DEVELOPMENT AND VALIDATION OF HEALTHCARE STANDARDS AND CRITERIA THAT CONTRIBUTE TO THE CARE OF RESIDENTS IN HOMES FOR THE ELDERLY IN TANZANIA

By

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DECLARATION

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ABSTRACT

Introduction

The problems experienced in homes for the elderly in Tanzania highlighted the need to develop healthcare standards to guide the provision of quality care to residents thus influencing healthcare outcomes.

Study goal

Developing and validating healthcare standards and the associated criteria to contribute to quality care for residents in homes for the elderly in Tanzania.

Objectives

i. To determine whether any healthcare standards are applied to ensure safe, quality care for residents in homes for the elderly in Tanzania.
ii. To develop and validate quality healthcare standards to provide safe, quality care to residents in homes for the elderly in Tanzania based on the results of objective (i).
iii. To develop validated measuring criteria to measure the validated healthcare standards for safe, quality care for residents in homes for the elderly in Tanzania.

Conceptual framework

The Donabedian quality model was applied to develop healthcare structure standards and the associated criteria.

Methodology

The study was conducted in three phases:

Phase 1:

A situational analysis was conducted by applying a quantitative research approach with an exploratory research design aligned with objective (i).

Validity

Efforts were made to strengthen construct, content and face validity of all data collections tools.

Reliability

The alpha coefficient for the audit instrument was .983 and the Likert questionnaire was .928 indicating a high internal consistency.

Phase 2:

Drafted standards and associated criteria were developed based on the findings of phase one and the relevant literature aligned with objective (ii).

Phase 3:

The developed drafted standards and criteria were validated applying the Delphi technique which was applied quantitatively aligned with objective (iii).

Ethical considerations

Approval was sought from Stellenbosch University (S19/02/048) and from Tanzania (NIMR/HQ/R.8a/Vol. IX/3191). Informed consent was obtained from managers of homes and participants.

Results

Phase 1:

All the homes for the elderly in the country N=32 (100%) were audited using an audit instrument which included seven fields, 26 drafted standards, four sub-standards and 262 associated criteria. All staff, N=65 (100%), from homes for the elderly completed a Likert scale questionnaire which was based on the items of the audit instrument which showed that all homes were non-compliant with all the standards and the criteria.

Phase 2:

Development of the drafted standards and associated criteria followed the COHSASA model. All 26 drafted standards and 257 (98%) of associated criteria were agreed upon by the experts, only 5 (2%) of the criteria underwent modifications which were then also accepted.

Phase 3:

Two rounds of the Delphi technique were conducted to validate the drafted standards and associated criteria. All 26(100%) healthcare standards reached consensus among the experts, including 258 (98.5%) criteria at a cut-off point of ≥ 80%. Four criteria were modified according to experts' comments and included in round two, achieving consensus of 96%.

Recommendation

Based on the researcher's observation and study findings, revealing poor care to residents in the homes for the elderly, the Government should respond to the plight of the elderly and urgently introduce the validated standards and criteria.

OPSOMMING

Inleiding

Die probleme wat in tehuise van bejaardes in Tanzanië ervaar word, het die behoefte laat ontstaan om gesondheidsorgstandaarde te ontwikkel om die voorsiening van kwaliteitsorg aan inwoners te fasiliteer en dus gesondheidsorg uitkomste te beïnvloed.

Doelstelling van die studie

Die ontwikkeling en bekragtiging van gesondheidsorgstandaarde en die meegaande kriteria wat tot kwaliteitsorg aan inwoners in tehuise vir bejaardes in Tanzanië sal bydra.

Doelwitte

i. Om te bepaal of daar enige gesondheidsorg standaarde toegepas word om veilige kwaliteitsorg vir die bejaarde inwoners van tehuise in Tanzanië te verseker.

ii. Om kwaliteit gesondheidsorgstandaarde te ontwikkel en te bekragtig vir die voorsiening van veilige kwaliteitsorg aan inwoners van tehuise van bejaardes in Tanzanië, wat op die uitslae van doelwit i gebaseer is.

iii Die ontwikkeling van geldige evaluasiekriteria vir die bekragtigde standaarde vir veilige, kwaliteitsorg van inwoners in tehuise vir bejaardes in Tanzanië, te meet.

Konseptuele raamwerk

Die Donabedian kwaliteitsmodel was toegepas om gesondheidsorgstruktuur standaarde en meegaande kriteria te ontwikkel.

Metodologie

Die studie is in drie fases uitgevoer:

Fase 1:

‘n Situasionele analise was uitgevoer deur die toepassing van ‘n kwantitatiewe navorsingsbenadering met ‘n ondersoekende navorsingsontwerp wat met doelstelling i in lyn is.

Geldigheid

Pogings was aangewend om die konstruk, inhoud en gesigsgeldigheid van die dataversamelingsinstrumente te versterk

Betroubaarheid

Die alfa-koëffisiënt vir die ouditeringsinstrument is .983 en die Likertskaal vraelys is .928, wat ‘n hoë interne konsekwentheid aandui.

Fase 2:

Die ontwikkeling van opgestelde standaarde en meegaande kriteria was op die bevindings van fase 1 en relevante literatuur inlyn met doelwit 2, gebaseer.

Fase 3:

Die ontwikkelde opgestelde standaarde en kriteria was kwantitatief deur die toepassing van die Delphi-tegniek, inlyn met doelwit iii, bekragtig

Etiese oorwegings

Goedkeuring was van Stellenbosch Universiteit (S19/02/048) en van Tanzanië (NIMR/HQ/R.8a/Vol. IX/3191) verkry. Ingeligte toestemming is van die bestuurders van tehuise en deelnemers verkry.

Resultate

Fase 1:

Al die tehuise vir die bejaardes in die land N=32 (100%) is geoudit, deur gebruik te maak van ‘n oudit-instrument wat sewe velde, 26 ontwerpte standaarde, vier substandaarde en 262 meegaande kriteria ingesluit het. Al die personeellede N=65 (100%) van tehuise vir die bejaardes het ‘n Likertskaal vraelys voltooi gebaseer op die items van die oudit instrument wat bewys het dat nie een van die tehuise aan al die standaarde en die kriteria voldoen nie.

Fase 2:

Die COHSASA model is met die ontwikkeling van die opgestelde standaarde en meegaande kriteria gebruik. Deskundiges het saamgestem met die 26 opgestelde standaarde en 257 (98%) van die meegaande kriteria. Slegs 5 (2%) van die kriteria het veranderings benodig wat ook aanvaar is.

