Over the past few years, the healthcare system was based on medical practitioners' opinions, but now it is considered patient-centred (de la Cueva-Ariza, Romero-Garcia, Jover-Sancho, Delgado-Hito, Acosta-Mejuto & Sola-Ribo, 2014). Medical professionals have recognised patient perception of care as an essential measure for providing a quality healthcare service. Patients are regarded as consumers of the healthcare service. Thus, their perception of care can be used to measure the quality of care being rendered (Aribia, Thanni & Adebayo, 2007). Patient perception of care can help improve the overall care by enhanced decision-making regarding management and treatment of the patient, and assist in improving quality of care and reducing the costs of care. (Al-Abri & Al-Balushi, 2014).

Despite patient perception of health care becoming increasingly crucial for patients and healthcare facilities it is rarely measured in the intensive care setting (Boev, 2012). Measurement of patient perception of Intensive Care Unit (ICU) care is seldom evaluated. This lack of measurement of ICU patient perception may be due to the large doses of sedatives being given to ICU patients that have been reported to affect their ability to participate verbally in surveys or interviews due to an inability to communicate and later a lack of memory of their ICU stay and care. However, in recent years there has been a shift towards early reduction in sedation practices and early awakening, breathing and mobilising practices for ICU patients due to the reported benefits of such practices such as reduced ICU

length of stay, reduced ICU costs as well as reduced loss of memory for ICU patients (Dafoe, Stiller & Chapman, 2015). Therefore, it has become increasingly possible to measure patient perception of care and services provided in the ICU setting as it will be more likely that patients remember their ICU stay and communicate about their stay with regard to the care and services received in this setting (Schweickert, Pohlman, Pohlman, Nigos, Pawlik & Esbrook, 2009).

The critical patient admitted to the cardiothoracic ICU is managed by a multidisciplinary team (Gosselink, Clerckx, Robbeets, Vanhullebusch, Vanpee & Segers, 2011). The multidisciplinary team includes a physiotherapist. The role of the physiotherapist in the cardiothoracic ICU consists of the management of airway secretions, mobilisation and muscle training, cardiac rehabilitation in the acute phase which aims to reduce ventilator dependency and weaning difficulties (Ambrosini, Janah & Vaghegghini, 2011). Since the patient is seen as the consumer of care, it is important to understand their perception of the physiotherapy care received and services provided. This would allow physiotherapists to adjust and improve the care and services they provide.

A study on the patient perception of physiotherapy care in the surgical ICU in South Africa has been conducted but has not yet been published (van Nes, 2016). The authors conducted a scoping review to develop their qualitative interview guide. The findings of this South African study highlighted that the patients' perception of physiotherapy care in a surgical ICU was that physiotherapists should be aware that maintaining communication and a professional demeanour assists in preserving the trust in the patient-physiotherapist relationship. Furthermore, there should be clear communication between the physiotherapist and the patient to ensure both parties understand what is expected from each other and to

manage patient expectations. The patients confirmed the value of ICU physiotherapy and the benefits of early mobilisation in the ICU.

The patient perceptions of surgical ICU physiotherapy care may not necessarily be the same as the patient perception of cardiothoracic ICU physiotherapy care due to the variations of physiotherapy management and treatment practices in different ICU settings in which patients with different intensive care conditions are admitted and managed (Hanekom, Louw & Coetzee, 2012). In South Africa, there are eight cardiothoracic ICUs in the public sector that provide physiotherapy services as part of the multidisciplinary care package. As physiotherapy management and treatment of cardiothoracic ICU patients are different to other ICU patients and the physiotherapy mobilisation protocol for these patients is as early as day zero or day one post-operatively, the patient perception of physiotherapy care in the cardiothoracic ICU would provide insight as to the quality of this care in this resource limited setting. Therefore, the purpose of this study was to explore and describe patient perception of physiotherapy care in the cardiothoracic ICU in the Western Cape South Africa.

4.2 Methods

4.2.1 Study design

A descriptive exploratory qualitative research design was used. The advantage of this design is that it allows the researcher to describe an event that has been observed and seeks to understand it and to explore factors that influence it (Polit & Beck, 2010).

4.2.2 Research Setting

The research setting for this study was the cardiothoracic ICU at a centrally located, university-affiliated academic hospital in the Western Cape, South Africa (SA). The cardiothoracic ICU has twenty-four ICU and high care beds. There is a multidisciplinary team consisting of the cardiothoracic surgeon and doctors, anaesthetist, ICU nurses, dietician, and physiotherapist. There is one physiotherapist allocated to the cardiothoracic ICU. The physiotherapist, however, is not exclusively allocated to the ICU but has ward duties. The physiotherapists rotate through this unit on a quarterly basis. During the study there were therefore two physiotherapists that worked in the unit, one every quarter. During the week there are physiotherapy students working in this unit as well. During the week the physiotherapists managed the patients in the unit mainly in the morning and would go back in the afternoon if needed. Over the weekend different physiotherapists rotate and work in the cardiothoracic ICU. The referral policy for weekend physiotherapy in the unit states that only three patients can be referred for weekend physiotherapy. There is a physiotherapist on call (after hours) on a rotation basis during the week and weekends. The physiotherapists do not include the family members in any part of their management or care of the patient in the cardiothoracic unit. Families are only there for visiting and will only know about receiving physiotherapy and what it entails if the patient discusses it with the family.

4.2.3 Population

The study population consisted of all patients admitted to the cardiothoracic ICU. A total of 627 patients were admitted during the study period therefore available for selection.

4.2.4 Sample

Sampling Method: A purposive sampling method was used for this study based on specific inclusion and exclusion criteria. Inclusion criteria are: i) 18 years and older; ii) able to

communicate in English, Afrikaans or Xhosa; iii) clearly remembers the ICU and physiotherapy care; iv) received more than three physiotherapy sessions; and v) no cognitive impairments based on Standardised 5 Questions (S5Q) of 5/5, vi) Glasgow Coma Scale (GCS) of 15/15. Exclusion criteria are: i) under the age of 18 years old; ii) unable to communicate in English, Xhosa or Afrikaans; ii) had no memory of the ICU or physiotherapy care, iii) received less than 3 physiotherapy sessions, or iv) presented with cognitive impairments; and v) has a GCS of below 15/15 and S5Q of below 5/5.

Cooperation and consciousness were determined and aided by the use of the GCS and S5Q (Addendum J and Addendum K). The patients had to score 5/5 for the S5Q for selection to participate and had to score 15/15 for the GCS for the inclusion of the study. Patients that scored below the maximum total for each score were excluded from the study. Patients that were available for inclusion were then purposefully selected for the study according to pre-determined characteristics. The pre-determined characteristics included patient demographics (age, gender), pre-admission status (education, employment), admission status (Diagnosis and Surgical Procedure) and ICU management (mechanical ventilation/not and ICU Length of Stay [LOS]).

Sample Size: According to Crouch and Mckenzie (2006) approximately 20 participants have been suggested for a quantitative study. We aimed to recruit for 8-15 participants. However, the final sample size was dependant on when data saturation occurred (no new data emerging).

4.2.5 Instrumentation

A semi-structured interview guide developed by van Nes (2016) was adopted and used for this study to measure patient perception of physiotherapy care rendered in the ICU (Appendix L). The guide was developed based on a scoping review on how to measure patient

perception of physiotherapy care in Surgical ICU (van Nes, 2016). The interview consisted of open-ended questions regarding the patient's experience of physiotherapy care, Tangibility (included the environment, equipment used, duration of physiotherapy and the physiotherapy attire), Reliability (included feeling safe and trusting the physiotherapist), Assurance (included the knowledge of the physiotherapist and the expectations patients had), Empathy (included how the physiotherapist treated the patient emotionally, mentally and physically), Responsiveness (included communication and decision making), and Satisfaction of care of physiotherapy care.

Pilot Study

A pilot study was conducted to ensure saliency of the semi-structured interview guide, using two patients. The pilot study was used to determine the length of the interviews which was approximately 30 to 40 minutes. Interview length depended largely on the quality of the interview and the patient's ability to participate. The data from the pilot study was included in the study sample. No changes were made to the semi-structured interview guide as all questions were appropriate and were understood clearly.

4.2.6 Procedure

4.2.6.1 Ethics

The researcher first obtained ethical clearance from the University of the Western Cape Research Ethics Committee and BMREC. Following ethical clearance, permission was granted to the researcher from the TBH Research Ethics Committee and cardiothoracic ICU manager. The study was conducted according to the ethics principles of human research as described in the Declaration of Helsinki. A further detailed explanation of the ethical procedure can be found in Appendices (Appendix G).

4.2.6.2 Recruitment of Sample

The researcher visited the unit every second day to recruit a sample of patients. The unit nurse in charge was asked only to confirm whether patients recruited by the researcher had family members visit them in the unit as the researcher required a patient and their respective family members as a set for the study as a whole. The participants were approached by the researcher and were informed (Appendix M) about the study and were asked to give written consent (Appendix N) for their participation. To minimise coercion, the patients were only asked once to participate and were made aware that they could refuse to partake in the study or that they could withdraw from the study at any time without consequence. Patients who had refused were therefore not included in the study (n=7).

4.2.6.1 Data Collection

Relevant socio-demographic (age, gender, education, employment, contact details for family) and clinical data (diagnosis and surgical procedure, ventilation, length of stay) of the included patients were extracted from the patient's folder and captured in a data extraction sheet.

Individual face-to-face interviews were conducted by the researcher. The researcher conducted a face-to-face interview as this allowed the researcher to be in control and keep the interviewee focused and on track until completion of the interviews. It is advantageous to use individual face-to-face interviews, as the interviewer was able to capture verbal and non-verbal cues (Hoffmann & Szolnoki, 2013). Patients were recruited between day four and day seven post-operative, which was considered as being discharged from the ICU. The patients were discharged from the ICU beds to high care and ward rooms within the ICU. Interviews did not take place in the actual ICU bed in a state that the patient was vulnerable to coercion. The GCS was evaluated and the researcher conducted the S5Q test with each patient. Patients who met the GCS and S5Q were asked to participate. Interviews took place at Tygerberg Hospital. All interviews were audio-taped using a voice recorder. The interviews with the

patients took place upon discharge from the cardiothoracic ICU. A decision was made by the primary investigator to conduct interviews once the patient was discharged from the cardiothoracic ICU so that the patient had the full exposure of the care received during their ICU stay and had enough time to communicate with their family regarding the care received. Throughout the process, the researcher summarised and confirmed data collected during the interview for verification of understanding. The primary researcher attended a lecture regarding the different data collection methods and how to conduct a face-to-face interview. Upon the first interview, an experienced researcher sat in the pilot interviews and gave tips and pointers to ensure competency. A trained translator, a qualified physiotherapist, was made available for both Afrikaans and Xhosa speaking interviewees, however no patients required to be interviewed in Xhosa, only in Afrikaans.

4.2.7 Data Analysis

All audio-taped data was transcribed verbatim by an independent transcriber. Data was analysed using a deductive-inductive content analysis. The researcher verified the transcription against the audiotapes for accuracy. The data was analysed using the six steps prescribed by Braun and Clarke (2006) using deductive-inductive thematic content analysis. The researcher first familiarised herself with the data by reading the transcripts a few times and listening to the audio-taped data. After the researcher was familiar with the transcripts, the data for each participant and the participants as a whole was coded. The codes were grouped into categories; themes were generated based on categories.

4.2.8 Trustworthiness: Credibility, Conformability, Transferability, and Dependability

The researcher established credibility and truth-value through checking the audio-taped data with that of the originally transcribed interviews. After the data collection, member checking

was done (Brit, Scott, Cavers, Campbell, & Walter, 2016). Eleven (85%); patients were willing to participate in the member checking which was done telephonically. The remaining two patients were unreachable telephonically. Transferability was ensured by the dense description of the results through quotations while maintaining the meaning of the participants' response.

Confirmability was established by a peer reviewer [FK] reading the transcripts and generating themes independently. A reflective diary documenting the process of the study facilitated the researcher in avoiding, bias (Creswell & Miller, 2000; Polit & Beck, 2004). Dependability and credibility were further safeguarded through triangulation of the collected data, namely: 1) the audio-taped interviews, 2) transcriptions and 3) the researcher's field journal.

4.3 Results

Thirteen patients were included in the study of which (54%, n=7) were female. Table 4.1 presents the demographics of the patients included in the study. While all the age categories were presented, most of the participants (38%, n=5) were in the 61 to 70 age category. English was the most common language spoken and most participants concluded their education in high school. The majority of the patients underwent a Sternotomy and post-operatively required only a face mask for ventilation. All 13 patients went for elective surgery with no patients admitted for emergency surgery. This specific cardiothoracic ICU does have emergency surgical cases, but they are rare.

Table 4.1: Patient Characteristics

Characteristics	<i>n</i> =13
Age (years)	
19 to 20	<i>n</i> =0
21 to 30	<i>n</i> =1
31 to 40	<i>n</i> =1
41 to 50	<i>n</i> =2
51 to 60	<i>n</i> =3
61 to 70	<i>n</i> =5
71 to 80	<i>n</i> =1
Home Language	
English	<i>n</i> =5
Afrikaans	<i>n</i> =4
Xhosa	<i>n</i> =4
Educational Level	
No Education	<i>n</i> =2
Primary School	<i>n</i> =3
High School	<i>n</i> =6
Tertiary Education	<i>n</i> =2
Diagnosis	
Sternotomy	<i>n</i> =12
Thoracotomy	<i>n</i> =1
Ventilation	
M/V	<i>n</i> =1
F/M	<i>n</i> =11
RA	<i>n</i> =1

Mechanical Ventilation (M/V); Face Mask (F/M); Room Air (R/A)

4.3.1 Themes

Eight themes emerged from the data analysed. These included: Physiotherapy Management of Patients, The Physiotherapists – Skill, Knowledge and Professionalism, Continuity of

Care, Tangibility, Physiotherapy Benefits, Decision-Making, Communication and Satisfaction of Physiotherapy ICU Care.

4.3.1.1 Physiotherapy Management of Patients

Patients described multiple physiotherapy techniques done during the session in the cardiothoracic ICU. The treatments included were chest physiotherapy, breathing exercises, bed exercises and mobilisation. Most patients described using a 'PEP bottle' and breathing exercises that they felt assisted their pain and loosened phlegm.

PP01: "Breathing exercises with this bottle, walking up and down the corridor. Uhm, she checks my lungs all the time...she was hitting me on my back and loosening up the build up inside the lungs and helping me cough, yeah."

PP02: "They ask me to blow that bottle of water and cough because they said I must put those things that are coming out of my chest. Uhm... also walked-took a walk... What else... Because she massaged me at the back those things that are still there in my chest that must still come out so it was those things."

PP03: "The first thing, they take me out of bed, they take me out of bed, put me in a chair and let me blow in that bottle. Normally I blow ten times, they started me with ten times and then I blow ten times and then I stop. And then I do that exercise, lifting up your arms and putting them down, lifting them up and putting them down and then cough and then if there is something, blockage, you know, and then you cough again, there's something coming out and then you just like blow it out and then after that, they take you for a walk, taking me for a walk the same day. I was just standing there, and I just did like, my steps there."

PP04: "Well, she made me get out of bed and sit for a very long time, then I had to blow into the bottle for the whole day and then try and cough to get the stuff out of my lungs. Then we also walked when I felt stronger."

All patients were mobilised. They explained that they were usually first moved to the chair and then progressed to walking in the ICU, with the assistance of the physiotherapists. If patients were unable to go into the chair on day one, post-operative bed exercises were done. Some patients described mobilising as challenging on the first day as they felt dizzy.

PP05: "When you stand up you feel dizzy and stuff so you need someone to train you how to do this and that because it's like the first time when you are walking when you have on the bed for a very long time. The first time I stood up I had to lift my one leg up, one leg up it was just tiring at first because it was my first time but then it came easy."

PP06: "...they took me down the passage so at least there is some movement. I didn't have balance the other day and then it started. We just walked up to there, almost to the end of that's side and then we came back so it was okay."

There was a general sense of patients feeling safe during the physiotherapy sessions specifically when being mobilised.

PP07: "I think I feel safe because first I knew she knows what she was doing and then even when we walk, she's not far from me, she's holding me from behind and stuff. So she expect anything and I feel safe I do feel safe."

PP08: "Strange enough, it's a tiny girl but with a firm grip. And that made me feel safe."

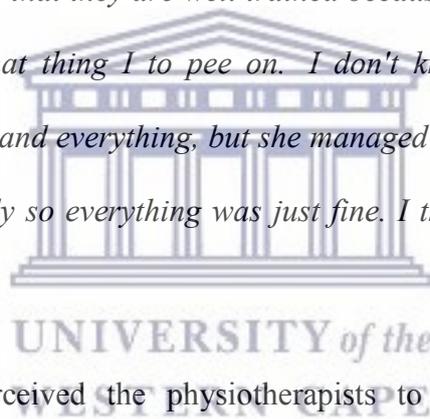
PP09: “...Yeah I did feel safe... They gave me clear instructions on how to do things and they were always right by my side in case something happened.”

4.3.1.2 The Physiotherapist’s Skill, Knowledge and Bedside Manners

Patients felt the physiotherapists were knowledgeable and competent in their abilities, knowing that they had studied or were studying to become a physiotherapist. The physiotherapists displayed confidence when treating patients in complex situations, which gave the impression to the patients that the physiotherapists knew what they were doing.

PP07: “She knew what she was doing. A person can see. She knew exactly what she was doing.”

PP04: “Mmm... I think that they are well trained because at first I have a drain in my stomach and I had that thing I to pee on. I don't know I forgot the name... The catheter and the drips and everything, but she managed to stand me up what all those tubes going in my body so everything was just fine. I think she is... she knows what she is doing.”



The patients in general perceived the physiotherapists to be friendly, well-mannered professionals who exhibited traits of being able to provide motivation, be kind, helpful and the ability to work well with others in a pleasant but firm manner.

PP10: “Okay, it’s like um, you know, I think the positiveness of the physio and person themselves or herself. It affects you.”