Fase 3:

Twee rondtes van die Delphi-tegniek is uitgevoer om die opgestelde standaarde en meegaande kriteria te bekragtig. Al 26(100%) gesondheidsorgstandaarde, insluitende 258 (98.5%) by ‘n afsnypunt van ≥ 80% is deur die deskundiges bereik. Vier kriteria is na aanleiding van die

deskundiges se kommentaar aangepas en is ingesluit in rondte twee wat ’n konsensus van 96% bereik het.

Aanbeveling

Op grond van die navorser se waarnemings en die studiebevindinge wat swak sorg aan die inwoners van tehuise van bejaardes ontbloot het, moet die regering reageer op die lot van die bejaardes en die bekragtigde standaarde en kriteria dringend instel.

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ACRONYMS AND ABBREVIATIONS

AHRQ	Agency for Healthcare Research and Quality
AIDS	Acquired Immunodeficiency Syndrome
BP	Blood pressure
CCTV	Closed circuit television
CDC	Centres for Disease Control and Prevention
COHSASA	Council for Health Service Accreditation of Southern Africa
COHSASA-SANC	The South African Nursing Council and The Council for Health Service-Accreditation of Southern Africa
CR	Critical realism
GAROP	Global Alliance for the Rights of Older Persons
HIV	Human Immunodeficiency Virus
HREC	Human Research Ethics Committees
IRB	Institutional Review Board
ISQua	International Society for Quality in Health Care
LHRC	Legal and Human Rights Centre
MoHCDEC	Ministry of Health, Community Development, Gender, Elderly and Children
MRC	Medical Research Council
NA	Not applicable
NHREC	National Health Research Ethics Council
NIMR	National Institute for Medical Research (Tanzania)
OHRP	Office of Human Research Protections
OHSC	Office of Health Standards Compliance
PHD	Doctor of Philosophy
PPE	Personal protective equipment
REDCap	Research Electronic Data Capture
RSA	Republic of South Africa
SA	South Africa
SANC	South African Nursing Council
SAWAKA	Saidia Wazee Karagwe
SOP	Standards operating procedures
SPSS	Statistical Package for the Social Sciences

SU	Stellenbosch University
TNMC	Tanzania Nursing and Midwifery Council
TOP	Tanzania Older People's Platform
UK	United Kingdom
UN	United Nations
URT	United Republic of Tanzania
USA	United States of America
UTI	Urinary tract infection
WHO	World Health Organization
ZLSC	Zanzibar Legal Services Centre

OPERATIONAL DEFINITIONS

- Criterion is the element that measures the specific requirements which indicates that a particular standard is met (COHSASA, 2019:1-9).
- Elderly or older person was accepted by high economic countries to be from the age of 65+ years; and the UN agreed to be 60 years and above (WHO, 2017a:1-7).
- Field is a group of related standards (Jones, Tobiason, Chang, Heritage & Herman, 2015:1-30).
- Homes for the elderly are the homes where the older adults live together for easy access to health and social services; the exceptional setting which offers health, living care and other related care for the elderly (Luff, Ferreira & Meyer, 2011:1-45).
- Outcome is the primarily changes in the client's, patient's or resident's condition following treatment which include resident information and satisfaction (Johnson & Sollecito, 2018:1-30).
- Outcome standards refer to the results of care, whether these outcomes are beneficial or adversarial (Donabedian, 1988:1743-1748).
- Policy is a written operational statement of intent which helps staff make comprehensive decisions and take actions that are legal, consistent with the aims of the Service Provider, and in the greatest benefits of service users (Plocha & Bacigalupe, 2020:247-261).
- Process refers to implementation of guidelines, procedures and policies including techniques, approaches and the sequence of giving care (Castle & Ferguson, 2010:426-442).
- Process standards refer to the implementation of structure standards, which if implemented as planned, will influence positive outcome standards (Donabedian, 1988:1743-1748).
- Quality is about the magnitude to which an organisation meets its clients' needs and expectations (Whittaker, Linegar, Shaw & Spieker, 2011:59-67).
- A resident is an older person living in a home for the elderly (Lombard & Kruger, 2009:119-135;Republic of South Africa (RSA), 2006:19-36).
- Standards are directive items developed in a consensus manner, including important elements such as conditions, measures, approaches, procedures and applications towards achieving a certain goal in a certain community (Schulz S., 2019:19-36).

- Standard in healthcare is a level of quality in the provision of services for healthcare that is required to meet the needs of intended customers such as residents, patients and clients (WHO, 2015:1-40).
- Structure refers to the organizational features related with the delivery of care (Castle & Ferguson, 2010:426-442).
- Standards of practice are the “how-to” of the clinical field which include clinical policies, standard operating procedures, clinical practice and procedures (Wallen & Fisher, 2018:671-685).
- Structure standards refer to the requirements necessary to deliver safe and quality care (Donabedian, 1988:1743-1748).

CHAPTER 1: FOUNDATION OF THE STUDY

1.1 INTRODUCTION

The development of standards and criteria for homes for the elderly in Tanzania aims to improve the quality and consistency of care for residents. Residents in the homes for the elderly have specific needs usually arising from their own healthcare requirements. These needs may make them more at risk of abuse, exploitation, and neglect. Thus, homes for the elderly have an obligation in balancing residents' care needs, rights to quality of life and measures necessary to protect residents from harm by applying standards and criteria for the care of the residents.

1.2 BACKGROUND

In Tanzania, problems in homes for the elderly are apparently not prioritised. Most homes lack guiding principles and standards, resulting in poor conditions (Legal and Human Rights Centre, 2012:173, 175, 176, 378, 395;Zanzibar Legal Services Centre, 2012:173, 175, 176, 378, 395). In addition, most existing buildings in homes for the elderly in Tanzania are outdated, undignified and in poor repair, as many were constructed under the Ujamaa policies in the 1970s or during colonial times (Boddy-Evans, 2017:1).

The researcher has observed various problems facing residents in Tanzanian homes for the elderly. Many residents leave these homes to go to nearby main roads to plead for help; this suggests that security is lacking. Spending time on the roads increases the risk for accidents, sunburn and respiratory infections, especially during rainy seasons. Furthermore, these residents wear dirty and ragged clothes and often suffer from various skin infections (e.g., scabies). Informal conversations with residents indicated that the homes tended to experience food shortages and problems with drinking water. Residents also complained that adequate medications were unavailable and different illnesses were poorly managed. Despite numerous problems and challenges facing homes for the elderly in Tanzania, these homes still exist and accommodate residents. A paucity of research means information about the performance of these homes is limited. Consequently, there is a lack of evidence of the provision of adequate care in these homes available (Spitzer & Mabeyo, 2016:133).

Elderly people are considered a vulnerable group because of the biological and psychological effects of aging, which lead to common physical and mental health problems. These problems include arthritis, high blood pressure, heart disease, hearing loss, vision problems (Kumari, 2019:165-176) dementia, including Alzheimer's disease and depression (Schott, 2017:411-413).

Therefore, elderly people need special care delivered via specialised services and programmes. Such services require specialised knowledge, increased awareness and attention beyond routine care (de Carvalho, Epping-Jordan & Beard, 2019:185-195).

Around 5.6% of the elderly population of Tanzania is aged ≥60 years (United Republic of Tanzania, 2010:10). This means that Tanzania has about 1.4 million elderly people, which is expected to increase to 8.3 million by 2050 (United Republic of Tanzania, 2003:1-19). The general decline of physical health and psychological functions among elderly people, including intellectual and social activities (Lee & Kim, 2016:165) considerably increase the burden on the elderly population in Tanzania, in both the community and in residential homes for the elderly.

To recognise and modify care for the elderly, the Tanzanian Government developed a National Ageing Policy in 2003. The main aim of the policy was to ensure that older people are recognized and provided with free basic services such as health services, nutrition, social and legal services. In addition, the policy aimed to allocate resources and enact laws for older people's welfare and to ensure that older people receive free basic health services. Other aims of the policy were to empower families for sustained support of older people and prepare strategies and programmes geared towards elimination of negative attitudes and age discrimination. However, the policy was not implemented as planned because details relating to the policy about elderly people were under government control. The government was experiencing financial problems at that time, which made it impossible to implement the policy without collaborating with other stakeholders (United Republic of Tanzania, 2003:1-22). Furthermore, Kagaruki (2013:46-68) revealed that the objective of providing free health services to older people aged 60 years and above as it was stated in the National ageing policy 2003 was not yet to be met. Findings show that required medicine were given rarely. The common health services, which were provided freely, were consultation and laboratory tests. The author concluded that free health services for older people as stated in the National Ageing Policy 2003 was not practical, therefore most of the older people continued to suffer. Help Age International Tanzania branch, reported that 96% of elderly people in Tanzania had no reliable income and were forced to work under difficult situations to survive (Gorman, 2017:1-19). It was stated further that the high movement of young people from rural to urban areas and the effects of HIV/AIDS have added to the burden carried by elderly people. De Klerk (2020:17-21) identified that in northwest Tanzania grandparents are the main carers of grandchildren suffering from HIV/AIDS but because these grandmothers are in poor physical and psycho-social health, it was also found that grandchildren living with HIV have to provide care to their grandmothers. The government also failed to promote a national

plan of action for the needs of elderly people who were unable to feed themselves. In addition, problems facing most poor, the elderly and disabled people increased following the abolishment of the socialist system initiated by the late president, Mwalimu Julius Nyerere, which aimed to assist such vulnerable groups (Mulinge, 2018:195-228).

In response to health problems facing the elderly in Tanzania, the government has tried to put in place social protection policies, which appear progressive and indicate that Tanzania is intending to significantly reduce health service inequalities among disadvantaged groups including the elderly. These policies include among others: The National Ageing Policy of 2003, The 2003 Social Security Policy and The National Social Security Framework (United Republic of Tanzania, 2003:1-19).

In addition, during the celebrations of the International Year Of Older People (1999), the Government committed itself to implementing the National Ageing Policy. This commitment was a demonstration of the government in resolving ageing issues in the development agenda of the nation (United Republic of Tanzania (2003:1-19).

Despite the Government's commitment to ensure that quality elderly care is rendered in the health sector, substandard care is still provided to residents in the homes for the elderly (Kivelia & Kirway, 2017:1-2), and free and accessible health services to older people as stated in the National Ageing Policy 2003 is not practical (Kagaruki, 2013:1-109).

A clear need to improve standards, assessment strategies and monitoring of the performance of elderly care were identified. This study aimed to develop and introduce validated healthcare standards and associated criteria for homes for the elderly in Tanzania. The introduction of such standards may make a contribution to residents' care and wellbeing (Foruoghi, Keshvari, Sadeghi & Abazari, 2018:7).

1.3 RATIONALE

Tanzania has 41 homes for the elderly. Unfortunately, a lack of accessible studies means there is limited information about the standard and level of care provided in these homes. Therefore, the performance of these homes remains unknown. Irrespective of the various problems associated with aging, the researcher has observed specific problems facing residents in Tanzanian homes for the elderly, including residents begging and pleading for assistance in the streets. Such behaviour provides evidence of poor care in these homes (Spitzer & Mabeyo, 2016:133).

In general, published studies and reports relating to homes for the elderly in Sub-Saharan African countries are limited, although several studies have been conducted in South Africa. Specific information about the type and level of care provided in these countries remains limited, but there are some evidences that few elderly people receive quality care (Feng, 2019:291-297). Experiences in homes for the elderly in Mauritius, Seychelles and South Africa have highlighted numerous challenges with problems experienced by residents in these homes, including a lack of basic care. Typical challenges include care settings that are unhygienic, cramped or without reliable access to electricity and water (Aboderin & Epping-Jordan, 2017:15). Likewise, fragmentation of long-term care services resulted from the lack of guidelines and quality assurance processes which further exacerbates the problem (Olojede & Rispel, 2015:27878). It was identified that in some Sub-Saharan countries including Kenya, the quality of care provided is uncertain and organized long-term care workers lack adequate training (WHO, 2017b:1-44). Employment conditions are often unfavourable in relation to workload and professional development (Department of Social Development of South Africa, 2010:1-87). It is most likely that the problems associated with homes of the elderly will continue to increase given the increasing elderly population (Man-Ging, Öven Uslucan, Frick, Büssing & Fegg, 2019:305-322). Growth in the number of elderly people in Sub-Saharan African countries is placing governments under pressure and calls for planning of human and other resources to provide quality care for elderly people. Specific areas that need more attention are training and employing skilled workers and development of standards for homes for the elderly (Dale & Helton, 2018:245-257;Beard, Officer & Cassels, 2016:S163-S166).

Problems in homes for the elderly are a global issue. However, the World Health Organization, abbreviated WHO (2016a, 2015) indicated that Sub-Saharan African countries require more attention in dealing with problems identified in the homes for the elderly. The main requirements for these countries include creating understanding, commitment and establishing sustainable care (Aboderin & Epping-Jordan, 2017:15).