PP08: “... she talked well. She was not like rude. She ask you something nice, can you stand up, can you do this, always supporting you... Because I remember the first day, she told me that you are not going to be able to walk now. If you try to walk on yourself, you will fall. That’s why you need my support and everything when you move, so that you don’t like try to move yourself, no, I’ll move you.”

The physiotherapists were always described as neatly dressed and professional.

PP06: “Yeah, because she was wearing that uniform. The navy one with written physiotherapist so they were just okay.”

PP07: “She was dressed very neat in her uniform.”

Some physiotherapists' interaction with the patients was perceived as not being interested in the patient but that the physiotherapists were only there to perform their job or deliver a service and leave (unsocial) and were sometimes perceived to be a bit distracted.

PP11: “...it’s like more focus on finishing the job than actually bonding with the patient...”

PP12: “Sometimes a bit distracted but I think then we all have a weakness in life today given those things. You know when you’ve got somebody who’s actually coming in to deal with you and they’ve got calls coming in....”

PP01: “Look I had this heart operation. I want to get healthy, I want to get better. To me, a physio’s work is to motivate you. Do things that will make you feel like you wanna live again. She didn’t.”

4.3.1.3 Continuity of Care

We asked patients about the continuity of care - the use of the same physiotherapist throughout their ICU stay until discharged. There were mixed feelings with regard to having the same physiotherapist throughout their treatment. Some patients expressed the importance of continuity of care and would have preferred the same physiotherapist, as it would help foster a relationship with the physiotherapist and instil confidence in the patient.

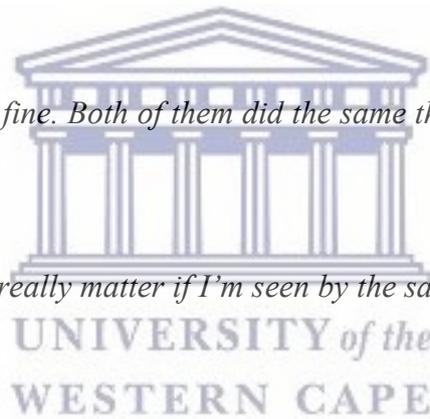
PP11: "I would think that's the same one should but at the most two. So that you can build up both of confidence up with them as they become might.... everyone knows that at Tygerberg you are luckily that you are seen by the same doctor the second time, so..."

PP13: "I would prefer the same person throughout.... Because you build up with the person... then when a new one comes you have to start from the beginning with that person..."

Other patients did not mind being seen by multiple physiotherapists, as they felt if they did the same treatment as the previous physiotherapist and knew what they were doing, therefore it did not matter.

PP09: "Uhm... it was fine. Both of them did the same thing and knew what they were doing."

PP06: "No, it doesn't really matter if I'm seen by the same physiotherapist as long as they doing their job."



4.3.1.4 Tangibility

Tangibility refers to the physical aspects included in physiotherapy care. They relate to the environment, equipment, appearance of the physiotherapists and the time duration and frequency of the therapy. When asked about the equipment used by physiotherapists in the management of patient care, some patients were not sure what equipment was being used as they did not consider the chair or PEP bottle as equipment, whereas other patients expressed the fact that even though minimal equipment was used during the physiotherapy treatment sessions, it worked and did what was intended.

PP03: "She didn't really use any equipment? Unless the bottle is equipment."

PP05: *“She didn’t really use any equipment.... other than the stethoscope and that (referring to bottle).”*

PP02: *“The equipment is just fine because I couldn't understand it's just a bottle that I must blow with water. I even asked is that normal water that you got from the tap? Yeah and they said yes. At first, I couldn't understand why but then I saw here the processes are going. I saw okay this is actually working so yeah.”*

The majority of patients expressed that the time spent with the physiotherapist was very short and the time ranged from 10-20 minutes per day. Patients expressed the need for the amount of time spent on treatment to be improved, while patients generally perceived that the treatment time was insufficient for a 24-hour day or unsatisfied they were not seen daily as they felt that recovery could have been quicker with longer daily treatment sessions. Some patients understood that the short treatment time was due to the physiotherapist/s being busy with a long list of patients that needed to be treated.

PP05: *“About ten to fifteen minutes.... It should be longer... 'cause ten minutes is that really enough. I would think ten minutes isn't enough time to make someone better.”*

PP07: *“Um, the first one it was more than five minutes. The first one it was, yah, that was the first one. And then after that I think it was more like seven minutes... Maybe make it a bit longer. Because maybe it will improve the recovery time. The longer you do it, I think it's better. But that's just my opinion.”*

PP03: *“I would've liked a little ... more of continuity... I didn't see anyone yesterday.”*

PP06: *“Yah, if like, more time was added to the... then I think it would do much impact on somebody's life...”*

PP02: *“It was a little time, but I also saw her point as she has a lot of work. A physio has a lot of work, can’t just stand by one person.”*

The environment was seen as small and closed off, and patients felt that a bigger area could be used for physiotherapy management and treatment, like a physiotherapy gym.

PP13: *“The environment was just the room and maybe the passage. We weren’t allowed out of the ward. I think a bigger gym area would be nice.”*

PP09: *“Well, they did it in a very closed environment. Most probably a bigger space would be better.”*

PP12: *“I think the space could be bigger. Like maybe a gym.”*

4.3.1.5 Perceived Benefits of Physiotherapy Care

Almost all the patients commented on the benefits and value of participation in physiotherapy. They felt without the physiotherapy they would have stayed in bed and that their condition would not have improved but consequently worsened. Some, at first, did not realise the importance and benefit of physiotherapy until they experienced it.

PP04: *“Yeah I see it because I don't think I would have made it on my own to stand up from the bed and walk, but with the physiotherapist I got some encouragement and yeah... Yeah to do those things and to stand up and walk and do the training, yeah.”*

PP10: *“Yes, they do the right thing. They do the right thing. Because if you constantly laying and no one look after you then you will get sick from lying and get even worse.”*

PP11: *“Okay at first I didn’t think it was necessary but now I realise what it meant. It really, really means a lot. Because normally you think a therapist is just a money-*

making thing, until you need them one day... I think that they what do you call them the therapists they are just like the cherry on the cake. Whatever the doctor do they are the cherry on the cake.”

PP08: “I could feel myself get better... I could feel it in my body that I was getting stronger... I would haven’t without the help...”

4.3.1.6 Decision-Making (Treatment Goal and Plan)

Generally, patients perceived that it was not necessary to be involved in the decision-making as they expressed that the physiotherapist knew what they were doing and what needed to be done.

PP08: “It’s better they decide... They know what they are doing.”

PP09: “No, no, it’s actually better that way. They should tell me what to do, they know better.”

PP12: “I wouldn’t even know what is right and wrong to do... so they better tell me rather.”

However, some patients would have preferred to have been involved. They felt they would have been more motivated during the sessions if they were involved in the decision-making rather than being told what had to be done. The patient felt that the physiotherapy sessions should begin with the physiotherapist sitting down with the patient and discussing the strategy or plan for treatment and what the goal of the treatment would be.

PP10: “Yes. But is wrong, maybe it’s wrong, maybe it’s right, I don’t know but I want to be included. I want to enjoy. But if you don’t include me, make my heart is there but my heart needs to be here.”

PP03: *“I’m not satisfied.... At no time was I given a very clear passage or path into, look, this is where we’re going, sit down day one. Now this is where wanna work you, this is where we wanna get to. Those are our goals. How are we gonna do this together? ‘Cause she can’t do it, I have to do it.”*

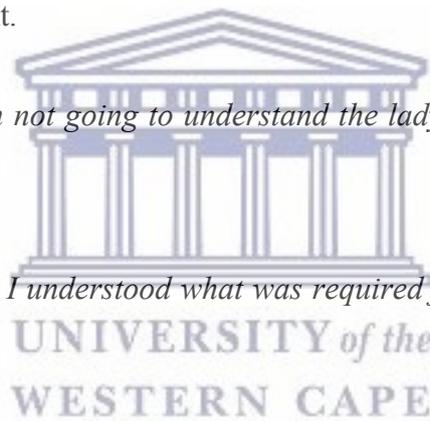
PP05: *“There was no decisions she just instructed me Yes, maybe I could have told her what’s difficult and easy for me then work on that. Maybe if I was I would have a better idea of where we were headed in the sessions.”*

4.3.1.7 Communication

There were mixed feelings with regard to communication. Some patients perceived the communication to be sufficient.

PP01: *“I thought I am not going to understand the lady because she looks foreigner but she's okay.”*

PP04: *“...it was good. I understood what was required from me, what she was trying to achieve so...”*



Others perceived that there could be a major improvement in communication between them and the physiotherapists.

PP05: *“That’s why I’m saying if maybe we sit down first, she made me understand what is it that we’re doing or if I was not in the right space of mind then, she comes back later. She explains maybe I would know things better... Because at a point I was made to understand by the doctor, by the nurses that that blowing of the bottle is more important than she did. I’m not discrediting her.”*

PP03: *“Not sufficient. I mean I would’ve liked a little more input so I knew what they were wanting and an explanation of everything”*

PP12: *“Again, I say there wasn’t much communication. She just come in the morning and then made me sit on the chair and then she’s gone again.”*

3.2.1.8 Satisfaction with Care

While all patients had different definitions for satisfaction with care, most equated satisfaction of care to being content with the care once the care was completed.

PP06: *“When I drink water, I get satisfied. Something like that?”*

PP03: *“If you have an aspiration towards reaching a point in time of recovery or of whatever it is, when you get there, that is satisfaction.”*

PP05: *“How do you put this... Did someone is doing something to you or then you are satisfied for you. You are ok with...it hundred percent it's. I think it's somewhere there.”*

PP01: *“Satisfaction, it’s like you are happy with something.”*

The majority of the patients were satisfied with the physiotherapy care they received while in the cardiothoracic ICU. Patients stated that their reasons for being satisfied were largely due to faster recovery and being able to return to their previous level of function.

PP11: *“I am satisfied. I can stand up on the bed. I can walk. I can do everything. For me I thought after the operation last week. I started the physiotherapy in Wednesday and I didn't even finish the week but I’m already done so I'm satisfied.”*

PP13: *“I am satisfied. Because I want to be better, I want to be stronger. I can feel, I can feel, every day when I woke up in the morning, I feel healthy and different and then feel strong.”*

PP07: *“Yes, because I’m better now and do everything again”*

4.4 Discussion

This study has contributed some new insights to the patient perception of ICU physiotherapy care in a cardiothoracic ICU in South Africa. The findings from the study highlighted how cardiothoracic ICU patients perceived physiotherapy care and the following themes: Physiotherapy Management of Patients, The Physiotherapist – Skill, Knowledge and Professionalism, Continuity of Care, Tangibility, Physiotherapy benefits, Decision-Making, Communication and Satisfaction of Physiotherapy ICU Care, emerged.

Overall, patients were satisfied with the physiotherapy care they received in the cardiothoracic ICU. However, there were areas of improvement required to increase the level of satisfaction namely: communication between the physiotherapist and patient, the duration of the physiotherapy treatment sessions, decision-making with regard to treatment, and continuity of care. In a study conducted by Stiller and Wiles (2008), patients reported to be satisfied with the ICU physiotherapy care received. It is important that patients are satisfied with the care they receive as they will be more compliant with the treatment plan that has been outlined (Prakash, 2010; Anhang, Elliot, Zaslavsky, Hays, Lehrman & Rybowski, 2014).

From the general discussion, the physiotherapy management of the patients was identical and had very few variations or none at all between patients. This may be due to the specific conditions and operations done in the cardiothoracic ICU, as well as the treatment being restricted due to the precautions and contra-indications of the procedure.

There were variations in the perception of patients with regard to the continuity of care by physiotherapists in the cardiothoracic ICU. There were mixed feelings about the need for the same physiotherapist to continue care from admission to discharge, as long as the same treatment and management would be followed with them. Patients perceived that the

physiotherapists were rendering identical treatments, so it was perceived that being treated by different physiotherapists during their stay in the cardiothoracic ICU did not affect their outcome. In contrast, a study conducted by Stiller and Wiles (2008) found that continuity of care and session constancy were seen positively by patients. In this study, patients perceived that there should however be a limit of two physiotherapists treating a patient, in order for patients to build a relationship with the physiotherapist. Literature states that the continuity of care is valuable and essential to medical professionals and patients. It enables improvement in the patient-medical professional relationship and allows the medical or healthcare professional to work more effectively with the patient and results in an improved clinical outcome (Sudhakar-Krishnan & Rudolf, 2007; Corrigan, 2012). However, in this study continuity of care was not always guaranteed.

The physiotherapist was seen as a skilled and knowledgeable medical professional, but lacked the ability to motivate patients during the physiotherapy sessions. It is essential that the physiotherapist motivates the patient throughout the treatment as the patient will be more willing to partake in the treatment, allowing them to reach their end goal potentially quicker (Maclean, Pound, Wolfe & Rudd, 2001). The physiotherapist lacked the ability to build a physiotherapist-patient relationship, as they were seen as not interested and distracted. In contrast, in a study by Stiller and Wiles (2008), the physiotherapist was found to be friendly and caring; this resulted the patients in being more satisfied. According to Klaber, Moffett and Richardson (1997), it is essential to have a good patient-physiotherapist relationship, as it positively affects the clinical outcome of the patient, as the patient will be more motivated to reach the end goal. In a South African study on patient perception of care in a surgical ICU conducted by van Nes (2016), physiotherapists were similarly described as skilled and knowledgeable.

The benefits and value of participation in physiotherapy in the cardiothoracic ICU was experienced by the majority of patients. They felt that without the physiotherapy care, they would not have improved functionally and that their health would have deteriorated. Some, at first, did not realise the importance of physiotherapy until they experienced it and saw the benefit. In a similar study, patients commented on the benefit of physiotherapy, which was verified by physical improvements and progression in their abilities (van Nes, 2016).

Patients had differing perceptions about their involvement in the decision-making regarding their physiotherapy treatment plan and goals. Patient participation in decision-making is encouraged, as it is associated with improved treatment outcomes and improves the patient knowledge (Vahdat, Hamzehgardeshi & Hamzegardeshi, 2014; Ng, Lee, Lee, Chew, Engkasan, Irmu, Hanafi & Tong, 2013). However, literature states that some patients prefer not to be involved in decision-making of their care (Ambigapathy, Chia & Ng, 2016). Therefore, it is essential that physiotherapists provide patients with the option to be involved in decision-making.

Tangibility refers to the physical aspects included in physiotherapy care. They relate to the environment, equipment, appearance of the physiotherapists and the time duration and frequency of the therapy. The time duration of the physiotherapy treatment was considered to be short in length and the number of physiotherapy sessions (one) during the day was seen as inadequate for faster recovery. Patients perceived that longer physiotherapy treatment sessions would speed up their recovery. However, there is currently a dearth of quantitative evidence on what the appropriate length of time for an effective treatment session is to substantiate or negate this finding. In the study conducted by van Nes (2016) patients did not comment on the time duration, but stated they preferred the physiotherapy sessions to be in the morning when they are awake and energetic.

Patients did not perceive the PEP bottle or chair as equipment used during the physiotherapy sessions. In physiotherapy practice, generally all treatment techniques are hands-on and minimal equipment is used. Treatment performed in the cardiothoracic ICU is chest physiotherapy, mobilisation and maybe bed exercises, which do not generally require the use of equipment (Stiller, 2000; Sommers, Engelbrecht, Dettling-Ihnenfeldt, Gosselink, Spronk, Nollet & van der Schaaf, 2015). Therefore, there were no perceived challenges with regard to the availability and use of equipment. The environment during the physiotherapy sessions was considered to be small and limited to the patients. ICU patients are restricted to stay within the ward as they are considered critical patients and need to be closely monitored at all times and therefore cannot be taken to the gym by physiotherapists. However, it is clear that this perception may be due to the lack of communication with patients about the role of the physiotherapists in the cardiothoracic ICU, and why care is being delivered in the particular environment and not in a gym as thought by patients. In the study conducted by van Nes (2016), patients described the ICU environment to be busy and there were mixed feelings whether the space was small and whether it was sufficient or not.

Overall, patients felt safe during the physiotherapy sessions specifically when being mobilised. Patients felt safe with the physiotherapist as they knew what they were doing and were described to be always near to the patient. According to King and Anderson (2010), physiotherapists need to be knowledgeable, skilled and have the right attitude to keep the patient safe. Therefore, physiotherapists in this unit were perceived to be knowledgeable, skilled and have the right attitude to keep the patient safe. A study (Needham, Korupolu, Zanni, Pradhan, Colantuoni & Palmer, 2010) has shown that mobilisation is safe and effective in the ICU. In another study, patients felt safe during the physiotherapy treatment in the ICU which was aided by the professionalism, reassurance and communication of the physiotherapist (van Nes, 2016).

Overall, patients were generally satisfied with the physiotherapy care in this specific cardiothoracic ICU. However, the patients did identify areas of improvement that can be implemented on to provide a better quality of care to the patients, yielding a better patient outcome. This study has provided valuable information for physiotherapists providing care and services in cardiothoracic ICUs in South Africa that can be used to improve on the service the physiotherapist provides.

4.5 Limitations, Strengths and Recommendations

A variety of patients participated in the study which enabled a large pooling of different perceptions and opinions regarding physiotherapy care rendered to patients in the cardiothoracic ICU that can be seen as a strength of the study. An Afrikaans interpreter was used, which allowed the patients to fully express themselves which is another strength of the study. The findings of this study are, however, limited to cardiothoracic ICU patients and cannot be generalised to other types of ICU patients. It is recommended that the information be used by physiotherapists working in the cardiothoracic ICU settings in order to improve quality of care and services in South Africa. It is recommended that physiotherapists implement a pre-operative and post-operative information sharing programme but not only in the ICU setting.

The cardiothoracic ICU patients recognised the value of the physiotherapist as part of the multidisciplinary team involved in the ICU care. For many patients, physiotherapy was seen as a beneficial and valuable service. Communication was highlighted as an area for improvement. Communication between the physiotherapist and patient needs to be clear and effective so that the patient may comply and benefit from the care. Physiotherapists working in cardiothoracic ICUs should focus more on patient-centred care that includes the patient in the decision-making process in order to achieve treatment goals and allow a sense of valuing

the patient's opinion regarding their care and ensuring that patients will be more co-operative during treatment sessions.