The situation of elderly care differs in developed countries. Although outcome measures for homes for the elderly in developed countries are not yet fully established, these homes at least encompass important components of a care continuum and extended care. Most concerns relating to care in developed countries relate to quality, including prevention of pressure ulcers, malnutrition, pain management, negligence, abuse, incontinence and residents' rights (Li, Cen, Cai & Temkin-Greener, 2019:641-647). Despite some movement for change in developed countries to meet the requirements and standards of care for residents, some private homes for

the elderly have not shown improved quality of care, including inadequate human and other resources (McGilton, Bowers, Heath, Shannon, Dellefield, Prentice, Siegel, Meyer, Chu & Ploeg, 2016:99-103). Harrington, Schnelle, McGregor and Simmons (2016:HSI.S38994) investigated the relationships between staffing standards and staffing levels in homes for the elderly in six developed countries (United States of America, Canada, England, Germany, Norway and Sweden). In four of these countries, namely United States of America, Canada, England and Germany, standards and staffing levels were lower than the levels recommended by specialists.

Daly (2017:67-91) in a study reported that homes for the elderly were associated with maltreatment, confrontation and negligence, as evidenced by pressure ulcers, underfeeding, malnourishment, dehydration, falls and bad smells. Other identified problems included a lack of guiding policies, unreliable funding and employment of unskilled workers with no knowledge of geriatric care, resulting in providing poor healthcare (Wunderlich, Sloan & Davis, 2016:128-167). A study conducted in China supported these results, which identified that administrators, workers and other staff working in these homes had little training and limited knowledge about geriatric care (Feng, Li, Xiao, Ullah, Mao, Yang, Hu & Zhao, 2018:816).

A study by Yakubu (2019:138-158) reported that homes for the elderly in Nigeria faced numerous problems, predominantly caused by unreliable funding as most of these homes depended on contributions from citizens and voluntary agencies. Consequently, unreliable funding for these homes resulted in residents not receiving appropriate care and residents resorting to begging in the streets. In addition, most Nigerian citizens were not interested in homes for the elderly, as they perceived the homes as the place where problems such as mishandling, neglect and carelessness dominated. Likewise the study conducted by Yuan and Wang (2018:16) in China, found that problems such as boredom, frustration and malfunctioned homes for the elderly were mainly due to a deficit in sources of funds, lack of professional nursing staff and management personnel, and imperfect management.

It is important that elderly people remain safe and close to other people in the community to prevent problems such as depression, which may be related to isolation and emotional needs not being met. If elderly people are not properly supported, problems such as a lack of appetite, insomnia and poor concentration may occur. Measures should be taken to manage the identified problems early to ensure that elderly people do not end up experiencing vulnerability, loneliness, boredom and isolation (Neves, Sanders & Kokanović, 2019:74-84). Abad and Guilleminault (2018:791-817) recommended that the elderly with insomnia should receive psychological and

behavioural therapies as initial intervention before pharmacological approach. In their study, Andrew and Meeks (2018:183-189) suggested recreational activities as among interventions to treat loneliness among the elderly. In addition, Aung, Nurumal and Bukhari (2017:72-78) indicated that early identification of loneliness is an important strategy to delay this problem in the elderly.

The problems experienced in homes for the elderly highlighted the need to develop care standards to guide the provision of safe, quality care; this care should be resident-centred, address residents' needs, provide access to care, promote residents' engagement and influence healthcare outcomes. Furthermore, safe, quality care must be focused on achieving long-term and meaningful improvements and provide means to assess quality improvement (Carmel, 2017:329-346). In particular, Lamsal (2019:1-2) stated that patient safety was the basis of quality healthcare. Patient safety should focus on progressive quality indicators, including measures of improved health status and prevention of adverse effects, such as high rates of mortality and morbidity.

1.4 PROBLEM STATEMENT

Although information about the performance of homes for the elderly is limited by the lack of published research, the researcher observed residents of elderly care homes begging in nearby streets; this suggested security was lacking, and residents could move in and out of homes freely. Informal conversations have also indicated that these homes commonly experienced food shortages and problems with drinking water. Residents also complained that medicines were unavailable and there was poor management of different illnesses.

Despite the numerous problems and challenges facing homes for the elderly and their residents in Tanzania, these homes still exist and accommodate residents. Therefore, it was necessary to obtain evidence to determine a baseline for the care provided to residents and develop quality healthcare standards for homes for the elderly in Tanzania. Such standards may provide guidance for the quality of care given to residents.

1.5 GOAL OF THE STUDY

The goal of this study was to develop and validate healthcare standards and criteria to contribute to quality care for residents in homes for the elderly in Tanzania.

1.6 RESEARCH QUESTIONS

The research questions, which gave guidance to the study, were the following:

i. What are the healthcare standards currently applied to provide safe, quality care for residents in homes for the elderly in Tanzania?
ii. What are the healthcare standards that should be developed and validated to provide safe, quality care to residents in homes for the elderly in Tanzania?
iii. What are the validated criteria that should be developed to measure these developed healthcare standards for safe, quality care for residents in homes for the elderly in Tanzania?

1.7 OBJECTIVES

The objectives set for this study were the following:

i. To determine whether any healthcare standards are applied to ensure safe, quality care for residents in homes for the elderly in Tanzania.
ii. To develop and validate quality healthcare standards to provide safe, quality care to residents in homes for the elderly in Tanzania based on the results of objective (i).
iii. To develop validated measuring criteria to measure the validated healthcare standards for safe, quality care for residents in homes for the elderly in Tanzania.

1.8 CONCEPTUAL FRAMEWORK

A brief overview of the conceptual framework is described in this chapter and more detail in chapter 2.

This study applied the Donabedian conceptual quality model framework to audit homes for the elderly (Donabedian, 1988:1743-1748). The model describes healthcare in three dimensions: structure, processes and outcomes (Donabedian, 1988:1743-1748).

Structure standards refer to the requirements necessary to deliver safe, quality care. According to Botma and Labuschagne (2019:363-372), the Donabedian framework describes structure standards as the setting in which healthcare is provided. This includes five components: infrastructure, equipment, staff, procedures and policies.

Process standards refer to the implementation of structure standards, which if implemented as planned, will influence positive outcome standards. Process standards observe the way healthcare is delivered. These standards refer to the techniques, approaches and sequence of steps needed to provide care to produce desired outcomes. It further presents a series of activities that convert resources into services. Activities involved in transforming inputs to products include

implementation of standards, guidelines, procedures and established policies. Process standards should address four aspects that guide the services delivered: integrated care, expanded excellent services, sustainable care and comprehensive care.

According to Donabedian (1988:1743-1748), outcome standards refer to the results of care, whether these outcomes are beneficial or adversarial. Outcome standards include residents' recovery, improvement in functioning, survival or death. The Donabedian (1980:807-811) classifies outcome standards in four domains: clinical outcomes, functional outcomes, satisfaction and measuring outcomes. The three dimensions (Structure, Process, Outcome) for measuring quality of care (Donabedian, 1988:1743-1748) are presented in chapter 2 (see Figure 2.2).

Although the Donabedian model describes three dimensions (structure, process and outcome standards) for measuring quality healthcare, this study focused on developing and validating structure standards. The development of standards focused on the fields within which standards and criteria were developed. The newly developed standards and criteria were based on the literature and findings of objective (i) and validated through a quantitative application of the Delphi technique (Njuangang, Liyanage & Akintoye, 2017:737-754).

1.9 PHILOSOPHICAL UNDERPINNINGS

As the purpose of the study was to gain an understanding of the 'real' situation of the homes of the elderly in Tanzania, the study was based on the Critical Realism (CR) Theory. Therefore, the main use of the critical realism (CR) theory in this research was to explain social events of lack of health care standards in the homes for the elderly and possible justifications and reasons of what caused such poor conditions in these homes. Moreover, the theory was used to measure how the study data may be used by homes for the elderly and measure the benefits of the outcomes derived from using information generated by this study.

By applying this theory, care given to residents was explored, which ultimately led to the development of healthcare standards for homes for the elderly. CR emphasises the real mechanisms that shape the outcome and allowed this study to explain how the developed standards for homes for the elderly will hopefully result in positive outcomes for residents. The philosophical underpinning of this study is described in more detail in chapter 2.

1.10 RESEARCH METHOD

A brief overview of the research method is described in this chapter and more detail is given in chapter 4.

The study was conducted in three phases, namely:

Phase 1: Phase one comprised of the situational analysis, which was done by applying a quantitative research approach with an exploratory research design. This phase was aligned with the first research objective that was to determine whether any healthcare standards were applied in homes for the elderly in Tanzania that contributed to safe, quality resident care.

Phase 1 comprised a situational analysis that was achieved through 2 sub-studies:

- Sub-study 1: An audit of homes of the elderly using an audit instrument
- Sub-study 2: A questionnaire completed by staff of these homes on whether the homes meet the structured standards contained in the audit instrument.

Phase 2: During the second phase, standards and associated criteria were developed based on the findings of phase one and relevant literature aligned with objective (ii).

Phase 3: In this phase, the developed drafted standards and associated criteria were validated applying the Delphi technique, which was applied quantitatively. This phase was aligned with objective (iii).

1.10.1 Phase 1

1.10.1.1 Research methodology

a. Study design

A quantitative research approach with an exploratory descriptive design was used in this study.

b. Study area and setting

This study was conducted in the mainland of Tanzania, which is divided into six different geographical zones. Homes for the elderly that were included in the study were from all six geographical zones of the country.

c. Population and sampling

i. Homes for the elderly

Sub-study 1: A total of 34 homes for the elderly (17 public homes and 17 private homes) were found in existence. Out of 34 homes, 2 homes (1 home from each entity) were used for the pilot study, and the remaining 32 homes, the total population was included in the study.

ii. Staff

Sub-study 2: The targeted population included general managers, professional registered nurses, non-professional nurses and caregivers. All staff members, the total population at the homes were included in this study.

d. Inclusion and exclusion criteria

i. Inclusion criteria

Sub- study 1: There were no inclusion criteria for homes for the elderly.

Sub-study 2: General managers, professional registered nurses, non-professional nurses and caregivers employed at the homes included in the study, who were available during the data collection period and who were willing to provide consent were included in this study.

ii. Exclusion criteria

Sub-study 1: There were no exclusion criteria for homes for the elderly.

Sub-study 2: Any staff member identified for the purpose of this study who did not give consent or who was away on leave such as holiday or sick leave was excluded.

e. Pilot study

Sub-study 1: A 10% sample (n=2) of the actual sample size of the homes was included in the pilot study, along with all staff of these two homes (Muhamad, Nuwairi & Rani, 2017:292-299).

Sub-study 2: A total of five staff from the two homes that were involved in the pilot study were also included in the pilot study.

f. Data collection tools

Data collection instruments included an audit instrument used to audit the homes (Sub-study 1) and a Likert questionnaire (Sub-study 2) completed by the staff.

g. Data collection

The researcher collected all data personally.

h. Validity and reliability

The validity was assured through construct, content and face validity. The reliability of the instruments was tested through the calculation of the Cronbach's alpha coefficient. A score of .983 and .928 for the audit instrument and the questionnaire respectively were obtained, indicating

that the instruments had high internal consistency. In addition, a pilot study was conducted which supported the rigour of the study.

i. Data analysis and presentation

Data were cleaned and statistical analyses were performed applying the Statistical Package for the Social Sciences (SPSS) version 26 (Green & Salkind, 2016:289, 688). Data were presented as frequencies using tables.

The summary of two sub-studies is presented in table 1.1.

Table 1.1: Summary of two sub-studies

Methods	**Sub-study 1: An audit of the homes**	**Sub-study 2: The views of the staff employed at these homes**
Population and sampling	Population: N=32 Homes: n=32 (100%). No sampling done	Population: N=65 No sample done
Pilot	Two homes	Five staff of these 2 homes
Data collection tool	An audit instrument	A questionnaire based on the items contained in the audit instrument
Data collection	Both sub-studies: Completed face to face by the researcher	
Data analysis	Both sub-studies: Data were cleaned, and statistical analyses were performed applying the Statistical Package for the Social Sciences (SPSS) version 26 (Green & Salkind, 2016:289, 688). Data were presented as frequencies using tables.	

1.10.2 Phase 2

During the second phase, standards and associated criteria were developed based on the findings of phase one and relevant literature aligned with objectives (ii) and (iii) applying the COHSASA model (Whittaker & Mazwai, 2016:42-45). The researcher, supervisor, co-supervisor, biostatistician and various organizations involved in providing services to the elderly in Tanzania were involved in the development of the drafted standards and associated criteria.

1.10.3 Phase 3

The Delphi technique was applied to validate the drafted structure standards and associated criteria for homes for the elderly developed in this study. An organised progression technique allowed a sequence of survey rounds of the required standards and criteria for homes for the elderly in Tanzania until consensus among experts was reached (Njuangang et al., 2017:737-754).

1.11 ETHICAL CONSIDERATIONS

Approval to conduct this study was sought from the Health Research Ethics Committee at the Faculty of Medicine and Health Sciences of Stellenbosch University (Annexure 7). Additional permission was sought from the Tanzanian Ministry of Health and Social Welfare (Annexure 8) and managers of the homes for the elderly. Written informed consent (Annexure 6) was obtained from individual participants before distribution of the questionnaires; participation was voluntary and no direct benefits or incentives were offered. For the Delphi process, it was stated in the introduction of the questionnaire that by agreeing to participate, it will be regarded as giving informed consent to take part in all rounds until the consensus is reached among the experts. Participants were informed that they were free to withdraw from the study at any time without any penalty.