4.6 Conclusion

Patient perception of physiotherapy care in the cardiothoracic ICU has provided rich in-depth data that, compared to quantitative surveys, fail to capture the reasons for responses. Patients in this resource limited cardiothoracic ICU setting in South Africa perceived the physiotherapy care to be overall satisfying with some areas for improvement. These findings can therefore be used to maintain what is perceived as positive in the physiotherapy care of these patients and improve on aspects of cardiothoracic ICU physiotherapy care perceived as lacking. Further study regarding patient perceptions of cardiothoracic ICU physiotherapy care in the eight public sector units in South Africa will provide a more general understanding of such care and services. Physiotherapist can now use this information as a point of access in order to gain insight from the patients and make changes to their treatment approach.



Chapter 5

Overall Discussion of Family and Patient Perception of Physiotherapy Care

5.1 Preface

The study achieved its overall aim to measure the family and patient perception of physiotherapy care rendered in a cardiothoracic Intensive Care Unit (ICU) in a public sector hospital in the South African context. The study was conducted in two phases with three study aims presented as three chapters in the thesis. Phase 1 of the study included a scoping review. The scoping review was conducted in order to identify how family perception of ICU care could be measured. The information gained from the scoping review and the work (scoping review on patient perception of ICU care) of Van Nes (2016) was used to design a discussion schedule to be used in Phase 2 for the family and patient perception of care respectively. Phase 2 of the study consisted of two primary qualitative studies. The primary studies were i) to explore the family perception; and ii) explore the patient perception of physiotherapy care in a cardiothoracic ICU in a public sector hospital in South Africa. In this chapter, an integrated discussion of the study findings is outlined in three parts according to the three study aims, and highlights new contributions to and gaps in the evidence base of physiotherapy care in a cardiothoracic ICU in a resource limited setting in South Africa.

5.2 Describing a Measure for Family Perception of ICU Care

Findings from the scoping review identified that there is no gold standard outcome measure for the measurement of family perception of ICU care. Four main quantitative outcome measures for measuring family perception of ICU care were identified namely EuroFS-ICU,

FSCCQ, CCFNI and FS-ICU and some included studies used modified versions of these questionnaires. These questionnaires were found to be reliable and valid and have been described by Naidoo and Karachi (2018) in their scoping review as having sound psychometric properties. The measures identified were quantitative in nature and all studies were conducted using different methods in terms of the sampling, the timing of surveys, and administration of surveys. Studies were conducted in both developed and developing countries, but none in Africa including South Africa. A gap identified by the review was that there were no qualitative study designs including interviews to explore and describe the family perception of ICU care. However, no measure has been identified as the best measure. Perception of care can vary depending on the context, culture and population being investigated. Qualitative methods are more advantageous as it gives a detailed description of the family's perception that is not possible through the use of quantitative outcome measures (Rahman, 2017). Qualitative studies provide more in-depth aspects as to determining the perception of family regarding aspects of ICU care. The components of care or services identified in the outcomes used were communication, staff skills, support, needs, and atmosphere of ICU, management of patient, facilities and decision-making. These components can be included in a qualitative evaluation of family perception of ICU care for a health care professional of the ICU multidisciplinary team. Therefore, the information gained from the scoping review was used to answer the question in Phase 2 of this study regarding the family perception of cardiothoracic ICU physiotherapy care in the South African public healthcare setting.

It was decided that a self-developed questionnaire would be used because each OM tool used in the included studies had to be modified to suit the specific ICU setting to ensure content validity. None of the five OM tools used in the studies were appropriate to all ICU settings

worldwide, as the questions that were asked were very specific. If the OM tools used broad general questions regarding the care, it could possibly be considered suitable for any ICU worldwide and thus constitutes as a “gold” standard. The OM tools asked about the quality of care and how the patient was treated during the treatment, however this would not be applicable in the context of the Western Cape as family members do not witness the care being received by the physiotherapist. The outcome measure looked at different variations of the components of care/services and did not cover all of them. Therefore, this could be one reason why the current available OM tools could not be considered a “gold” standard. Secondly, all existing OM tools were quantitative and did not allow for family to express themselves about areas of improvement that was not asked in the OM tools about the ICU care rendered. Thirdly, the questions from the existing outcome measures were specific to family members who have witness the care rendered in the ICU rendered whereas here they did not therefore the content of the study questions may not be appropriate. Fourthly, the OM tools questions were specific to nursing care and not specific to physiotherapy. Lastly, there was no indication of which outcome measure was better and should be used. The OM tools were all developed in developed countries and due to the cultural difference from a developed to developing country cultural adaption can affect the validity of the tool.

5.3 Describing Family Perception of Physiotherapy Care in a Cardiothoracic ICU

The family perception of physiotherapy care in a cardiothoracic ICU in South Africa provided new and valuable information that can be added to the ICU evidence base. The themes Understanding of Physiotherapy Care (including the perception of the role of physiotherapists, benefits of physiotherapy and communication), Family Involvement in

Physiotherapy Care (including physical presence during treatment and decision making), and Satisfaction of Care emerged.

The perception of family of the physiotherapy care and services showed a general lack of understanding about the physiotherapy care, in terms of the importance and benefits of physiotherapy care. If a family member does not understand the role of the physiotherapist, their expectations will not be aligned with what the physiotherapist does and therefore they will be dissatisfied. If there is a good understanding of the care provided, the family will be more satisfied with it (Shona, 2009). The poor understanding of physiotherapy care was further impaired by the lack of, or no communication between the physiotherapist and family. In this SA context, families do not interact with the physiotherapist. Good communication between the physiotherapist and family is essential. Ultimately, the lack of communication led to the level of satisfaction being lower even though the families were satisfied with the care. Therefore, ICU physiotherapists in the cardiothoracic ICU need to be aware of how the families perceive their care and services. The physiotherapist should, in addition, provide education to the family and communicate with, and involve the family in the road to recovery of the patient. Findings indicated that family members perceived that at some level of the cardiothoracic ICU patients' physiotherapy care, they should be involved and present and have some input with regard to decision-making about care provided. Family members perceived communication as an important aspect of the physiotherapists care and services in order for them to understand how they could be involved in the continued care of their loved one when in hospital and at home.

Physiotherapists should as well try to implement pre-operative information sheets to elective surgery patients and post-operative information sheets elective and emergency patients to improve the communication and understanding of the physiotherapy care. This may improve

the quality of care and satisfaction of care as perceived by the family of the critically ill cardiothoracic ICU patient.

An unanticipated theme that emerged was Family Involvement in the Physiotherapy Care. This was interesting as, in the South African context; family members are not actively involved in the physiotherapy ICU care. Family members clearly expressed that there is a time in the process of physiotherapy care when the family should be involved in the physiotherapy care and exceptions need to be made to involve the families when appropriate and necessary, such as when the patient is elderly or cannot communicate for themselves. Family should be encouraged to participate in the patient care in order to motivate and support the patient during their treatment (Foster, Armstrong, Buckley, Sherry, Young, Foliaki, James-Hohaia, Thradom & McPherson, 2012). Having this in mind, physiotherapists in the ICU setting (cardiothoracic) should have an open mind with regard to involving the family members in decision-making or being physically present in the physiotherapy treatments with, of course, permission from the patient as well.

Even though there were areas of improvement that were identified by the family members they were still satisfied with the physiotherapy care as their loved ones were fully functional once they were discharged. However, we as physiotherapists can improve on the family members' level of satisfaction.

5.4 Describing Patient Perception of Physiotherapy Care in a Cardiothoracic ICU

Communication was perceived by the patients to be an important part of the physiotherapist-patient interaction. It was identified that the communication was good, but with areas for improvement in terms of explanation of treatment techniques used by the physiotherapist. Good communication is perceived to assist patients in their understanding of the care

provided and the benefits, and thus improved both their compliance and adherence to physiotherapy treatment in the cardiothoracic ICU. Due to the lack of explanation of the treatment techniques the patients failed to understand how the treatment techniques benefitted them. According to the studies by Ashworth (1987) and Oluwadiya, Olatoke and Atibia (2010) communication was seen as an area for improvement, as effective communication and consistent information are fundamental to patients to feel at ease, especially being in a strange environment. Thus influencing the patients' overall perception of care in the ICU.

There is moreover a clear need for pre-operative cardiothoracic ICU physiotherapy education to those patients who have planned surgeries, as perceived by these ICU patients. The pre-operative information will allow the patient to be more prepared and know what is needed from them during the recovery period. This will allow the patient to be more satisfied with the care as they are prepared and motivated. Post-operative education is as just as important as it will inform the patient what can and cannot be done after discharge and when normal activities can be resumed. In summary the pre- and post-operative information may assist in improving the quality of ICU physiotherapy care and satisfaction of ICU physiotherapy care as perceived by the cardiothoracic ICU patient.

Physiotherapists need to make their physiotherapy sessions more patient-centred as they do not involve them in the decision-making regarding treatment plans and goal setting, or give them the option of participation. Due to the lack of involvement in decision-making, patient adherence to treatment may be less and result in a lower level of compliance and satisfaction (Vahdat, Hamzehgardeshi, & Hamzehgardeshi, 2014; Ng, Lee, Lee, Chew, Engkasan, Iemi, Hanafi & Tong, 2013). Patients need to be felt that they are important and their opinions matter, so that a physiotherapist-patient relationship is built which will encourage a motivated and compliant patient.

The duration of physiotherapy treatment was a concern for the general patient population as they felt the physiotherapy sessions were short and insufficient for a faster recovery. However, there is a dearth of literature that substantiates that it may or may not be true that a longer treatment session would yield a faster recovery and improved outcome. This is potentially seen as an area of improvement, as patients need to be made aware that it is not the length of the sessions that is important, but more the quality of the treatment they received and this needs to be communicated to the patients to highlight the importance of individualised care based on physiotherapist assessment. As there is no special recipe on how to treat cardiothoracic ICU patients, it is all determined based on how the patients present and where they want to be at the end of the physiotherapy sessions.

5.5 Limitations

Limitations for the study exists and these are described per study conducted and must be taken into consideration when interpreting the results of each study.

5.5.1 Limitations of the Scoping Review

- The databases used in this review were limited due to limited databases available and accessible to the researcher on the University website, although databases such as Pubmed and EBSCOhost, including Medline, would have provided most papers included in smaller databases and therefore this may be a minor limitation.

5.5.2 Limitations of the Family Perception of Physiotherapy Care in Cardiothoracic ICU

- The findings from this study are not transferable to families of other ICU patient populations but limited to the family perception of cardiothoracic ICU physiotherapy care in a limited resource setting in South Africa where the culture, health and

population context is different and cannot necessarily be generalised for all types of ICUs.

- The study was conducted in one tertiary hospital in Cape Town, Western Cape so it cannot be a representation of the entire Cape Town population.
- Family members were not involved in the physiotherapy care in this specific cardiothoracic ICU therefore the study is limited.

5.5.3 Limitations of the Patient Perception of Physiotherapy Care in Cardiothoracic ICU

- The limitation is the perceptions of cardiothoracic ICU patients cannot be generalised to other types of ICU patients.

5.6 Strengths of the Study

5.6.1 Strengths of the Scoping Review

The strengths of the scoping review are as follows:

- The review was that studies were not limited to English articles.
- The scoping review search was conducted from inception of the databases up to and including the 20th June 2018.

5.6.2 Strengths of the Family Perception of Physiotherapy Care in Cardiothoracic ICU

- The strength of the study was that there were a variety of family members who participated in the study, which enabled a large pooling of different perceptions and opinions regarding physiotherapy care rendered to patients in the cardiothoracic ICU.

5.6.3 Strength of the Patient Perception of Physiotherapy Care in

Cardiothoracic ICU

- A variety of patients participated in the study, which enabled a large pooling of different perceptions and opinions regarding physiotherapy care rendered to patients in the cardiothoracic ICU that can be seen as a strength of the study.
- An Afrikaans interpreter was used which allowed the patients to fully express themselves which is another strength of the study.

5.7 Recommendation for Future Studies

Future research should concentrate on obtaining data of family and patient perceptions of physiotherapy care in other ICU settings because patient demographics and diagnoses may vary from unit to unit. The study was conducted in a public sector hospital in South Africa and it cannot be assumed that findings from this project can be generalised to the general South Africa population, due to the differences in public and private healthcare in the country. Future studies can evaluate the family and patient perception of physiotherapy care in various ICU settings in both the public and private sector to have a generalised understanding of the perception of ICU and ICU physiotherapy care in the country. Physiotherapists in the cardiothoracic ICU should work on improving the understanding of physiotherapy of the family and improve communication between the family, their loved one and the physiotherapist through involving the family in physiotherapy care and allow or provide family and patients to be involved in decision-making regarding their needs for physiotherapy care in the cardiothoracic ICU in order to improve the overall quality of ICU physiotherapy care. Patients perceived that the cardiothoracic ICU physiotherapy treatment time was insufficient. Future studies should look at what is an appropriate treatment duration

time for an ICU physiotherapy treatment session and its effect on the outcome of the ICU patients including cardiothoracic ICU patients as there is a dearth of evidence available.

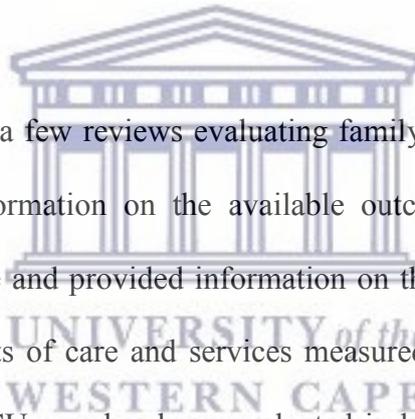
5.8 Summary of Findings

- i) Family perception of ICU care can be measured by quantitative questionnaires namely CCFNI, EuroFS-ICU, FSCQ and FS- ICU which are available, reliable and valid. However, no “gold” standard measure or best questionnaire has been identified. Qualitative exploration of the family perception of ICU care may provide richer data and provide a deeper understanding of the family perception of ICU care.
- ii) The qualitative enquiry of family perception of cardiothoracic ICU physiotherapy care highlighted the lack of understanding of the physiotherapists, including their role and the benefits of physiotherapy, which was exacerbated by the lack of communication. There was a lack of family involvement in the physiotherapy care, specifically the family’s physical presence during treatment and involvement in decision-making. However, there was an overall feeling of satisfaction with the care as patients did recover.
- iii) The qualitative enquiry of patient perception of cardiothoracic ICU physiotherapy care highlighted communication, physiotherapy management of patient, the physiotherapist’s skills, knowledge and bedside manners, decision-making, tangible issues such as the environment, equipment used, duration of treatment and physiotherapists attire, the perceived benefits of physiotherapy and continuity of care as areas of improvement in the study. However, there was an overall feeling of satisfaction with the care.

Chapter 6

6.1 Project Conclusion

In South Africa (SA), the family and patient perception of Intensive Care Unit (ICU) physiotherapy care in the cardiothoracic ICU has not been evaluated. However, in this transforming healthcare system, where patient care in the ICU has progressed to patient and family focussed care, the findings of this study are timely and useful to healthcare professionals including physiotherapists in the ICU setting. The aims of the study were achieved and a relatively new body of knowledge has been added to the ICU literature or evidence base.



The scoping review is one of a few reviews evaluating family perception of ICU care. This scoping review provided information on the available outcome measures for measuring family perception of ICU care and provided information on their reliability and validity but specifically on the components of care and services measured by these outcome measures. While family perception of ICU care has been evaluated in both developed and developing countries and in different ICU settings evaluating the multidisciplinary team and one study evaluating the ICU physiotherapist, no study evaluating the family perception of cardiothoracic ICU physiotherapy care in Africa, in particular the South African context was available.

Family involvement in the care of the ICU patient and family-focused care in the South African ICU is a recent development in ICU care and evaluation of quality of care. Therefore, ICU healthcare professionals can use the information gained from this review to evaluate family perceptions of care in ICUs in SA and other countries as the context, culture and

populations differ in these settings and may provide new findings that can assist in the improvement of ICU quality of care. While it is clear that quantitative measures are available, no “gold” standard outcome measure for family perception of ICU care is available and a qualitative enquiry and exploration is recommended for future studies to provide rich data and an in-depth understanding of the topic.

Family perception of cardiothoracic ICU physiotherapy care in a cardiothoracic ICU in the Western Cape Province in SA was explored. The scoping review provided the components of care and services that could be used to develop the discussion schedule for this study. The study is one of the first studies exploring family perception of cardiothoracic ICU physiotherapy care in SA in a public sector hospital. Although family members are not involved in the care of the cardiothoracic ICU patients, they do visit and discuss the management or care received by their loved ones with their loved ones. Family members are therefore seen as proxies for measuring family perception of care.

Even though the family members were not a part of the physiotherapy care in this setting, we were able to explore the perception of physiotherapy care with family members who were aware of this care being received by their loved ones.

Findings indicated that family members want to be involved in the physiotherapy care (being present and decision-making) at some level. The family members reiterated that communication is an essential aspect of the physiotherapy care and should be further installed in communication and by means of pamphlets.

Furthermore, patient perception of cardiothoracic ICU physiotherapy care in a cardiothoracic ICU in the Western Cape Province in South Africa was explored. The study is one of the first studies exploring patient perception of cardiothoracic ICU physiotherapy care in South Africa

in a public sector hospital. Patient perception of ICU physiotherapy may be different depending on the type of ICU (specific ICU conditions), population and care processes in the particular ICUs.

The finding of the study has shown a more patient-centred care approach will improve the patient's perception of care provided. By attaining a patient-centred care approach, communication is key, whether it be verbal or by literature given to the patient. This improvement in the physiotherapist-patient interaction, communication and pre- and post-operative treatment may assist in improving the quality of ICU physiotherapy care and satisfaction of ICU physiotherapy care as perceived by the cardiothoracic ICU patient.

In this dynamic and complex environment where practices are continually changing due to the development of new evidence, including ICU physiotherapy clinical guidelines and protocols to improve the quality of care through improved patient outcomes and reduced costs, measuring family and patient perception of care in the ICU is invaluable in providing insight into the needs of family and patients in the ICU. This knowledge can assist ICU healthcare professionals, including physiotherapists, to adapt and improve care and services to ensure "high" quality of care in the ICU.

Reference List

- Abedi, G., Rostami, F., Ziaee, M., Siamian, H., & Nadi, A. (2015). Patient's Perception and Expectations of the Quality of Outpatient Services of Imam Khomeini Hospital in Sari City. *Materia Socio-Medica*, 27(4), 272.
- Al-Abri, R., & Al-Balushi, A. (2014). Patient Satisfaction Survey as a Tool Towards Quality Improvement. *Oman Medical Journal*, 29(1), 3.
- Alvarez, G. F., & Kirby, A. S. (2006). The Perspective of Families of the Critically Ill Patient: Their Needs. *Current Opinion in Critical Care*, 12(6), 614-618.
- Ambigapathy, R., Chia, Y. C., & Ng, C. J. (2016). Patient Involvement in Decision-Making: A Cross-Sectional Study in a Malaysian Primary Care Clinic. *BMJ Open*, 6(1), 1-7.
- Ambrosino, N., Janah, N., & Vagheggini, G. (2011). Physiotherapy in Critically Ill Patients. *Revista Portuguesa de Pneumologia (English Edition)*, 17(6), 283-288.
- Angus, D. C., & Black, N. (2004). Improving Care of the Critically Ill: Institutional and Health-care System Approaches. *The Lancet*, 363(9417), 1314-1320.
- Ariba, A. J., Thanni, L. O., & Adebayo, E. O. (2007). Patients' Perception of Quality of Emergency Care in a Nigerian Teaching Hospital: The Influence of Patient-Provider Interactions. *The Nigerian Postgraduate Medical Journal*, 14(4), 296-301.
- Arksey, H., & O'Malley, L. (2005). Scoping Studies: Towards a Methodological Framework. *International Journal of Social Research Methodology*, 8(1), 19-32.
- Auerbach, S. M., Kiesler, D. J., Wartella, J., Rausch, S., Ward, K. R., & Ivatury, R. (2005). Optimism, Satisfaction with Needs Met, Interpersonal Perceptions of the Healthcare Team,

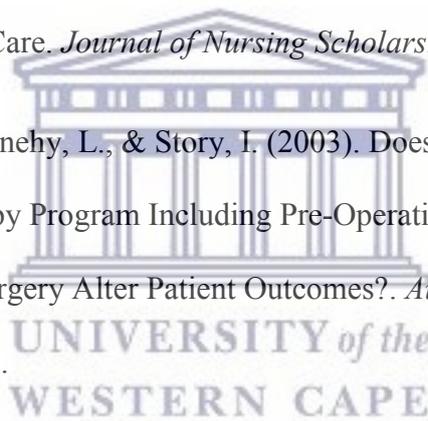
and Emotional Distress in Patients' Family Members During Critical Care Hospitalization. *American Journal of Critical Care*, 14(3), 202-210.

Bellou, P., & Gerogianni, K. G. (2007). The Contribution of Family in the Care of Patient in the Hospital. *Health Science Journal*, (3). Retrieved from: <http://www.hsj.gr/medicine/the-contribution-of-family-in-the-care-of-patient-in-the-hospital.pdf>

Brit, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member Checking: A Tool to Enhance Trustworthiness or Merely a Nod to Validation?. *Qualitative Health Research*, 26(13), 1802-1811.

Boev, C. (2012). The Relationship Between Nurses' Perception of Work Environment and Patient Satisfaction in Adult Critical Care. *Journal of Nursing Scholarship*, 44(4), 368-375.

Brasher, P. A., McClelland, K. H., Denehy, L., & Story, I. (2003). Does Removal of Deep Breathing Exercises From a Physiotherapy Program Including Pre-Operative Education and Early Mobilisation After Cardiac Surgery Alter Patient Outcomes?. *Australian Journal of Physiotherapy*, 49(3), 165-173.



Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research In Psychology*, 3(2), 77-101.

Brook, R. H., McGlynn, E. A., & Shekelle, P. G. (2000). Defining and Measuring Quality of Care: A Perspective from US Researchers. *International Journal For Quality In Health Care*, 12(4), 281-295.

Cambridge Dictionary. [Internet]. n.d. Retrieved from:

<https://dictionary.cambridge.org/dictionary/english/perception>

- Carlson, E. B., Spain, D. A., Muhtadie, L., McDade-Montez, L., & Macia, K. S. (2015). Care and Caring in the Intensive Care Unit: Family Members' Distress and Perceptions About Staff Skills, Communication, and Emotional Support. *Journal of Critical Care, 30*(3), 557-561.
- Chelluri, L. P. (2008). Quality and Performance Improvement in Critical Care. *Indian Journal of Critical Care Medicine: Peer-Reviewed, Official Publication of Indian Society of Critical Care Medicine, 12*(2), 67.
- Clark, P. A. (2007). Intensive Care Patients' Evaluations of the Informed Consent Process. *Dimensions of Critical Care Nursing, 26*(5), 207-226.
- Creswell, J. W., & Miller, D. L. (2000). Determining Validity in Qualitative Inquiry. *Theory Into Practice, 39*(3), 124-130.
- Crouch, M., & McKenzie, H. (2006). The Logic of Small Samples in Interview-Based Qualitative Research. *Social Science Information, 45*(4), 483-499.
- Curtis, J. R., Cook, D. J., Wall, R. J., Angus, D. C., Bion, J., Kacmarek, R., ... Moreno, R. (2006). Intensive Care Unit Quality Improvement: A "How-To" Guide For the Interdisciplinary Team. *Critical Care Medicine, 34*(1), 211-218.
- Das, J., & Hammer, J. (2014). Quality of Primary Care in Low-Income Countries: Facts and Economics. *Annu. Rev. Econ., 6*(1), 525-553.
- Dansereau, E., Masiye, F., Gakidou, E., Masters, S. H., Burstein, R., & Kumar, S. (2015). Patient Satisfaction and Perceived Quality of Care: Evidence From a Cross-Sectional National Exit Survey of HIV and Non-HIV Service Users in Zambia. *BMJ Open, 5*(12), 1-11.
- De Beer, J., & Brysiewicz, P. (2016). The Needs of Family Members of Intensive Care Unit Patients: A Grounded Theory Study. *Southern African Journal of Critical Care, 32*(2), 44-49.

- De Beer, J., & Brysiewicz, P. (2017). The Conceptualization of Family Care During Critical Illness in KwaZulu-Natal, South Africa. *Healthsagesondheid*, 22(1), 20-27.
- De La Cueva Ariza, L., Romero García, M., Delgado Hito, P., Acosta Mejuto, B., Jover Sancho, C., RicartBasagaña, M. T., ...SolàRibó, M. (2014). Development of an Instrument to Measure the Degree of Critical Patient's Satisfaction with Nursing Care: Research Protocol. *Journal of Advanced Nursing*, 70(1), 201-210.
- Denehy, L., & Berney, S. (2006). Physiotherapy in the Intensive Care Unit. *Physical Therapy Reviews*, 11(1), 49-56.
- Department of Health, (2014). National Health Insurance. Pretoria, Cape Town. Retrieved from: <http://www.health.gov.za/>
- Dafoe, S., Stiller, K., & Chapman, M. (2015). Staff Perceptions of the Barriers to Mobilizing ICU Patients. *Internet Journal of Allied Health Sciences and Practice*, 13(2), 8.
- Donabedian, A. (1990). The Seven Pillars of Quality. *Archives of pathology & laboratory medicine*, 114(11), 1115-1118.
- Fortunatti, C. P., & Silva, N. R. (2017). Families on Adult Intensive Care Units: Are They Really Satisfied? A Literature Review. *Australian Critical Care*. 31(5), 318-324.
- Foster, A. M., Armstrong, J., Buckley, A., Sherry, J., Young, T., Foliaki, S., ...& McPherson, K. M. (2012). Encouraging Family Engagement in The Rehabilitation Process: A Rehabilitation Provider's Development of Support Strategies For Family Members of People with Traumatic Brain Injury. *Disability and Rehabilitation*, 34(22), 1855-1862.
- Fumis, R. R. L., Nishimoto, I. N., & Deheinzelin, D. (2006). Measuring Satisfaction in Family Members of Critically Ill Cancer Patients in Brazil. *Intensive Care Medicine*, 32(1), 124-128.



- Fumis, R. R. L., Nishimoto, I. N., & Deheinzelin, D. (2008). Families' Interactions with Physicians in The Intensive Care Unit: The Impact on Family's Satisfaction. *Journal of Critical Care*, 23(3), 281-286.
- Garretson, S. (2004). Benefits of Pre-Operative Information Programmes. *Nursing Standard*, 18(47).
- Garrouste-Orgeas, M., Willems, V., Timsit, J. F., Diaw, F., Brochon, S., Vesin, A., ...Moulard, M. L. (2010). Opinions of Families, Staff, and Patients about Family Participation in Care in Intensive Care Units. *Journal of Critical Care*, 25(4), 634-640.
- Goldwag, R., Berg, A., Yuval, D., & Benbassat, J. (2002). Predictors of Patient Dissatisfaction with Emergency Care. *Israel Medical Association Journal*, 4(8), 603-606.
- Gonzalez, C. E., Carroll, D. L., Elliott, J. S., Fitzgerald, P. A., & Vallent, H. J. (2004). Visiting Preferences of Patients in the Intensive Care Unit and in a Complex Care Medical Unit. *American Journal of Critical Care*, 13(3), 194-198.
- Gosselink, R., Clerckx, B., Robbeets, C., Vanhullebusch, T., Vanpee, G., & Segers, J. (2011). Physiotherapy in the Intensive Care Unit. *Netherland Journal of Critical Care*, 15(2), 66-75.
- Hagerty, T. A., Velázquez, Á., Schmidt, J. M., & Falo, C. (2016). Assessment of Satisfaction with Care and Decision-Making Among English and Spanish-Speaking Family Members of Neuroscience ICU Patients. *Applied Nursing Research*, 29, 262-267.
- Hanekom, S. D., Louw, Q., & Coetzee, A. (2012). The Way in which a Physiotherapy Service is Structured Can Improve Patient Outcome from a Surgical Intensive Care: A Controlled Clinical Trial. *Critical Care*, 16(6), R230.
- Haupt, M. T., Bekes, C. E., Brill, R. J., Carl, L. C., Gray, A. W., Jastremski, M. S., ... & Horst, M. (2003). Guidelines on Critical Care Services and Personnel: Recommendations Based on a

System of Categorization of Three Levels of Care. *Critical Care Medicine*, 31(11), 2677-2683.

Herzer, K. R., & Pronovost, P. J. (2015). Physician Motivation: Listening to what Pay-For-Performance Programs and Quality Improvement Collaboratives are Telling Us. *Joint Commission Journal on Quality and Patient Safety*, 41(11), 522-528.

Heyland, D. K., Tranmer, J. E., & Kingston General Hospital ICU Research Working Group. (2001). Measuring Family Satisfaction With Care in the Intensive Care Unit: The Development of a Questionnaire and Preliminary Results. *Journal of Critical Care*, 16(4), 142-149.

Hopkins, W. G. (2008). Research Designs: Choosing and Fine-Tuning a Design for your Study. *Sport Science*, 12(1), 1-3.

Hughes, C. G., McGrane, S., & Pandharipande, P. P. (2012). Sedation in the Intensive Care Setting. *Clinical Pharmacology: Advances and Applications*, 4, 53-63.

Jensen, H. I., Gerritsen, R. T., Koopmans, M., Downey, L., Engelberg, R. A., Curtis, J. R., ...& Ørding, H. (2017). Satisfaction with Quality of ICU Care for Patients and Families: The EUROQ2 Project. *Critical Care*, 21(1), 239.

Latchem, J., Kitzinger, J., & Kitzinger, C. (2016). Physiotherapy for Vegetative and Minimally Conscious State Patients: Family Perceptions and Experiences. *Disability and Rehabilitation*, 38(1), 22-29.

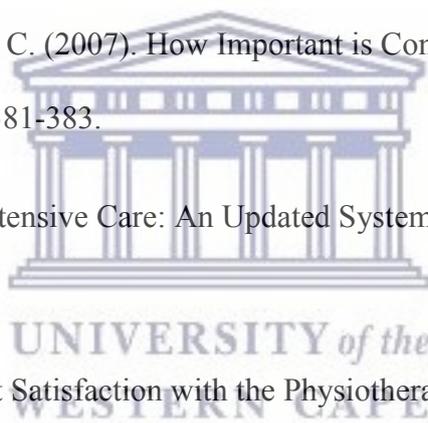
Leligdowicz, A., Bhagwanjee, S., Diaz, J. V., Xiong, W., Marshall, J. C., Fowler, R. A., & Adhikari, N. K. (2016). Development of an Intensive Care Unit Resource Assessment Survey for the Care of Critically Ill Patients in Resource-Limited Settings. *Journal of Critical Care*, 38, 172-176.

- Lilly, C. M., & Katz, A. W. (2016). New ICU Team Members: The Effective Inclusion of Critical Care Advanced Practice Providers. *Chest*, 149(5), 1119-1120.
- Maclean, N., Pound, P., Wolfe, C., & Rudd, A. (2002). The Concept of Patient Motivation: A Qualitative Analysis of Stroke Professionals' Attitudes. *Stroke*, 33(2), 444-448.
- Martos-Casado, G., Aragón-López, A., & Gutiérrez-Ramos, N. (2014). Satisfaction of Relatives of the Patients Admitted to an Intensive Careunit: Perceptions of Relatives and Professionals. *Enfermeriaintensiva*, 25(4), 164-172.
- McAdam, J. L., Arai, S., & Puntillo, K. A. (2008). Unrecognized Contributions of Families in the Intensive Care Unit. *Intensive Care Medicine*, 34(6), 1097-1101.
- Merriam-Webster. [Internet]. 2015. Retrieved from: <https://www.merriam-webster.com/dictionary/care>
- Merriam-Webster. [Internet]. 2015. Retrieved from: <https://www.merriam-webster.com/dictionary/experience>
- Merriam-Webster. [Internet]. 2015. Retrieved from: <http://www.merriam-webster.com/dictionary/perception>
- Mistraletti, G., Umbrello, M., Mariani, V., Carloni, E., Miori, S., Taverna, M., ... & Chiumello, D. (2018). Conscious Sedation in Critically Ill Patients is Associated With Stressors Perception Lower Than Assessed by Caregivers. *Minerva Anestesiologica*, 84(10), 1150-1159.
- Mosleh, S., Alja'afreh, M., & Lee, A. J. (2015). Patient and Family/Friend Satisfaction in a Sample of Jordanian Critical Care Units. *Intensive and Critical Care Nursing*, 31(6), 366-374.
- Moyakhe, N. P. (2014). Quality healthcare: An Attainable Goal for all South Africans?. *South African Journal of Bioethics and Law*, 7(2), 80-83.

- Munyiginya, P., & Brysiewicz, P. (2014). The Needs of Patient Family Members in the Intensive Care Unit in Kigali, Rwanda. *Southern African Journal of Critical Care*, 30(1), 5-7.
- Ndambuki, J. (2013). The Level of Patients' Satisfaction and Perception on Quality of Nursing Services in the Renal Unit, Kenyatta National Hospital Nairobi, Kenya. *Open Journal of Nursing*, 3(02), 186.
- Needham, D. M., Korupolu, R., Zanni, J. M., Pradhan, P., Colantuoni, E., Palmer, J. B., ... Fan, E. (2010). Early Physical Medicine and Rehabilitation for Patients with Acute Respiratory Failure: A Quality Improvement Project. *Archives of Physical Medicine and Rehabilitation*, 91(4), 536-542.
- Ng, C. J., Lee, P. Y., Lee, Y. K., Chew, B. H., Engkasan, J. P., Irmu, Z. I., ... & Tong, S. F. (2013). An Overview of Patient Involvement in Healthcare Decision-Making: A Situational Analysis of the Malaysian Context. *BMC Health Services Research*, 13(1), 408.
- Obringer, K., Hilgenberg, C., & Booker, K. (2012). Needs of Adult Family Members of Intensive Care Unit Patients. *Journal of Clinical Nursing*, 21(11-12), 1651-1658.
- Oluwadiya, K., Olatoke, S. A., Ariba, A. J., Omotosho, O. A., & Olakulehin, O. A. (2010). Patients' Satisfaction with Emergency Care and Priorities for Change in a University Teaching Hospital in Nigeria. *International Emergency Nursing*, 18(4), 203-209.
- Ovretveit, J. (1992). *Health Service Quality: An Introduction to Quality Methods for Health Services*. Blackwell Scientific.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). Servqual: A Multiple-Item Scale for Measuring Consumer Perc. *Journal of Retailing*, 64(1), 12.

- Peña, M. H., Talledo, N. M., Ruiz, E. O., Gómez, J. L., Ruiz, A. R., Miguelez, A. G., ...Díaz, J. L. (2017). Satisfacción en la Unidad de Cuidados Intensivos (UCI): la opinión de paciente como piedra angular. *Medicina Intensiva*, 41(2), 78-85.
- Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A Scoping Review of Scoping Reviews: Advancing the Approach and Enhancing the Consistency. *Research Synthesis Methods*, 5(4), 371-385.
- Polit, D. F., & Beck, C. T. (2010). Generalization in Quantitative and Qualitative Research: Myths and Strategies. *International Journal of Nursing Studies*, 47(11), 1451-1458.
- Pronovost, P. J., Nolan, T., Zeger, S., Miller, M., & Rubin, H. (2004). How Can Clinicians Measure Safety and Quality in Acute Care? *The Lancet*, 363(9414), 1061-1067.
- Rahman, M. S. (2016). The Advantages and Disadvantages of Using Qualitative and Quantitative Approaches and Methods in Language “Testing and Assessment” Research: A Literature Review. *Journal of Education And Learning*, 6(1), 102.
- Schweickert, W. D., Pohlman, M. C., Pohlman, A. S., Nigos, C., Pawlik, A. J., Esbrook, C. L., ... & Schmidt, G. A. (2009). Early Physical and Occupational Therapy in Mechanically Ventilated, Critically Ill Patients: A Randomised Controlled Trial. *Lancet (London, England)*, 373(9678), 1874-1882.
- Sitzia, J., & Wood, N. (1997). Patient Satisfaction: A Review of Issues and Concepts. *Social Science & Medicine*, 45(12), 1829-1843.
- Sottile, P. D., Nordon-Craft, A., Malone, D., Schenkman, M., & Moss, M. (2015). Patient and Family Perceptions of Physical Therapy in the Medical Intensive Care Unit. *Journal of Critical Care*, 30(5), 891-895.