Participants were assured of confidentiality of their information throughout the study. Zones, participating homes and participants were all identified using codes. This study did not cause any risk to participants, and no individual was forced to participate in this study. Moreover, principles of ethics (i.e., autonomy of participants, justice, beneficence and nonmaleficence) were observed.

Considering the principle of autonomy, participants gave informed consent to be part of the study after being given sufficient information and time to understand the research. The researcher was fair to all participants and all participants were treated equally.

Beneficence was observed to promote the well-being of the participants and residents in the homes for the elderly throughout the collection of the data. On the other hand, non-maleficence was observed by not causing any harm to the participants by carefully observing all ethical principles in the data collection process. All measures were taken to avoid careless mistakes.

Before obtaining permission, participants were informed about the value of their participation and the expected outcomes of the study. Thereafter, written informed consent was obtained. Data were collected in the participant's language of choice (Swahili or English).

Intellectual property was respected. Plagiarism or copying materials were prevented. All references cited were acknowledged. Objectivity was sustained; bias was strictly avoided in any aspect of the research, including design, data analysis and interpretation. No country zone, home or participant was inadvertently excluded from the research. Openness was maintained throughout the study. The research was open to any kind of criticism and new ideas from various

stakeholders. Honesty and integrity underpinned all processes of data collection. The research as a whole from the beginning including methods used, data and results were reported honestly.

The data will be stored for a period of not less than 6 years after becoming dormant (Health Professions Council of South Africa, 2007:162, 256-257). During the study, data were only accessible to the supervisor and co-supervisor, the biostatistician and researcher.

After completion of the study, any publications generated from the study will be publicly accessible in order to further enhance knowledge and advance practice in the area of elderly care. Consent for any other party who wishes to use the instruments developed for this study will be obtained from the researcher through Stellenbosch University who is the copy-right owner of this research.

1.12 CHAPTERS LAYOUT

The layout of the 10 chapters of the study is presented in table 1.2.

Table 1.2: Layout of chapters

Chapter	Title	Description
Chapter 1	Foundation of the study	This chapter includes the background of the study, problem statement and rationale of the study. Also included in this chapter is a brief overview of the research method followed in this study
Chapter 2	Research paradigm and conceptual framework	The chapter contains a description of the research paradigm and conceptual framework, which gave guidance to this study
Chapter 3	Literature review	The chapter covers a description, summary and clarification of information found in the literature related to this study
Chapter 4	Phase 1: Research methodology	In this chapter the research methodology followed in this study is described
Chapter 5	Phase 1: Data analysis and results of the audit of standards of care in homes for the elderly in Tanzania	This chapter presents the quantitative data analysis and results of Phase 1 completed by the researcher
Chapter 6	Data analysis and results of the Likert Questionnaire	The indicated chapter presents the quantitative data analysis and results of Phase 1, completed by the participants
Chapter 7	Phase1: Discussion of results, interpretation and conclusion of the situational analysis	The chapter includes the discussion and interpretation of the results of Phase 1. Conclusion of phase 1 is also provided in this chapter

Chapter 8	Phase 2: Development of the drafted standards and criteria	The development of the standards and criteria are presented in this chapter
Chapter 9	Phase 3: Validation process of the drafted healthcare standards and the associated criteria	This chapter contains a description of the Delphi technique as applied to validate the drafted standards and associated criteria. The process consisted of two rounds
Chapter 10	Summary of findings, research outcomes discussion and recommendations	The chapter provided a summary of the research findings, summary of discussion of research outcomes and recommendations

1.13 SUMMARY

This chapter includes the background of the study, provides the rationale of the study, and describes the problem statement and significance of the study. In addition, the chapter provides the study goals, research questions, research objectives and a brief overview of the methods followed based on the three phases applied to develop and validate standards and criteria. Similarly, ethical considerations are described in this chapter.

1.14 CONCLUSION

The residents in the homes for the elderly are facing serious and multiple problems. These problems include underfeeding, malnourishment, falls, maltreatment, lack of funds and skilled staff to mention a few. The situation in these homes indicated the need for the development of healthcare standards and criteria that would lead to improved quality healthcare of the residents.

CHAPTER 2: RESEARCH PARADIGM AND CONCEPTUAL FRAMEWORK

2.1 INTRODUCTION

The research paradigm is the basis of the research, and involves the choice of research strategies, processing, and analysis that were used in the study. The study was founded on perspectives provided by the critical realism (CR) paradigm, in which critical realists believe that there are unobservable events that cause the observable ones. For that reason, the researcher applied CR focusing to understand social events, namely problems in homes for the elderly in this case and causal mechanisms behind such problems (Haigh, Kemp, Bazeley & Haigh, 2019:1571).

The Donabedian Model served as the theoretical framework of the study and subsequently, the main concepts and relational statements contained in this model were aligned to the research process applied in the study. The Donabedian conceptual quality model framework was linked with the concepts, empirical research and important theories used in promoting knowledge adopted by the researcher to conduct this study.

2.2 RESEARCH PARADIGM

The research paradigm used in this study was CR. Critical realism is a series of philosophical positions on a range of matters including causation, structure, persons, and forms of explanation (Gross, 2016:1-3). According to Næss (2015:1228-1244) CR acknowledges the independent causal powers of both agents and structures and thus provides a suitable platform for investigating causal relationships between social conditions, poor homes for the elderly in this circumstance and the actions of agents, including Tanzanian Ministry of Health and Social Welfare. Critical realism, like other philosophies of science, sets out a particular worldview, in this case, that the world is real and is driven by causal mechanisms that may function differently according to context. Realist science focuses on exploring these mechanisms and the way it works to develop explanatory theories of the phenomena under consideration, in this circumstance, the condition of homes for the elderly in Tanzania (Ellaway, Kehoe & Illing, 2020:984-988). According to CR, there is a reality that exists independently of human beings' thoughts about it, and while observing may make human beings more confident about what exists, existence itself is not dependent on observation (Haigh et al., 2019:1571). An example of this is

that residents in homes for the elderly in Tanzania have the right to health even when they are not aware of it.

However, CR is a philosophy of science that contrasts with other main philosophies, such as essentialism and progressivism because of the nature of contemporary sociology. CR underlies sociology, in which current operating issues, namely healthcare problems in homes for the elderly can be better served by a CR perception. These issues tend to operate within deficiencies in truth, culture, structure, agency and causality (Carrigan, 2017:1-2). CR is the method preferred in social sciences for enclosing research and theory (Bygstad, Munkvold & Volkoff, 2016:83-96;Rutzou, 2018:119A'157). It is a philosophical structure that reflects a new approach to research in general, and to nursing research in particular (Schiller, 2016:88-102).