- Sjöling, M., Nordahl, G., Olofsson, N., & Asplund, K. (2003). The Impact of Pre-Operative Information on State Anxiety, Postoperative Pain and Satisfaction with Pain Management. *Patient Education and Counseling*, 51(2), 169-176.
- Sofaer, S., & Firminger, K. (2005). Patient Perceptions of the Quality of Health Services. *Annual Review of Public Health*, 26, 513-559.
- Sommers, J., Engelbert, R. H. H., Dettling-Ihnenfeldt, D., Gosselink, R., Spronk, P. E., Nollet, F., & van der Schaaf, M. (2015). Physiotherapy in the Intensive Care Unit: An Evidence-Based, Expert Driven, Practical Statement and Rehabilitation Recommendations. *Clinical Rehabilitation*, 29(11), 1051-1063.
- Sudhakar-Krishnan, V., & Rudolf, M. C. (2007). How Important is Continuity of Care?. *Archives of Disease in Childhood*, 92(5), 381-383.
- Stiller, K. (2013). Physiotherapy in Intensive Care: An Updated Systematic Review. *Chest*, 144(3), 825-847.
- Stiller, K., & Wiles, L. (2008). Patient Satisfaction with the Physiotherapy Service in an Intensive Care Unit. *South African Journal of Physiotherapy*, 64(1), 43-46.
- Stricker, K. H., Kimberger, O., Brunner, L., & Rothen, H. U. (2011). Patient Satisfaction with Care in the Intensive Care Unit: Can We Rely on Proxies? *Acta Anaesthesiologica Scandinavica*, 55(2), 149-156.
- Stricker, K. H., Kimberger, O., Schmidlin, K., Zwahlen, M., Mohr, U., & Rothen, H. U. (2009). Family Satisfaction in The Intensive Care Unit: What Makes the Difference? *Intensive Care Medicine*, 35(12), 2051.



- Sun, B. C., Adams, J., Orav, E. J., Rucker, D. W., Brennan, T. A., & Burstin, H. R. (2000). Determinants of Patient Satisfaction and Willingness to Return with Emergency Care. *Annals of Emergency Medicine*, 35(5), 426-434.
- Szolnoki, G., & Hoffmann, D. (2013). Online, Face-to-Face and Telephone Surveys—Comparing Different Sampling Methods in Wine Consumer Research. *Wine Economics and Policy*, 2(2), 57-66.
- Tilden, V. P., Tolle, S., Drach, L., & Hickman, S. (2002). Measurement of Quality of Care and Quality of Life at the End of Life. *The Gerontologist*, 42(3), 71-80.
- Vahdat, S., Hamzehgardeshi, L., Hessam, S., & Hamzehgardeshi, Z. (2014). Patient Involvement in Health Care Decision Making: A Review. *Iranian Red Crescent Medical Journal*, 16(1)e12454.
- Van Campen, C., Sixma, H., Friele, R. D., Kerssens, J. J., & Peters, L. (1995). Quality of Care and Patient Satisfaction: A Review of Measuring Instruments. *Medical Care Research and Review*, 52(1), 109-133.
- Van Nes, M. B. (2016), *Perception of Physiotherapy Care in a Surgical ICU: The Patients' Perspective* (Master's Thesis). University of Stellenbosch, Cape Town, South Africa.
- Van Mol, M. M., Bakker, E. C., Nijkamp, M. D., Kompanje, E. J., Bakker, J., & Verharen, L. (2014). Relatives' Perspectives on the Quality of Care in an Intensive Care Unit: The Theoretical Concept of a New Tool. *Patient Education and Counseling*, 95(3), 406-413.
- Venkataraman, R., Ranganathan, L., Rajnibala, V., Abraham, B. K., Rajagopalan, S., & Ramakrishnan, N. (2015). Critical Care: Are We Customer Friendly?. *Indian Journal of Critical Care Medicine: Peer-Reviewed, Official Publication of Indian Society of Critical Care Medicine*, 19(9), 507.



Wall, R. J., Engelberg, R. A., Downey, L., Heyland, D. K., & Curtis, R. J. (2007). Refinement, Scoring, and Validation of the Family Satisfaction in the Intensive Care Unit (FS-ICU) Survey. *Critical Care Medicine*, 35(1), 271-279.

Westerdahl, E., & Möller, M. (2010). Physiotherapy-Supervised Mobilization and Exercise Following Cardiac Surgery: A National Questionnaire Survey in Sweden. *Journal of Cardiothoracic Surgery*, 5(1), 67.

Whyte, R. I., & Grant, P. D. (2005). Preoperative Patient Education in Thoracic Surgery. *Thoracic Surgery Clinics*, 15(2), 195-201.



APPENDIX A – Filters used for each data base

PUBMED: Until 20 June

(Family perception) AND (intensive care unit)

Limit to Journal article and human species 331 hits

(Family perception) AND (service) AND (hospital) AND (outcome measures)

Limit to Journal article and human species 46 hits

(Perception) AND (outcome measures) AND (intensive care unit)

Limit to Journal article and human species 155 hits

(Family perception) AND (outcome measures) AND (intensive care unit)

Limit to Journal article and human species 25 hits

(Family experience) AND (outcome measures) AND (intensive care unit)

Limit to Journal article and human species 100 hits

(Family experience OR family perception) AND (outcome measures) AND (hospital) AND (intensive care unit OR critical care OR ICU) AND (Care OR services)

Limit to Journal article and human species 123 hits

Scopus: Until July 23

(Family perception) AND (intensive care unit)

Limit to article 656 hits

(Family perception) AND (service) AND (hospital) AND (outcome measures)

Limit to articles 94 hits

(Perception) AND (outcome measures) AND (intensive care unit)

Limit to article 149 hits

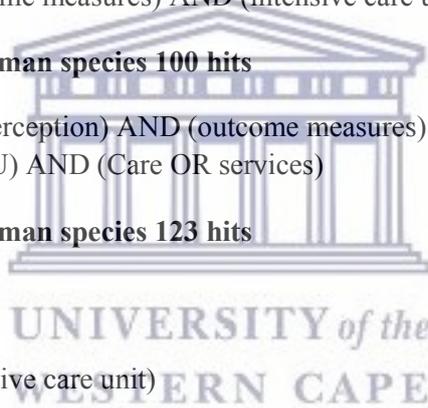
(Family perception) AND (outcome measures) AND (intensive care unit)

Limit to article 20 hits

(Family experience) AND (outcome measures) AND (intensive care unit)

Limit to articles 60 hits

(Family experience OR family perception) AND (outcome measures) AND (hospital) AND (intensive care unit OR critical care OR ICU) AND (Care OR services)



Limit to articles 14 hits

EBSCOhost: Until 20 June 2018

Academic search complete, CINAHL plus with full text, E-journals, Health Sources: Nursing/Academic Edition, MEDLINE, PsycARTICLES

(Family perception) AND (intensive care unit)

Filter academic journal 241 hits

(Family perception) AND (service) AND (hospital) AND (outcome measures)

Filter academic journal 22

(Perception) AND (outcome measures) AND (intensive care unit)

Filter academic journal 112

(Family perception) AND (outcome measures) AND (intensive care unit)

Filter academic journal

(Family experience) AND (outcome measures) AND (intensive care unit)

Filter academic journal

(Family experience OR family perception) AND (outcome measures) AND (hospital) AND (intensive care unit OR critical care OR ICU) AND (Care OR services)

Filter academic journal

ScienceDirect: 20 Feb 2018

Expert Search restricted to these journals:

Medicine and dentistry, Nursing and Health Professionals, and Psychology. Selected Journals only

Filter of ICU and got results. Applied filter again of family, family member and relatives

(Family perception) AND (intensive care unit) [127 hits]

Search results: 127 results found for (Family perception) AND (intensive care unit) AND LIMIT-TO(topics, "icu") AND LIMIT-TO(topics, "family,familymember,relative").

Applied filters family. Then ICU

(Family perception) AND (service) AND (hospital) AND (outcome measures) [46 hits]

46 results found for (Family perception) AND (service) AND (hospital) AND (outcome measures) AND LIMIT-TO(topics, "family") AND LIMIT-TO(topics, "icu").

Filter of ICU and got results. Applied filter again of family and family members

(Perception) AND (outcome measures) AND (intensive care unit) [60 hits]

60 results found for (Perception) AND (outcome measures) AND (intensive care unit) AND LIMIT-TO(topics, "icu") AND LIMIT-TO(topics, "family,family member").

Filter of ICU and got results. Applied filter again of family and family members

(Family perception) AND (outcome measures) AND (intensive care unit) [60hits]

60 results found for (Family perception) AND (outcome measures) AND (intensive care unit) AND LIMIT-TO(topics, "icu") AND LIMIT-TO(topics, "family,family member").

Filter of ICU and got results. Applied filter again of family and family members

(Family experience) AND (outcome measures) AND (intensive care unit)[80 hits]

89 results found for (Family experience) AND (outcome measures) AND (intensive care unit) AND LIMIT-TO(topics, "icu") AND LIMIT-TO(topics, "family,family member").

Filter of ICU and got results. Applied filter again of family and family members

(Family experience OR family perception) AND (outcome measures) AND (hospital) AND (intensive care unit OR critical care OR ICU) AND (Care OR services) [60 hits]

60 results found for (Family experience OR family perception) AND (outcome measures) AND (hospital) AND (intensive care unit OR critical care OR ICU) AND (Care OR services) AND LIMIT-TO(topics, "icu") AND LIMIT-TO(topics, "family,family member").

Web of Science: 20 June 2018

(Family perception) AND (intensive care unit) [504 hits]

Applied filter of articles only

(Family perception) AND (service) AND (hospital) AND (outcome measures) [65 hits]

Applied filter of articles only

(Perception) AND (outcome measures) AND (intensive care unit) [90 hits]

Applied filter of articles only

(Family perception) AND (outcome measures) AND (intensive care unit) [48 hits]

Applied filter of articles only

(Family experience) AND (outcome measures) AND (intensive care unit) [108 hits]

Applied filter of articles only

(Family experience OR family perception) AND (outcome measures) AND (hospital) AND (intensive care unit OR critical care OR ICU) AND (Care OR services) [4 hits]

Applied filter of articles only



APPENDIX B – Data Extraction Sheet with Extracted Data

Year of publication	Country of publication	Study design	Service/ Care being investigated	ICU setting	Sample Size	Outcome Measure	Inclusion and Exclusion Criteria	Time of data collection	Reliability and Validity	Components of care/services investigated
2006	Brazil	Quantitative	MDT	Mixed ICU	n=164	CCFNI	Inclusion Family members were enrolled 2 days after patient ICU admission Patient and family member over the age of 16 Exclusion Lacked a comprehensible reading ability	Between the 3rd and 4th day of the ICU and remaining up to the 6th day	Looked into validity and reliability	Communication
2008	Brazil	Quantitative	MDT	Mixed ICU	n=164	CCFNI	Inclusion Patient stayed in the ICU for more than 2 days Patient and family member was over the age of 16 Exclusion Lacked a comprehensive reading ability	Between the 3rd and 4th day of the ICU and remaining up to the 6th day	Looked into validity and reliability	Communication
2014	Spain	Quantitative	MDT	Mixed ICU	n=78	Developed by Cardenas et al.	Family members over the age of 18 years Family members who normally visited Telephonic detail was available	15 days after discharge	Looked into validity and reliability	Communication, Atmosphere of ICU, Management of patient, Visiting hours, Facilities
2015	India	Quantitative	MDT	Mixed ICU	n=200	FS-ICU	Inclusion Patients who staged in the ICU for more than 3 days Exclusion Younger than 18	Day 4 of patient's ICU admission	Not specified	Communication, Management of patient, Visiting hours, Facilities
2015	USA	Quantitative	MDT	Surgical ICU	n=29	FSCCQ	Inclusion Patients who staged in the ICU for more than 3 days Exclusion Younger than 18	given 11 to 14 days after patient's admission FSCCQ was given 2 months' after patient's ICU admission	Looked into validity and reliability	Communication, Staff skill, Support
2015	Jordan	Quantitative	MDT	Mixed ICU	n=246	FS-ICU	No criteria mentioned	Between the 3 rd and 5 th day following the patient's admission	Looked into validity and reliability	Communication, Support, Management of patient, Decision Making
							Inclusion Observed a session of PT Patient required a minimum of 4 days			
2015	USA	Quantitative	Physiotherapist	Medical ICU	n=49	Self develop	Inclusion Observed a session of PT Patient required a minimum of 4 days mechanical ventilation Exclusion Patient is 18 years or younger, pregnant, had an underlying disorder	End of 28 days of therapy or at discharge	Only validity	Management of patient
2016	USA	Quantitative	MDT	Neuroscience ICU	n=73	FS-ICU	Inclusion Family members 18 years and older Mechanically ventilated patients in the Neuroscience ICU for 48 hours or greater Family members visited the patient at least once during their ICU stay Exclusion Could not comprehend the questions because of language, cognitive or 18 years and older	Pre-negotiated period of time, no specific day specified	Looked into validity and reliability	Communication, Staff skill, Support, Needs, Management of patient
2017	Spain	Quantitative	MDT	Mixed ICU	n=148	FS-ICU	Relative of patient who died in the first 24 hours of stay following ICU discharge Patient moved to another hospital centre within 24 hours of the ICU admission Unable to read or understand Spanish	At least 24 hours after discharge from the ICU to the ward	Not specified	Communication, Staff skill, management of patient
2017	Netherlands and Denmark	Quantitative	MDT	Mixed ICU	n=1077	Euro FS-ICU	Inclusion Family members of patients admitted to the ICU for more than 48 hours Up to three family members could participate Exclusion Under the age of 18 years, Cognitive impairments	Three weeks after patient discharge from the ICU family members received the questionnaires by mail	Looked into validity and reliability	Communication, Support, Management of patient, Decision Making, Atmosphere of ICU

APPENDIX D – Family Interview Guide (English)

INTERVIEW DISCUSSION SCHEDULE

Introduction of self and explanation through use of the information sheet and consent form before start of interview.

1. What were your expectations of the care provided by the physiotherapist to your family member (patient) in the intensive care unit?
2. How did you perceive the care provided to your family member or significant other (patient) by the physiotherapist in the intensive care unit?
3. Was there any communication between you and the physiotherapist? If so, do you think it is necessary?
4. Overall, would you say you were satisfied or dissatisfied with the physiotherapy care provided to your family member/ significant other (patient) during their stay in the intensive care unit? (How would you describe the physiotherapy care in terms of satisfaction or dissatisfaction?)
 - a. Why do you say so?
 - b. What made you feel like this? (Satisfaction)
 - c. What could have made this (satisfaction) better?
 - d. What would have made this (satisfaction) worse?
5. Is there anything you feel could have changed/been improved on (quality of care) in the care provided to your family member or significant other (patient) by the physiotherapist/s in the intensive care unit?

APPENDIX D – Family interview guide (Afrikaans)

INTERVIEW DISCUSSION SCHEDULE

Inleiding van self en verduideliking deur gebruik te maak van die inligtingsblad en toestemmingsvorm voor aanvang van onderhoud.

1. Wat was u verwagtinge van die sorg wat die fisioterapeut aan u familielid (pasiënt) verskaf in die intensiewe sorgeneheid?
2. Hoe het jy die sorg wat aan jou familielid of beduidende ander (pasiënt) verskaf is deur die fisioterapeut in die intensiewe sorgeneheid waargeneem?
3. Was daar enige kommunikasie tussen jou en die fisioterapeut? Indien wel, dink jy is dit nodig?
4. Oor die algemeen sou jy sê dat jy tevrede was of ontevrede was met die fisioterapie sorg wat aan jou familielid / beduidende ander (pasiënt) gegee is tydens hul verblyf in die intensiewe sorgeneheid? (Hoe sou u die fisioterapie sorg beskryf ten opsigte van bevrediging of ontevredenheid?)
 - a. Hoekom se jy so?
 - b. Wat het jou so laat voel? (Satisfaction)
 - c. Wat kon dit (tevredenheid) beter gemaak het?
 - d. Wat sou dit (tevredenheid) erger gemaak het?
5. Is daar enigiets wat u meen, kan verander of verbeter (kwaliteit van sorg) in die versorging aan u familielid of beduidende ander (pasiënt) deur die fisioterapeut / s in die intensiewe sorgeneheid?

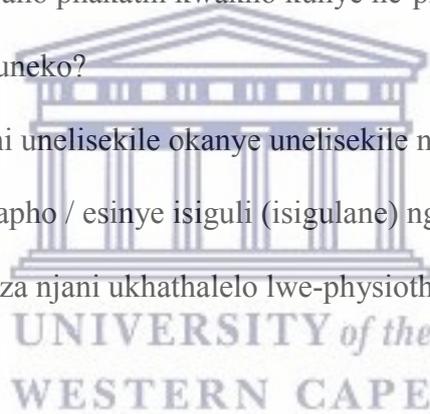


APPENDIX D– Family interview guides (Xhosa)

UKUHLAWULWA KWENKQUBO YESHEDYULI

Isingeniso sobuntu kunye nenkcazo ngokusetyenziswa kwephepha leenkukacha kunye nefom yemvume phambi kokuqala kwendlebe nodliwano-ndlebe.

1. Yintoni okulindelwe kwinkathalo enikwe ngumzimba we-physiotherapist ilungu lentsapho (isigulane) kwiyunithi yonyango enzulu?
2. Wazibonela njani unonophelo olunikezelwa ilungu lakho losapho okanye enye ebalulekileyo (isigulane) ngumzimba we-physiotherapist kwiyunithi yonyango enzulu?
3. Ngaba kukho na unxibelelwano phakathi kwakho kunye ne-physiotherapist? Ukuba kunjalo, ucinga ukuba kuyimfuneko?
4. Ngokubanzi, ngaba unokuthi unelisekile okanye unelisekile ngonyango lwe-physiotherapy olunikezelwa ilungu lakho losapho / esinye isiguli (isigulane) ngexesha lokuhlala kwiyunithi yonyango enzulu? (Ungazichaza njani ukhathalelo lwe-physiotherapy ngokwaneliseko okanye ukunganeliseki?)
 - a. Kutheni utsho njalo?
 - b. Yintoni eyenza uzive ngathi? (Ukwaneliseka)
 - c. Yintoni eyayenza ukuba (ukwaneliseka) kube ngcono?
 - d. Yintoni eyayiyenza (ukwaneliseka) ngakumbi?
5. Ingaba kukho nto uvakalelwa kukuba yatshintshile / iphuculwe kuyo (umgangatho wokunyamekela) kwinkathalo enikezelwa ilungu lentsapho okanye enye ebalulekileyo (isigulane) ngumzimba we-physiotherapist / s kwiyunithi yokunyamekela kakhulu?



APPENDIX E - Ethical Clearance from UWC BREC



OFFICE OF THE DIRECTOR: RESEARCH RESEARCH AND INNOVATION DIVISION

Private Bag X17, Bellville 7535
South Africa
T: +27 21 959 2988/2948
F: +27 21 959 3170
E: research-ethics@uwc.ac.za
www.uwc.ac.za

19 April 2017

Ms M Naidoo
Physiotherapy
Faculty of Community and Health Sciences

Ethics Reference Number: BM17/3/2

Project Title: Family and patient perception of physiotherapy care rendered to patients in the cardiothoracic intensive care unit.

Approval Period: 12 April 2017 – 12 April 2018

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval. Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

The permission from the health facility and/or health department must be submitted for record keeping to BMREC.

A handwritten signature in black ink, appearing to read 'Josias'.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

PROVISIONAL REC NUMBER -1304 16-050

APPENDIX F – Ethical clearance from Tygerberg Hospital



TYGERBERG HOSPITAL
REFERENCE:
Research Projects
ENQUIRIES: Dr GG
Marinus
TELEPHONE:021 938 5752

Ethics Reference: BM17/3/2

TITLE: Family and patient perception of Physiotherapy care rendered to patients in the Cardiothoracic Intensive Care Unit.

Dear Ms Naidoo

PERMISSION TO CONDUCT YOUR RESEARCH AT TYGERBERG HOSPITAL.

1. In accordance with the Provincial Research Policy and Tygerberg Hospital Notice No 40/2009, permission is hereby granted for you to conduct the above-mentioned research here at Tygerberg Hospital.
2. Researchers, in accessing Provincial health facilities, are expressing consent to provide the Department with an electronic copy of the final feedback within six months of completion of research. This can be submitted to the Provincial Research Co-Ordinator (Health.Research@westerncape.gov.za).



DR GG MARINUS
MANAGER: MEDICAL SERVICES



DR D ERASMUS
CHIEF EXECUTIVE OFFICER

Date: 18 September 2017

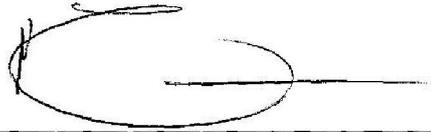
Administration Building, Francie van Zijl Avenue, Parow, 7500
tel: +27 21 938-6267 fax: +27 21 938-4890

Private Bag X3, Tygerberg, 7505
www.capegateway.gov.za

TYGERBERG HOSPITAL

Ethics Reference: BM17/3/2

TITLE: Family and patient perception of Physiotherapy care rendered to patients in the Cardiothoracic Intensive Care Unit.



BY _____
An authorized representative of Tygerberg Hospital

NAME Dr DS Erasmus

TITLE CEO

DATE 18 September 2017



APPENDIX G – Ethical Consideration

Ethics clearance was obtained from the University of the Western Cape Research Ethics committee and Biomedical Research Ethics Committee (BM 17/3/2). Permission was obtained from Tygerberg Hospital Research Ethics Committee and cardiothoracic Intensive care unit manager. Information sheets were given to the participating family members to thoroughly inform them about the study and the value and benefits of the study. Participants were informed of the choice to participate in the study or not and could choose at any time to withdraw from the study. Participating family members/patients were asked to provide written and signed consent. Signed written consent forms were obtained from all participants who indicated their voluntary participation in the study. Participants were assured of their anonymity pertaining to the participants' names. To ensure their anonymity, no names were used and the interviews and transcribed data will be coded. Only the researcher had access to these codes for the purpose of the researcher being able to recheck information with the participant. Codes were used to replace participants' names. All hard data was stored in a locked cabinet in the researcher's office and electronic data was password protected with only the researcher having access to the password. Scrambling of electronic data will be done to remove any reference to specific individuals' data and all data will be destroyed 5 years after completion of the study. Confidentiality will thus be ensured. No reference to specific participant's and involved institutions will be made in any publications of the results.

APPENDIX H – Family Member Information Sheet (English)



ADDENDUM 3 UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 61 154 7506 Fax: 27 21-959 1217
E-mail: mn19bb@gmail.com

INFORMATION SHEET Family Member

Project Title: Family and patient perception of physiotherapy care rendered to patients in a Cardiothoracic Intensive Care Unit

What is this study about?

This is a research project being conducted by Melissa Naidoo at the University of the Western Cape. We are inviting you to participate in this research project because you are a family member of a patient that has received physiotherapy care in a Cardiothoracic Intensive Care Unit. The purpose of this research project is to determine family and patient perception of physiotherapy care rendered to patients in the Cardiothoracic Intensive Care Unit.

What will I be asked to do if I agree to participate?

You will be asked to participate in a face to face interview with the researcher at a most convenient time for you at Tygerberg Hospital. The interview will require you to answer questions based on your perceptions of the physiotherapy care you have seen rendered to the patient in the Cardiothoracic Intensive Care Unit. The interview will take about 30 to 45 minutes.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, no names will be used and the interviews and transcribed data will be coded. Only the researcher will have access to these codes for the purpose of the researcher being able to recheck information with the participant. These code lists will be destroyed on completion of the study. All hard data will be stored in a locked cabinet of the researchers' office during the study period and will be destroyed 5 years after completion of the study. Electronic and tape recorded data will be password protected with only the researcher having access during the study period. The electronic data will be scrambled so that even the researcher will be unable to identify or relate data to any particular participant and then destroyed 5 years following completion of the study. Anonymity and confidentiality will thus be maintained. If we write a report or article about this research project, your identity will be protected and no names will be mentioned. This will ensure your confidentiality.

What are the risks of this research?

There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

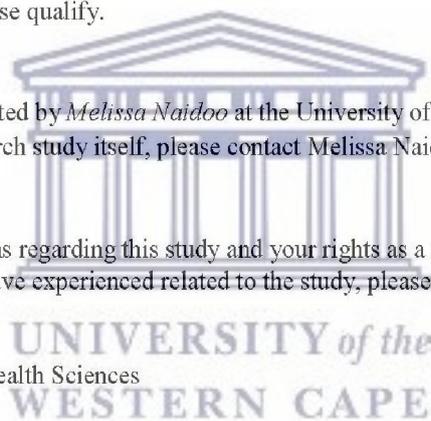
This research is not designed to help you personally or directly, but the results may help the researcher to improve care rendered to patients admitted to the Cardiothoracic Intensive Care Unit and appropriate involvement of the family in this care in the future. The information gathered can improve the understanding of how physiotherapy treatment in the Cardiothoracic ICU is perceived and can be improved and allow physiotherapists to plan appropriate and relevant treatments for the patients which will allow for an improved participation from the patient and faster recovery. It will also help enhance appropriate and relevant information sharing between the Cardiothoracic ICU physiotherapist and family members. Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by *Melissa Naidoo* at the University of the Western Cape. If you have any questions about the research study itself, please contact Melissa Naidoo at: 0611547506 or Email: mn19bb1@gmail.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Nondwe Mlenzana
Faculty of Community and Health Sciences
Head of Department
Physiotherapy
University of the Western Cape
Private Bag X17
Bellville 7535
nmlenzana@uwc.ac.za



Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Senate Research Committee.
(REFERENCE NUMBER: *to be inserted on receipt thereof from SR*)

APPENDIX H – Family Member Information Sheet (Afrikaans)



ADDENDUM 3 UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 61 154 7506 Fax: 27 21-959 1217
E-mail: mn19bb@gmail.com

INLIGTINGSBLAD (Familielid)

Projek titel: Familie en pasiënt se persepsie van fisioterapie sorg gelewer aan pasiënte in 'n Kardiotorakale Intensiewe Sorgteenheid

Wat is hierdie studie oor?

Dit is 'n navorsingsprojek deur *Melissa Naidoo* gedoen aan die Universiteit van die Wes-Kaap. Ons nooi U om deel te neem in hierdie navorsingsprojek omdat jy 'n familielid van 'n pasiënt wat fisioterapie sorg ontvang het in 'n Kardiotorakale intensiewe sorgteenheid. Die doel van hierdie navorsingsprojek is om familie en pasiënt se persepsie van fisioterapie sorg gelewer aan pasiënte in die Kardiotorakale Intensiewe Sorgteenheid te bepaal.

Wat sal ek gevra word om te doen as ek instem om deel te neem?

Jy sal gevra word om deel te neem in 'n onderhoud met die navorser by Tygerberg-hospitaal. Die onderhoud sal jou vrae oor jou persepsies van die fisioterapie sorg jy gesien het wat aan die pasiënt in die Kardiotorakale Intensiewe Sorgteenheid gegee is. Die onderhoud sal ongeveer 30 tot 45 minute te neem.

Sou my deelname aan hierdie studie vertroulik gehou word?

Die navorsers onderneem om jou identiteit en die aard van die bydrae te beskerm. Om jou anonimiteit te verseker, sal geen name gebruik word nie en die onderhoude en getranskribeer data sal gekodeer word. Slegs die navorser sal toegang hê tot hierdie kodes sodat die navorser die deelnemer weer kan kontak as verdere inligting benodig is. Hierdie kode lyste sal vernietig word na afloop van die studie. Alle harde data sal gestoor word in 'n geslote kabinet in die kantoor van die navorsers tydens die studietydperk en sal 5 jaar na voltooiing van die studie vernietig word. Elektroniese data sal wagwoord beskerm word met slegs die navorser wat sal toegang hê tydens die studietydperk word. Die elektroniese data sal roer sodat selfs die navorser in nie die data kan identifiseer nie en sal dan na 5 jaar na voltooiing van die studie vernietig word. Anonimiteit en vertroulikheid word dus gehandhaaf. As ons 'n verslag of artikel oor hierdie navorsingsprojek te skryf, sal jou identiteit beskerm word en geen name sal, genoem word nie. Dit sal jou vertroulikheid verseker.

Wat is die risiko's van hierdie navorsing?

Daar kan 'n paar risiko's van deelname aan hierdie navorsingstudie wees. Alle menslike interaksies en praat oor die self of ander voer 'n paar bedrag van risiko's. Ons sal nogtans sulke risiko's minimaliseer en vinnig optree om jou te help as jy enige ongerief, sielkundige of anders tydens die proses van jou deelname aan hierdie studie ervaar. Waar nodig, sal 'n gepaste verwysing gemaak word na 'n geskikte professioneel vir verdere hulp of intervensie.

Wat is die voordele van hierdie navorsing?

Hierdie navorsing is nie ontwerp om jou persoonlik of direk te help nie, maar die resultate kan die navorser help om die sorg gelewer aan pasiënte toegelaat om die Kardiotorakale Intensiewe Sorgteenheid en gepaste betrokkenheid van die gesin in hierdie sorg in die toekoms te help verbeter. Die inligting wat

ingesamel word kan die begrip van hoe fisioterapie behandeling in die Kardiorakale ICU beskou word verbeter en toelaat dat fisioterapeute toepaslike en relevante behandelings te beplan vir die pasiënte wat sal help om die pasiënte beter by te dra in hul sorg en vinniger te herstel. Dit sal ook help om toepaslike en relevante inligting te deel tussen die Kardiorakale ICU fisioterapeut en familieledede en dit te verbeter. Jou deelname aan hierdie navorsing is heeltemal vrywillig. Jy kan kies om nie deel te neem nie. As jy besluit om deel te neem in hierdie navorsing, kan jy ophou deelneem op enige tyd. As jy nie besluit om deel te neem aan hierdie studie, of indien jy ophou deelneem op enige tyd, sal jy nie gestraf word of enige voordele waarop jy anders kwalifiseer verloor nie.

Wat gebeur as ek vrae het?

Hierdie navorsing word uitgevoer deur *Melissa Naidoo* aan die Universiteit van die Wes-Kaap. Indien u enige vrae oor die navorsingstudie self, kontak *Melissa Naidoo* by: 0611547506 of e-pos: mn19bb1@gmail.com

Indien u enige vrae oor hierdie studie en jou regte as 'n navorsingsdeelnemer of indien u enige probleme wat jy met betrekking tot die studie ervaar rapporteer, kontak:

Dr Nondwe Mlenzana
Faculty of Community and Health Sciences
Head of Department
Physiotherapy
University of the Western Cape
Private Bag X17
Bellville 7535
nmlenzana@uwc.ac.za



Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

Hierdie navorsing is goedgekeur deur die Universiteit van Wes-Kaapland se Senaat Navorsings Komitee (VERWYSINGSNOMMER: om by ontvangs daarvan van SR in te plaas)

APPENDIX H – Family Member Information Sheet (Xhosa)



ADDENDUM 3 UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 61 154 7506 Fax: 27 21-959 1217
E-mail: mn19bb@gmail.com

UXWEBHU LOLWAZI (iLungu loSapho)

Isihloko Project: Family abayibona nomonde unonophelo umzimba enikwa izigulane kwindawo Nomziba okunzulu Unit Care

Yintoni na le sifundo?

Le yiprojekthi yophando luyenziwa *Melissa Naidoo* kwiYunivesithi yaseNtshona Koloni. Simema ukuba zithathe inxaxheba kule projekthi yophando kuba lilungu lentsapho yomguli ifumene ukhathalelo umzimba kwindawo Nomziba okunzulu Unit Care. Injongo yale projekthi yophando kukuqinisekisa usapho abayibona nomonde unonophelo umzimba ezinikezelwa izigulane kwi Nomziba okunzulu Unit Care.

Ndiza kucelwa ukwenza ukuba ndiyavuma ukuthatha inxaxheba?

Uya kucelwa ukuba bathathe inxaxheba ubuso ngobuso ndlebe kunye umphandi ngexesha ezininzi ekulungeleyo kwiSibhedlele iTygerberg. Udliwano uza kufuna ukuba uphendule imibuzo esekelwe ngeembono zakho bololongo umzimba okubonileyo embuyisela isigulana kwi Nomziba Nonyango Unit. I-ndlebe luya kuthatha imizuzu 30 ukuya 45.

Ngaba ukuba nenxaxheba kolu phando zigcinwe ziyimfihlo?

Abaphandi siqinisekisa ukukhusela yesazisi sakho kunye nohlobo kokudlelana kwenu. Ukuqinisekisa ungaziwa, akukho amagama ziya kusetyenziswa kwaye ndlebe kunye data yayishicilelwe iya iibhakhawudi. Umphandi Kuphela kuya kuba ukufikelela kwezi Iikhowudi injongo umphandi abe nako khangela ulwazi kunye nxaxheba. Ezi zintlu Umgaqo uya kutshatyalaliswa kusakugqitywa phando. Yonke i data nzima kuya kugcinwa ikhabinethi ebala ofisi abaphandi 'ngethuba lophononongo kwaye iya kutshatyalaliswa kwiminyaka 5 emva kokugqitywa kwesifundo. data Electronic and tape ebhalwe uya kuba password protected kuphela umphandi ukuba ufikelelo ngethuba lophononongo. Idatha leyo ekwikhompyutha iya begilana ukuze nkqu umphandi uya kuba nako ukuchonga okanye babalise data nayiphi na inxaxheba ethile emva koko watshabalalisa engama-5 emva kokugqitywa kwesifundo. Imfihlo no siya kugcinwa. Ukuba ubhale ingxelo okanye inqaku malunga nale projekthi yophando, yesazisi sakho ziya kukhuselwa kwaye akukho amagama ziya, okhankanywe. Oku kuya kuqinisekisa ukuba yimfihlo yakho.

Ziziphi iingozi kolu phando?

Kusenokubakho ezinye iingozi ekuthatheni inxaxheba kwesi sifundo sophando. Zonke iingxoxo oluntu kunye nokuthetha ngesiqu okanye abanye ezinye isixa iingozi. Siya kunjalo nokunciphisa imingcipheko kwaye asebenze ngokukhawuleza ukunceda wena xa kukho kuphazamiseka, ngokwasengqondweni okanye ngenye ngexesha lenkqubo inxaxheba kwakho inxaxheba kwesi sifundo. Apho kuyimfuneko, omnye yokuthunyelwa efanelekileyo iya kwenziwa ukuba yobungecali ezifanelekileyo uncedo okanye olunye ungenelelo ngoncedo.

Ziziphi iingenelo kolu phando?

Olu phando ayenzelwanga ukunceda wena buqu okanye ngqo, kodwa iziphumo kunokubanceda umphandi

ukuphucula unonophelo ezinikezelwa kwizigulana wamkelwa Nomziba Ophezulu Care Unit nxaxheba olufanelekileyo usapho kule unonophelo kwixa elizayo. Ngolwazi oluqokelelweyo unako ukuphucula ukuqonda unyango lokunyanga umzimba kwi Nomziba ICU ibonwa njani kwaye kuphuculwe, kwaye kuvumela zomzimba ukucwangcisa unyango olufanelekileyo nolululo ngenxa izigulane leyo iza kuvumela ephuculweyo inxaxheba ukusuka isigulane kunye nokufunyanwa ngokukhawuleza. Oku kuya kunceda ekuphuculeni ulwazi olufanelekileyo kunye efanelekileyo ukwabelana phakathi kwamalungu omzimba kunye nosapho Nomziba ICU. ukuthatha kwakho inxaxheba kolu phando kube kukuzithandela ngokupheleleyo. Mhlawumbi ungagqiba ukuba ukuthatha inxaxheba kuwo onke. Ukuba ugqiba ukuba ukuthatha inxaxheba kolu phando, ungamisa Nanina inxaxheba nangaliphi na ixesha. Ukuba ugqiba ukuba ukuthatha inxaxheba kolu phanongo, okanye ukuba uyeke inxaxheba nangaliphi na ixesha, akuyi kohlwaywa okanye kulahlekelwa naziphi na izibonelelo apho kuwe ngenye faneleke.