Mingers and Standing (2017:171-189) argued that the CR philosophy challenges the fundamental concerns of both natural and social science systems. This makes CR particularly useful in studies involving facts related to natural and social sciences because of its applicability in human situations such as organisations. The authors claimed that the primary principle of CR is that the world exists autonomously of what people think about it. According to Rutzou (2018), CR has been applied when attempting to solidify knowledge of concepts such as structure, appearance and causation, and undoing the rationalities of explanation. Tanaka (2017:79-105) stated that the realist theme in knowledge of the social world is also adapted from causal mechanisms methodology to social description, where theorists debate that there are real but frequently unobservable social causal mechanisms that institute the force of social variation. The mechanism-based explanation associated with CR is a form of causal inference that attempts to establish how an observed social phenomenon, poor conditions of residents in homes for the elderly in Tanzania in this situation, is brought about, and the way causes are linked to effects versus causal mechanisms.

CR encompasses human needs, frustrations and how social structure relates to these human needs and identified frustrations. In addition, CR holds that beliefs, the falsehood thereof and causal relations are related to social structures. Rafe, Noaparast, Hosseini and Sajadieh (2019:1-9) identified that CR is applicable in addressing the causes of inequities and false beliefs by exposing and challenging the institutions that generate and maintain these inequities and false beliefs. Moreover, the uniqueness of CR is that it goes beyond normal thinking to the deeper roots of needs and false beliefs (Lennox & Jurdi-Hage, 2017:28-38).

At the heart of critical realism is realism about ontology, an inquiry into the nature of things. Ontological realism asserts that much of reality exists and operates independently of human beings' awareness or knowledge of it (Gross, 2016:1-3). Critical realists thus retain an ontological realism that there is a real world that exists independently of our perceptions, theories, and constructions (Maxwell, 2012). According to Øgland (2017:1-14), CR ontology allows for consistency re-interpretation of various activities upon the concepts of structures and causal mechanisms. This interpretation is important as it provides explanatory power in relation to current research practices.

A study conducted by Karanasios (2017:1-17) identified that CR is a useful paradigm because it is a theory with realism philosophy about the world, human agency and the interaction between them. Human agency entails the claim that humans do in fact make decisions and enact them on the world and society. The agency may be classified either as involuntary behaviour or as intentional directed activity of human being over the society.

Karanasios (2017:1-17) further stated that CR goes a step beyond other paradigms and demands for empirical testing to determine whether issues are real or imaginary. Therefore, CR differs from other paradigms because of scientific experiments. Critical realists are concerned with ontological depths and identification of the efficiency of causal mechanisms. Additionally, with this paradigm, mechanisms of events and causal patterns are easily recognised. According to the author, CR distinguishes between a reality independent of what we think of it and our thinking of it. CR therefore assumes that there exists a mind-independent reality and truth is correspondent with fact. Therefore, CR agrees that there should be construction and production of knowledge that is communicable.

Furthermore, CR is sustainable and is therefore useful for conducting research. It has also been proposed as an alternative for other paradigms, namely positivism and interpretivism. The uniqueness of CR is that it shows a clear explanation of causal relationships in the given phenomenon on the interaction between structural entities and contextual conditions to generate a given set of events. The causality principles and processes are derived directly from the ontological and epistemological assumptions of the paradigm (Øgland, 2017:1-14). Similarly, the CR ontology approach was described by Fleetwood (2013:15) as shown in figure 1.

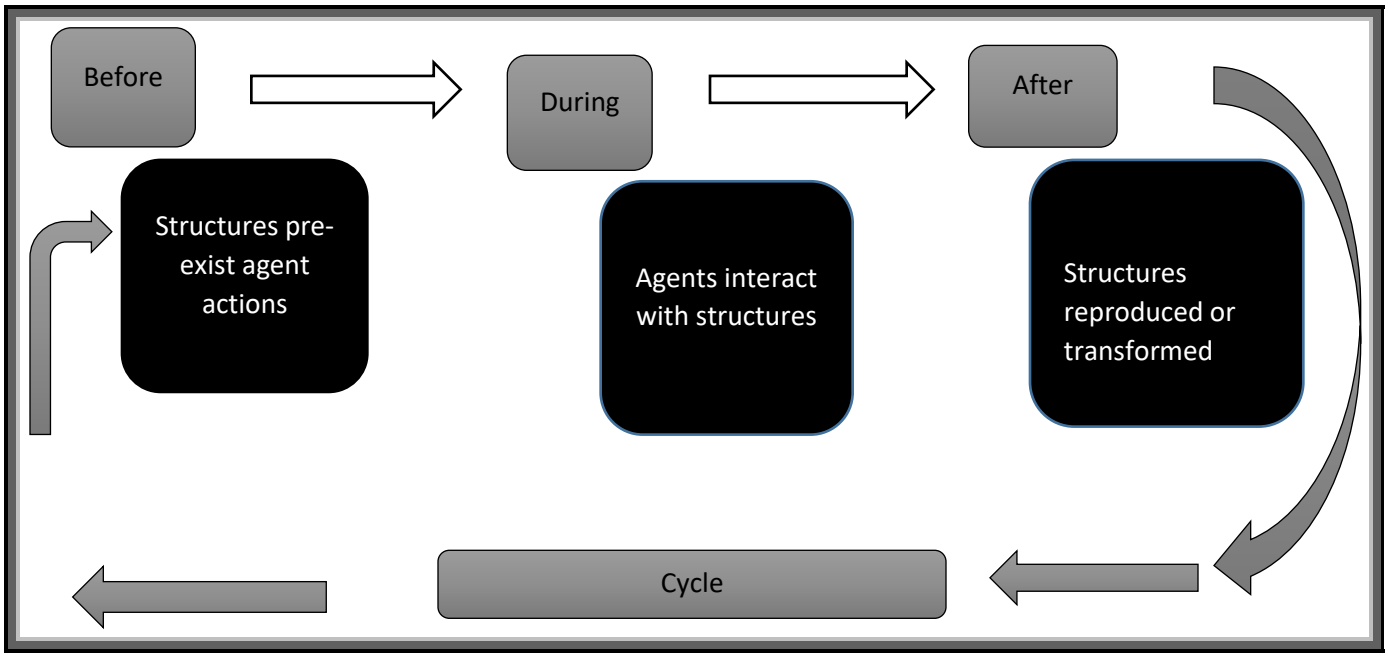

Figure 2.1: Ontology approach in critical realism

With reference to figure 2.1 and based on relevant literature, CR was deemed useful for this study as homes for older adults are within a certain structure that needs standards (agents) that will reproduce and transform the pre-existing structure. Structures are the ever present conditions of these homes that need to be reproduced or transformed for the sake of the residents (Karanasios, 2017:1-17).