Kuthekani Ukuba unemibuzo?

Olu phando luyaqhutywa *Melissa Naidoo* kwiYunivesithi yaseNtshona Koloni. Ukuba unayo nayiphi na imibuzo malunga uphando ngokwawo, nceda uqhagamshelane *Melissa Naidoo* apha: 0611547506 okanye Email: mn19bb1@gmail.com

Ukuba unayo nayiphi na imibuzo ngokuphathelele kwesi sifundo kwaye amalungelo akho nxaxheba kuphando okanye ukuba ufuna ukuxela naziphi na iingxaki ububonile zinxibelelene ukufunda, nceda uqhagamshelane:

Dr Nondwe Mlenzana
Faculty of Community and Health Sciences
Head of Department
Physiotherapy
University of the Western Cape
Private Bag X17
Bellville 7535
nmlenzana@uwc.ac.za

Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

Olu phando luvunywe kwiYunivesithi Yeengwevu neKomiti yoPhando eNtshona Koloni.
(YEREFERENSI: elizakufakwa ekufunyanweni kwawo ukusuka SR)

APPENDIX I - Family Members Consent form (English)



Addendum 5
UNIVERSITY OF THE WESTERN CAPE
Private Bag X 17, Bellville 7535, South Africa
Tel: +27 61 154 7506 Fax: 27 21-959 1217
E-mail: mn19bb1@gmail.com

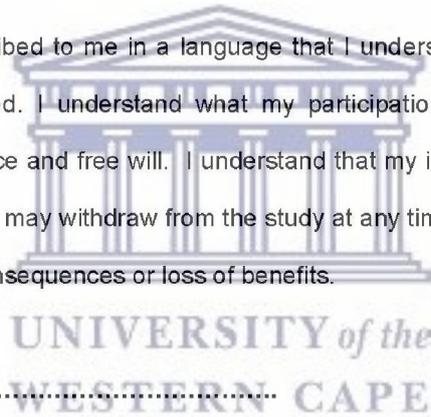
CONSENT FORM

(Family member)

Title of Research Project: Family and patient perception of Physiotherapy care rendered to patients in the Cardiothoracic Intensive Care Unit

Study Objective: *To determine family and patient perception of Physiotherapy care rendered to patients in the Cardiothoracic Intensive Care Unit*

The study has been described to me in a language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.



Participant's name.....

Participant's signature.....

Date.....



Addendum 5
UNIVERSITY OF THE WESTERN CAPE
Private Bag X 17, Bellville 7535, South Africa
Tel: +27 61 154 7506 Fax: 27 21-959 1217
E-mail: mn19bb1@gmail.com

TOESTEMMINGSFORMULIER

(Familielid)

Titel van navorsingsprojek: Familie en pasiënt se persepsie van Fisioterapie sorg gelewer aan pasiënte in die Kardiorakale Intensiewe Sorgeenheid

Studie Doel: Om gesin en pasiënt se persepsie van Fisioterapie sorg gelewer aan pasiënte in die Kardiorakale Intensiewe Sorgeenheid te bepaal

Die studie is al beskryf vir my in 'n taal wat ek verstaan. My vrae oor die studie is beantwoord. Ek verstaan wat my deelname sal betrek en ek stem saam om deel te neem van my eie keuse en vrye wil. Ek verstaan dat my identiteit nie aan enigiemand bekend gemaak sal word nie. Ek verstaan dat ek enige tyd uit die studie kan trek sonder rede en sonder vrees vir negatiewe gevolge of verlies van voordele te voorkom.

Naam Deelnemer:.....

Handtekening Deelnemer:.....

Datum:.....

APPENDIX I – Family Member Consent form (Xhosa)



Addendum 4
UNIVERSITY OF THE WESTERN CAPE
Private Bag X 17, Bellville 7535, South Africa
Tel: +27 61 154 7506 Fax: 27 21-959 1217
E-mail: mn19bb1@gmail.com

IFOMU IMVUME

(Nomonde)

Isihloko Research Project: Family abayibona nomonde unonophelo Omzimba ezinikezelwa izigulane kwi Nomziba Ophezulu Unit Care

Injongo Isifundo: Ukuze ubone usapho abayibona nomonde unonophelo Omzimba ezinikezelwa izigulane kwi Nomziba Ophezulu Unit Care

Isifundo uye wachazwa kum ngolwimi ukuba ndiyayiqonda. imibuzo yam ngesi sifundo iphendulwe. Ndiyaqonda ukuba nenxaxheba yam iya kubandakanya kwaye ndiyavuma ukuthatha inxaxheba abazikhethela yam kunye yokuzikhethela. Ndiyaqonda ukuba iinkeukacha zam ingayi kutyhilwa nakubani. Ndiyaqonda ukuba ukuze uyeke kwesi sifundo nanini na ixesha ngaphandle kokunika isizathu ngaphandle koloyiko lweziqhamo ezimbi okanye ilahleko imgenelo.

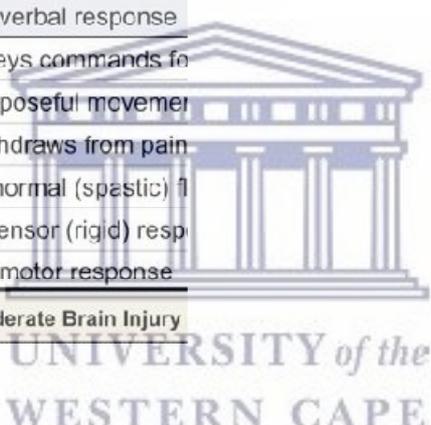
Igama-nxaxheba

Utyikityo-nxaxheba

Umhla

APPENDIX J – Glasgow Coma Scale

Glasgow Coma Scale	
Response	Scale
Eye Opening Response	Eyes open spontaneously
	Eyes open to verbal
	Eyes open to pain (nocturnal)
	No eye opening
Verbal Response	Oriented
	Confused conversation
	Inappropriate response
	Incomprehensible sounds
	No verbal response
Motor Response	Obeys commands for movement
	Purposeful movement
	Withdraws from pain
	Abnormal (spastic) flexion
	Extensor (rigid) response
No motor response	
Minor Brain Injury = 13-15 points; Moderate Brain Injury	



UNIVERSITY of the
WESTERN CAPE

APPENDIX K -Standardised 5 Questions (S5Q)

1. Open and close your eyes	
2. Look at me	
3. Open your mouth and stick out your tongue	
1. Shake yes and no (nod your head)	
5.) I will count to 5, frown your eyebrows afterwards	
TOTAL	/5
One mark will be given to each correct response /reaction.	
Interpretation:	
SQ5 = 0	No cooperation
SQ5 = 0-5	Variable cooperation
SQ5 > 4	Close-full cooperation
SQ5 = 5	Full cooperation

APPENDIX L- Patient Interview Guide (English)

Patient Interview – English

INTERVIEW DISCUSSION SCHEDULE – Patient perception

(Adapted from Van Nes, 2015 – Thesis)

Introduction of self and explanation through use of the information sheet and consent form before start of interview.

1. Tell me about your experiences with the physiotherapy care while in the intensive care unit.
 - a. What do you understand about physiotherapy and the care they provided?
 - b. Can you describe what happened in the physiotherapy sessions, what did you do in the sessions and describe what it felt like for you?
 - c. Did you experience any challenges during the physiotherapy sessions?
2. Tangibility
 - a. What did you think of the environment and equipment used during the physiotherapy care? (E.g. chairs etc.)
 - b. What did you think of the appearances of the physiotherapists that treated you?
 - c. Did you know who the physiotherapists were? (Introduced themselves/ name badges etc.)
 - d. When did the physiotherapists in the ICU see you? (time) {Prompts : What time?, How long?}
3. Assurances
 - a. What did you think of the knowledge and skill displayed by the physiotherapists?
 - b. Did you understand what was expected of you in the physiotherapy sessions?
 - i. Why do you say this?
 - c. Were the physiotherapy sessions as you expected?
 - i. If no, then how were they different?
4. Empathy
 - a. How do you feel the physiotherapists treated you in the sessions? (physically, emotionally, mentally?)
 - b. Can you describe examples from the physiotherapy sessions?

5. Responsiveness

- a. What did you think of the communication during the physiotherapy sessions?
- b. How were the decisions made, to decide what the next step/progression was in the sessions?
- c. Did you have any feelings with regards to the physiotherapy care? (fears?/worries?)

6. Reliability

- a. Did you feel safe during the physiotherapy sessions?
- b. Specifically with mobilisation?
- c. Did you trust the physiotherapists?
- d. If yes/No: Why do you say so?

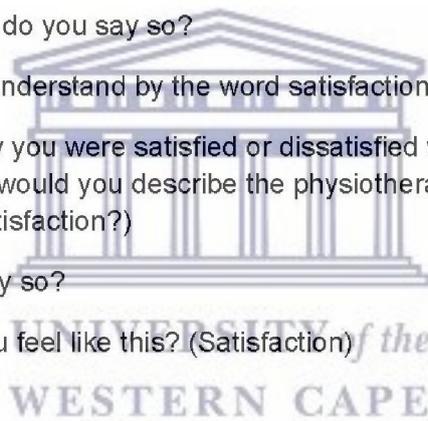
7. What do you understand by the word satisfaction, and what does it mean to you?

8. Would you say you were satisfied or dissatisfied with the physiotherapy treatment? (How would you describe the physiotherapy care in terms of satisfaction/dissatisfaction?)

- a. Why do you say so?
 - b. What made you feel like this? (Satisfaction)
- 9.

- a. What would have made this (satisfaction) better?
- b. What would have made this (satisfaction) worse?

10. Is there anything you feel that could have changed/ been improved on?



APPENDIX L - Patient Interview Guide (Afrikaans)

Patient Interview – Afrikaans

ONDERHOUD BESPREKING skedule - Pasiënt persepsie

(Aangepas uit Van Nes 2015 - Proefskrif)

Bekendstelling van die self en verduideliking deur gebruik van die inligtingsvorm en toestemmingsvorm voor aanvang van die onderhoud.

1. Vertel my van jou ervarings met die fisioterapie sorg terwyl jy in die intensiewe sorgteenheid was.

- a. Wat verstaan jy oor fisioterapie en die sorg wat hulle verskaf?
- b. Kan jy beskryf wat gebeur het in die fisioterapie sessies, wat het jy gedoen in die sessies en beskryf hoe dit gevoel het vir jou?
- c. Het jy enige uitdagings tydens die fisioterapie sessies ervaar?

2. Tasbaarheid

- a. Wat dink jy van die omgewing en toerusting wat gebruik word tydens die fisioterapie sorg? (Bv. stoele ens.)
- b. Wat dink jy van die professionele verskynings van die fisioterapeute wat jou behandel het?
- c. Het jy geweet wie die fisioterapeute was? (Hulleself / naamplaatjies ens)
- d. Wanneer het die fisioterapeute in die intensiewe sorgteenheid jou gesien? (Tyd {Vrae: Wat is die tyd ?, Hoe lank?})

3. Versekering

- a. Wat dink jy van die kennis en vaardigheid wat deur die fisioterapeute vertoon is?
- b. Het jy verstaan wat van jou verwag was in die fisioterapie sessies?
 - i) Hoekom sê jy so?
- c. Was die fisioterapie sessies soos jy verwag het?
 - i). Indien nie, dan hoe was hulle anders?

4. Empatie

- a. Hoe voel jy het die fisioterapeute jou in die sessies behandel? (fisies, emosioneel, geestelik?)
- b. Kan jy voorbeelde uit die fisioterapie sessies beskryf?

5. Responsiwiteit

- a. Wat dink jy van die kommunikasie tydens die fisioterapie sessies?
- b. Hoe was die besluite wat geneem is, om te besluit wat die volgende stap / vordering was in die sessies gemaak?
- c. Het u enige gevoelens met betrekking tot die fisioterapie sorg? (Vrese? / Bekommernisse?)

6. Betroubaarheid

- a. Het jy veilig gevoel in of gedurende die fisioterapie sessies?
- b. Spesifiek met mobilisasie?
- c. Het jy die fisioterapeute vertrou?
- d. Indien ja / nee: Hoekom sê jy so?

7. Wat verstaan jy onder die woord tevredenheid, en wat beteken dit vir jou?

8. Sou jy sê dat jy tevrede of ontevrede was met die fisioterapie behandeling? (Hoe sou jy in terme van tevredenheid / ontevredenheid die fisioterapie sorg beskryf?)

- a. Hoekom se jy so?
- b. Wat het jou so laat voel? (Tevredenheid)

9.

- a. Wat sou jou meer tevrede gemaak het met die fisioterapie sorg?
- b. Wat sou jou minder tevrede gemaak het met die fisioterapie sorg?

10. Is daar enigiets wat jy voel kon verander / verbeter het (kwaliteit van sorg) in jou fisioterapie behandeling en sorg in die intensiewe sorgeenheid?



UNIVERSITY *of the*
WESTERN CAPE

APPENDIX L -Patient Interview Guide (Xhosa)

Patient Interview – Xhosa Translation

INTERVIEW INGXOXO ISHEDYULI - Iuvo Nomonde

(Oku kuthatyathwe Van Nes, 2015 - ithisisi)

Ukwaziswa iziqu ingcaciso ngokusetyenziswa wetshati lwazi kunye nefomu yemvumelwano phambi kokuqala ndlebe.

1. Khawundixelele ngamava akho nangonophelo umzimba ngoxa unit labagula kakhulu.

- Uqonde ntoni na malunga ndolula nokunonophela baya kubonelelwa?
- Ngaba uchaze ukuba kwenzeka ntoni kwi ndolula, yintoni onokuyenza iiseshoni baze bachaze ukuba waziva njani na?
- Ingaba unazo naziphi na iingxaki ngexesha leeseshoni umzimba?

2. Tangibility

- Yintoni ocinga ukuba okusingqongileyo kunye nezixhobo ezisetyenziswa ngexesha unonophelo umzimba? (Umzka izitulo njalo njalo)
- Ntoni ucinga imbonakalo ye zomzimba okunyangileyo?
- Ngaba uyazi ukuba ngubani zomzimba aba? (Kufuneka ngokwabo / iibheji igama, njl)
- Nini zomzimba kwi ICU ukukubona? (Ixesha) {zarhoqo: Liliphi ixesha ?, Njani ixesha elide?}

3. Assurances

- Ntoni ucinga ulwazi nobuchule ibonakaliswe zomzimba?
- Ngaba oko kwakulindelekile kuni ndolula umzimba?
 - Yini na ukuba nithi oku?
 - Ngaba ndolula njengoko kulindeleke?
 - Ukuba akukho, ngoko ke indlela eyahlukileyo?

4. Novelwano

- Uyakalelwa njani le zomzimba akuphatha kwiiseshoni? (Emzimbeni, ngokweemvakalelo, ngokwasengqondweni?)
- Ngaba ukuchaza imizekelo ndolula umzimba?

5. Ukusabela

- Ntoni ucinga unxibelelwano ngexesha leeseshoni umzimba?
- Njani wenza ukuba izigqibo, ukuba isigqibo sokuba zeziphi na inyathelo / progression elilandelayo kwiiseshoni?
- Ingaba unayo nayiphi na iimvakalelo ngokumalunga unonophelo umzimba? (Uloyiko? / Ezisixhalabisayo?)

6. ukuthembeka

- a. Ngaba uziva ekhuselekile ngexesha leeseshoni umzimba?
 - b. Ngokukhethekileyo kugaya?
 - c. Ngaba uthembe zomzimba?
 - d. Ukuba ewe / No: Kutheni usitsho nje?
7. Yintoni oyiqondayo ngalo ulwaneliseko ngelizwi, kwaye kuthetha ntoni kuwe?
8. Ngaba ndithi kuwe Wanelise okanye awanelisekanga kunye nonyango umzimba?
(Unokuwuchaza ukhathalelo umzimba njani ngokwemiqathango ulwaneliseko / ukungoneliseki?)
- a. Kutheni usitsho nje?
 - b. Yintoni eyakwenza uziva ngolu hlobo nje? (Satisfaction)
- 9.
- a. Yintoni eyayinokwenza ngcono oku (ulwaneliseko)?
 - b. Yintoni usenzile (ulwaneliseko) mandundu?
10. Ingaba ikhona into uzive bethu eyatshintsha / ziphuculiwe ngomhla?



UNIVERSITY *of the*
WESTERN CAPE

APPENDIX M- Patient Information Sheet (English)

INFORMATION SHEET

Patient

Project Title: Family and patient perception of physiotherapy care rendered to patients in a Cardiothoracic Intensive Care Unit

What is this study about?

This is a research project being conducted by Melissa Naidoo at the University of the Western Cape. We are inviting you to participate in this research project because you are a patient that received physiotherapy care in a Cardiothoracic Intensive Care Unit. The purpose of this research project is to determine family and patient perception of physiotherapy care rendered to patients in the Cardiothoracic Intensive Care Unit.

What will I be asked to do if I agree to participate?

You will be asked to participate in a face to face interview with the researcher that will be conducted during your stay at Tygerberg Hospital at a time convenient and comfortable for you. The interview will require you to answer questions based on your perceptions of physiotherapy care rendered to patients in the Cardiothoracic Intensive Care Unit and will take approximately 30 to 45 minutes.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, no names will be used and the interviews and transcribed data will be coded. Only the researcher will have access to these codes for the purpose of the researcher being able to recheck information with the participant. These code lists will be destroyed on completion of the study. All hard data will be stored in a locked cabinet of the researchers' office during the study period and will be destroyed 5 years after completion of the study. Electronic and tape recorded data will be password protected with only the researcher having access during the study period. The electronic data will be scrambled so that even the researcher will be unable to identify or relate data to any particular participant and then destroyed 5 years following completion of the study. Anonymity and confidentiality will thus be maintained. If we write a report or article about this research project, your identity will be protected and no names will be mentioned. This will ensure your confidentiality.

What are the risks of this research?

There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally or directly, but the results may help the researcher to improve care rendered to patients admitted to the Cardiothoracic Intensive Care Unit in the future. The information gathered can improve the understanding of how physiotherapy treatment in the Cardiothoracic ICU is perceived and can be improved and allow physiotherapists to plan more appropriate and relevant treatments for the patients which may allow for an improved participation from the patient and faster recovery. It will also help enhance information sharing between the Cardiothoracic ICU physiotherapist, patients and their family members.

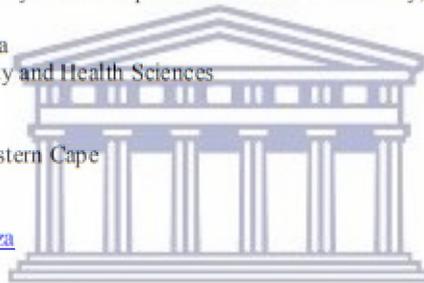
Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by *Melissa Naidoo* at the University of the Western Cape. If you have any questions about the research study itself, please contact Melissa Naidoo at: 061 1547506 or Email: mn19bb1@gmail.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Nondwe Mlenzana
Faculty of Community and Health Sciences
Head of Department
Physiotherapy
University of the Western Cape
Private Bag X17
Bellville 7535
nmlenzana@uwc.ac.za



Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Senate Research Committee.
(REFERENCE NUMBER: *to be inserted on receipt thereof from SR*)

APPENDIX M -Patient Information Sheet (Afrikaans)

INLICHTINGSBLAD (Pasiënt)

Projek titel: Familie en pasiënt se persepsie van fisioterapie sorg gelewer aan pasiënte in 'n Kardiorakale Intensiewe Sorgteenheid

Wat is hierdie studie oor?

Dit is 'n navorsingsprojek deur *Melissa Naidoo* gedoen by die Universiteit van die Wes-Kaap. Ons nooi U om deel te neem in hierdie navorsingsprojek omdat U 'n pasiënt wat fisioterapie sorg in 'n Kardiorakale Intensiewe Sorgteenheid ontvang het. Die doel van hierdie navorsingsprojek is om familie en pasiënte se persepsie van fisioterapie sorg gelewer aan pasiënte in die Kardiorakale Intensiewe Sorgteenheid te bepaal.

Wat sal ek gevra word om te doen as ek instem om deel te neem?

Jy sal gevra word om deel te neem in 'n Persoonlike onderhoud met die navorser dat tydens u verblyf by die Tygerberg-hospitaal sal gedoen word op 'n tyd gerieflik en gemaklik vir jou. Die onderhoud sal jou vree oor jou persepsies van fisioterapie sorg gelewer aan jou in die Kardiorakale Intensiewe Sorgteenheid en sal ongeveer 30 to: 45 minute te neem.

Sou my deelname aan hierdie studie vertroulik gehou word?

Die navorsers onderneem om jou identiteit en die aard van die bydrae te beskerm. Om jou anonimiteit te verseker, sal geen name gebruik word en die onderhoude en getranskribeer data sal gekodeer word. Slegs die navorser sal toegang tot hierdie kodes he vir die doel van die navorser om weer kontak met die deelnemer te maak vir verdere inligting. Hierdie kode lyste sal vernietig word na afloop van die studie. Alle harde data sal gestoor word in 'n geslote kabinet van die kantoor en sal 5 jaar na voltooiing van die studie vernietig word. Elektroniese data sal wagwoord beskerm word met slegs die navorser toegang na dit tydens die studie tydperk. Die elektroniese data sal rof sodat selfs die navorser nie in staat is om data te identifiseer of verband hou met 'n bepaalde deelnemer nie en sal dan na 5 jaar na voltooiing van die studie vernietig word. Anonimiteit en vertroulikheid word dus gehandhaaf. As ons 'n verslag of artikel oor hierdie navorsingsprojek skryf, sal jou identiteit beskerm word en geen name sal, genoem word. Dit sal verseker dat jou vertroulikheid bewaar is.

Wat is die risiko's van hierdie navorsing?

Daar kan 'n paar risiko's van deelname aan hierdie navorsingstudie. Alle menslike interaksies en praat oor die self of ander voer 'n paar bedrag van risiko's. Ons sal nogtans sulke risiko's probeer minimaliseer en vinnig optree om jou te help as jy enige ongerief, sielkundige of anders tydens die proses van jou deelname aan hierdie studie ervaar. Waar nodig, sal 'n gepaste verwysing gemaak word na 'n geskikte professioneel vir verdere hulp of intervensie.

Wat is die voordele van hierdie navorsing?

Hierdie navorsing is nie ontwerp om jou persoonlik of direk te help nie, maar die resultate kan die navorser help om die sorg gelewer aan pasiënte toegelaat om die Kardiorakale Intensiewe Sorgteenheid

benadering in die Kardiotorakale ICU gebeskou word verbeter en toelaat dat fisioterapeutiese hulpeerbehandelings vir die pasiënte meer gepas en relevant maak sodat pasiënte vinniger kan herstel. Dit sal ook help om inligting tussen die Kardiotorakale ICU fisioterapeut, pasiënte en hul gesinslede te verbeter.

Jou deelname aan hierdie navorsing is heeltemal vrywillig. Jy kan kies om nie deel te neem of nie. As jy besluit om deel te neem in hierdie navorsing, kan jy ophou deelneem op enige tyd. As jy nie besluit om deel te neem aan hierdie studie, of indien jy ophou deelneem op enige tyd, sal jy nie gestraf word of enige voordele waarop jy anders kwalifiseer verloor nie.

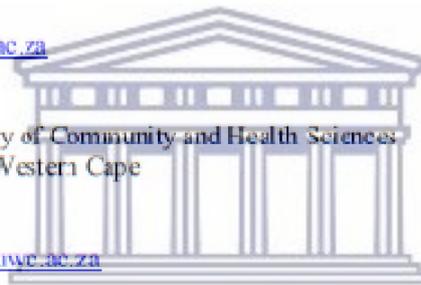
Wat gebeur as ek vrae het?

Hierdie navorsing word uitgevoer deur *Melissa Naidoo* aan die Universiteit van die Wes-Kaap. Indien u enige vrae oor die navorsingstudie self, kontak *Melissa Naidoo* by: 0611547506 of e-pos: m195b1@gmail.com

Indien u enige vrae oor hierdie studie en jou regte as 'n navorsingsdeelnemer of indien u enige probleme wat jy met betrekking tot die studie ervaar rapporteer, kontak:

Dr Nondwe Mlerzana
Faculty of Community and Health Sciences
Head of Department
Physiotherapy
University of the Western Cape
Private Bag X17
Bellville 7535
nmlenzana@uwc.ac.za

Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za



Hierdie navorsing is goedgekeur deur die Universiteit van Wes-Kaaplan se Senaats navorsings komitee (VERWYSINGSNOMMER: om by ontvangs daarvan by SR in te plaas)

UNIVERSITY of the
WESTERN CAPE

APPENDIX M - Patient Information Sheet (Xhosa)



Private Bag X 17, Bellville 7535, South Africa
Tel: +27 61 154 7506 Fax: 27 21-959 1217
E-mail: mn19bb@gmail.com

UXWEBHU LOLWAZI (Isigulane)

Isihloko Project: Family abayibona nomonde unonophelo umzimba enikwa izigulane kwindawo Nomziba okunzulu Unit Care

Yintoni na le sifundo?

Le yiprojekthi yophando luyenziwa *Melissa Naidoo* kwiYunivesithi yaseNtshona Koloni. Simema ukuba zithathe inxaxheba kule projekthi yophando ngenxa yokuba isigulane ezafumana ukhathalelo umzimba kwindawo Nomziba okunzulu Unit Care. Injongo yale projekthi yophando kukuqinisekisa usapho abayibona nomonde unonophelo umzimba ezinikezelwa izigulane kwi Nomziba okunzulu Unit Care.

Ndiza kucelwa ukwenza ukuba ndiyavuma ukuthatha inxaxheba?

Uya kucelwa ukuba bathathe inxaxheba ubuso ngobuso ndlebe kunye umphandi eza kuqhutywa ngexesha ukweli kwiSibhedlele iTygerberg ngexesha elimlungeleyo kwaye bekhululekile kuwe. Udliwano uza kufuna ukuba uphendule imibuzo esekelwe ngeembono zakho ukhathalelo umzimba ezinikezelwa izigulane kwi Nomziba okunzulu Unit Care kwaye kuya kuthatha imizuzu emalunga nama-30 ukuya 45.

Ngaba ukuba nennxaxheba kolu phando zigcinwe ziyimfihlo?

Abaphandi siqinisekisa ukukhusela yesazisi sakho kunye nohlobo kokudlelana kwenu. Ukuqinisekisa ungaziwa, akukho amagama ziya kusetyenziswa kwaye ndlebe kunye data yayishicilelwe iya iibhalkowudi. Umphandi Kuphela kuya kuba ukufikelela kwezi likhowudi injongo umphandi abe nako khangela ulwazi kunye nxaxheba. Ezi zintu Umgao uya kutshatyalaliswa kusakugqitywa phando. Yonke i data nzima kuya kugcinwa ikhabinethi ebala ofisi abaphandi ngethuba lophononongo kwaye iya kusatyalaliswa kwiminyaka 5 emva kokugqitywa kwesifundo data Electronic and tape ebhalwe uya kuba password protected kuphela umphandi ukuba ufikelelo ngethuba lophononongo. Idatha leyo ekwikhompyutha iya begilana ukuze naku umphandi uya kuba nako ukuchonga okanye babalise data nayiphi na inxaxheba ethile emva koko wawshabalalisa emgama-5 emva kokugqitywa kwesifundo. Imfihlo no siya kugcinwa. Ukuba ubhale ingxelo okanye inqaku malunga nale projekthi yophando, yesazisi sakho ziya kukhuselwa kwaye akukho amagama ziya, okhankanywe. Oku kuya kuqinisekisa ukuba yimfihlo yakho.

Ziziphi iingozi kolu phando?

Kusenokubakho ezinye iingozi ekuthatheni inxaxheba kwesi sifundo sophando. Zonke iingxoxo oluntu kunye nokuthetha ngesiqu okanye abanye ezinye isixa iingozi. Siya kunjalo nokunciphisa imingcipheko kwaye asebenze ngokukhawuleza ukunceda wena xa kukho kuphazamiseka, ngokwasengqondweni okanye ngenye ngexesha lenkqubo inxaxheba kwakho inxaxheba kwesi sifundo. Apho kuyimfuneko, omnye yokuthunyelwa efanetela leyo iya kwenziwa ukuba yobungcafi ezifanetelileyo uncedo okanye olunye ungencelelo ngoncedo.

WESTERN CAPE

Ziziphi iingenelo kolu phando?

Olu phando ayenzelwanga ukunceda wena buqu okanye ngqo, kodwa iziphumo kunokubanceda umphandi ukuphucula unonophelo ezinikezelwa kwizigulana wamkelwa Nomziba Nonyango Unit kwixesha elizayo. Ngolwazi oluqokelelweyo unako ukuphucula ukuqonda unyango lokunyanga umzimba kwi Nomziba ICU ibonwa njani kwaye kuphuculwe, kwaye zomzimba ukuvumela ukuba ukucwangcisele unyango ezi fanelekileyo efanelekileyo ngenxa izigulane leyo ukuvumela ephuculweyo inxaxheba ukusuka isigulane kunye nokufunyanwa ngokukhawuleza. Oku kuya kunceda ekuphuculeni ukwabelana phakathi No mziba ICU umzimba, abaguli kunye namalungu eentsapho zabo iinkcukacha.

Ukuthatha kwakho inxaxheba kolu phando kube kukuzithandela ngokupheleleyo. Mhlawumbi ungagqiba ukuba ukuthatha inxaxheba kuwo onke. Ukuba ugqiba ukuba ukuthatha inxaxheba kolu phando, ungamisa Nanina inxaxheba nangaliphi na ixesha. Ukuba ugqiba ukuba ukuthatha inxaxheba kolu phando onongo, okanye ukuba uyeke inxaxheba nangaliphi na ixesha, akuyi kohlwaywa okanye kulahlekelwa naziphi na izibonelelo apho kuwe ngenye faneleke.

Kuthekani Ukuba unemibuzo?

Olu phando luyaqhutywa *Melissa Naidoo* kwiYunivesithi yaseNtshona Koloni. Ukuba unayo nayiphi na imibuzo malunga uphando ngokwawo, nceda uqhagamshelane *Melissa Naidoo* apha: 061 1547506 okanye Email: mn19bb1@gmail.com

Ukuba unayo nayiphi na imibuzo ngokuphathelene kwesi si fundo kwaye amalungelo akho nxaxheba kuphando okanye ukuba ufuna ukuxela naziphi na iingxaki ububonile zinxibelelene ukufunda, nceda uqhagamshelane:

Dr Nondwe Mlenzana
Faculty of Community and Health Sciences
Head of Department
Physiotherapy
University of the Western Cape
Private Bag X17
Bellville 7535
nmlenzana@uwc.ac.za

Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

Olu phando luvunywe kwiYunivesithi Yeengwevu neKomiti yoPhando eNtshona Koloni.
(YEREFERENSI: elizakufakwa ekufunyanweni kwawo ukusuka SR)

APPENDIX N -Patient Consent Form (English)



Addendum 4
UNIVERSITY OF THE WESTERN CAPE
Private Bag X 17, Bellville 7535, South Africa
Tel: +27 61 154 7506 Fax: 27 21-959 1217
E-mail: mn19bb1@gmail.com

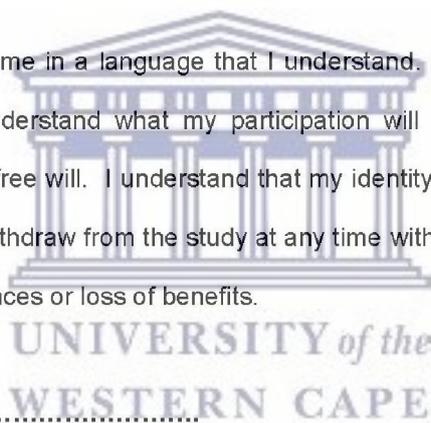
CONSENT FORM

(Patient)

Title of Research Project: Family and patient perception of Physiotherapy care rendered to patients in the Cardiothoracic Intensive Care Unit

Study Objective: *To determine family and patient perception of Physiotherapy care rendered to patients in the Cardiothoracic Intensive Care Unit*

The study has been described to me in a language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.



Participant's name.....

Participant's signature.....

Date.....



Addendum 5

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 61 154 7506 Fax: 27 21-959 1217

E-mail: mn19bb1@gmail.com

TOESTEMMINGSFORMULIER

(Familielid)

Titel van navorsingsprojek: Familie en pasiënt se persepsie van Fisioterapie sorg gelewer aan pasiënte in die Kardiorakale Intensiewe Sorgeenheid

Studie Doel: Om gesin en pasiënt se persepsie van Fisioterapie sorg gelewer aan pasiënte in die Kardiorakale Intensiewe Sorgeenheid te bepaal

Die studie is al beskryf vir my in 'n taal wat ek verstaan. My vrae oor die studie is beantwoord. Ek verstaan wat my deelname sal betrek en ek stem saam om deel te neem van my eie keuse en vrye wil. Ek verstaan dat my identiteit nie aan enigiemand bekend gemaak sal word nie. Ek verstaan dat ek enige tyd uit die studie kan trek sonder rede en sonder vrees vir negatiewe gevolge of verlies van voordele te voorkom.



Naam Deelnemer:.....

Handtekening Deelnemer:.....

Datum:.....



Addendum 4
UNIVERSITY OF THE WESTERN CAPE
Private Bag X 17, Bellville 7535, South Africa
Tel: +27 61 154 7506 Fax: 27 21-959 1217
E-mail: mn19bb1@gmail.com

IFOMU IMVUME

(Nomonde)

Isihloko Research Project: Family abayibona nomonde unonophelo Omzimba ezinikezelwa izigulane kwi Nomziba Ophezulu Unit Care

Injongo Isifundo: Ukuze ubone usapho abayibona nomonde unonophelo Omzimba ezinikezelwa izigulane kwi Nomziba Ophezulu Unit Care

Isifundo uye wachazwa kum ngolwimi ukuba ndiyayiqonda. imibuzo yam ngesi sifundo iphendulwe. Ndiyaqonda ukuba nenzaxheba yam iya kubandakanya kwaye ndiyavuma ukuthatha inxaxheba abazikhethela yam kunye yokuzikhethela. Ndiyaqonda ukuba iinkcukacha zam ingayi kutyhilwa nakubani. Ndiyaqonda ukuba ukuze uyeke kwesi sifundo nanini na ixesha ngaphandle kokunika isizathu ngaphandle koloyiko lweziqhamo ezimbi okanye ifahleko iingenelo.

Igama-nxaxheba

Utyikityo-nxaxheba

Umhla

APPENDIX O – Plagiarism Report from Turnitin

mnthesisturnitin

ORIGINALITY REPORT

10%

SIMILARITY INDEX

7%

INTERNET SOURCES

3%

PUBLICATIONS

2%

STUDENT PAPERS

PRIMARY SOURCES

1

scholar.sun.ac.za

Internet Source

5%

2

Submitted to University of the Western Cape

Student Paper

1%

3

theses.gla.ac.uk

Internet Source

<1%

4

www.ajol.info

Internet Source

<1%

5

Venkataraman, Ramesh Ranganathan, Lakshmi. "Critical care: Are we customer friendly?.(Research Article)(Report)", Indian Journal of Critical Care Medicine, Sept 2015 Issue

Publication

<1%

6

Sottile, Peter D., Amy Nordon-Craft, Daniel Malone, Margaret Schenkman, and Marc Moss. "Patient and family perceptions of physical therapy in the medical intensive care unit", Journal of Critical Care, 2015.

Publication

<1%