Because of human nature, CR theory itself cannot predict what will happen in the future, but is only used for explanation. The significance of CR theory involves a deep understanding of any social condition beyond the observable, and the study of mechanisms behind any result. The present study proposed to understand the 'real' situation of the elderly care homes in Tanzania to achieve the required outcome. Therefore, the main use of CR theory in this research was to explain social events, namely, the lack of healthcare structure standards in homes for the elderly in Tanzania in this case and possible justifications of such problems. Moreover, the theory was used to measure how the study data may be used by homes for the elderly and measure the benefits, thus outcomes derived from using information generated by this study.

This study applied the CR paradigm, which holds that knowledge (epistemology) differs from existence (ontology). According to CR theory, there are unobservable events that cause observable events (Martin, 2020:155). Therefore, this study first addressed the unobservable situation, which according to CR theory caused the observable situation. The 'reality' can be

acquired if the origin of unobservable events is understood. By applying this theory, care given to residents was explored, and ultimately informed the development of healthcare standards and criteria for homes for the elderly in Tanzania. CR emphasises the real mechanisms that shape the outcome and allowed this study to explain how the developed standards and criteria for homes for the elderly will hopefully result in positive outcomes for residents.

2.3 CONCEPTUAL FRAMEWORK

This study applied the Donabedian conceptual quality model framework to audit the homes for the elderly. The model describes healthcare in three dimensions: structure, processes and outcomes (Donabedian, 1988:1743-1748).

2.3.1 Structure standards

Structure standards refer to the requirements necessary to deliver safe, quality care. According to Donabedian (1988:1743-1748), the Donabedian framework describes structure standards as the setting in which healthcare is provided, which includes five components: infrastructure, equipment, staff, procedures, and policies.

2.3.1.1 Infrastructure

Adequate facilities and a good organisational set-up with enough building space can enhance the delivery of care. According to Donabedian (1988:1743-1748), facilities should include the infrastructure necessary for therapies, and treatment should be located in a convenient place to promote activities of daily living and mobility. Essential elements such as toilets, washing and bathing facilities must be secured to meet residents' needs.

2.3.1.2 Equipment

Each home should have the equipment required for therapies and relevant care to enable the home to deliver safe, quality care for residents.

2.3.1.3 Staff

Staff employed in homes for the elderly should include a skill mix of qualified and unqualified staff appropriate for the needs of residents and the size, layout and purpose of the home. Caregivers and healthcare professionals employed in these homes should be competent, skilled and sufficiently knowledgeable in gerontology to provide safe, quality care to residents. Staff should have the appropriate skills for assessing and resolving the needs of residents. In addition, qualified staff should be able to provide rehabilitation and recovery services, including treatment,

management of incontinence and promotion of self-care. These aspects govern caregivers and the type of care provided to residents in homes for the elderly (Donabedian, 1988:1743-1748).

2.3.1.4 Procedures

Donabedian (1988:1743-1748) indicated that it is essential that homes for the elderly develop and apply written procedures that prohibit mistreatment, neglect and abuse of residents and embezzlement of residents' property. Other necessary procedures include control of infection, such as safe management of clinical waste and proper hand washing. Additional procedures should be implemented that cover aspects such as employing trained staff, administration of the right drugs, residents' wellbeing and security, managing threats and appropriate keeping of residents' records. Furthermore, procedures should include guidelines and protocols for programmes, including complaints procedures. Registered homes must ensure that there is a simple, clear and accessible complaints procedure that sets out the stages and timescales for the process and describes how complaints are dealt with promptly and effectively. The home must also ensure that employment procedures are adopted, and induction, training and supervision arrangements are implemented.

2.3.1.5 Policies

Registered homes must ensure that policies are formulated on various issues that may affect the home for the elderly, such as an admission policy. Policies must also be adhered to for the receipt, recording, storage, handling, administration and disposal of medicines. Registered homes should also ensure residents are safeguarded from physical, financial, material, psychological or sexual abuse, neglect, discrimination, self-harm, inhuman treatment, negligence and ignorance, in accordance with written policies (Donabedian, 1988:1743-1748).

2.3.2 Process standards

According to Donabedian (1988:1743-1748), process standards refer to the implementation of structure standards, which if implemented as planned, will influence positive outcome standards. Process standards observe the way healthcare is delivered. These standards refer to the techniques, approaches and sequence of steps needed to provide care to produce desired outcomes. It represents a series of activities that convert resources into services. Activities involved in transforming inputs to products include implementation of standards, guidelines, procedures and established policies. Process standards should address four aspects that guide the services delivered: integrated care, expanded excellent services, sustainable care and comprehensive care.

2.3.2.1 Integrated care

A care plan generated from a comprehensive assessment must be drawn up for each resident and must provide the basis for the care to be delivered. Process standards related to integrated care should include communication between caregivers and residents, residents' information, performance and level of quality of care delivered.

2.3.2.2 Expand excellent services

Process standards define the relationship between care providers and care recipients through providing healthcare and other required care. Management of homes for the elderly must ensure as far as is practical the health, safety and welfare of residents and staff. Residents in these homes must be free of abuse, negligence and maltreatment. Moreover, process standards of care describe how the care is to be delivered and the interpersonal processes between care providers and care recipients. These standards should include necessary actions and appropriate analysis related to adversarial events and cases, based on established policies, protocols, procedures, standard operating procedures and actual nursing care (Donabedian, 1988:1743-1748).

2.3.2.3 Sustainable care

The routines and activities of daily living should be made available, flexible and varied to suit residents' expectations, preferences and capacities. Homes for the elderly must ensure that care and comfort are provided to residents who are dying, their death is handled with dignity, and their spiritual needs and functions are observed.

2.3.2.4 Comprehensive care

Process standards refer to the activities that make up comprehensive care. This type of care includes all practices of health education for residents, prevention of health problems, identification of correct diagnoses and the process of delivering appropriate treatment.

2.3.3 Outcome standards

According to Donabedian (1988:1743-1748) outcome standards refer to the results of care, whether these outcomes are beneficial or adversarial. Outcome standards include residents' recovery, improvement in functioning, survival or death. The Donabedian model (1988) classifies outcome standards in four domains: clinical outcomes, functional outcomes, satisfaction and measuring outcomes.

2.3.3.1 Clinical outcomes

High morbidity rates, mortality, complications and adverse outcomes are indications of poor clinical outcomes. A high mortality rate is an indication of poor health services and poor quality of care. In contrast, low morbidity and mortality rates, minimum complications and the absence of adverse events are indicators of good care. In particular, a low number or absence of residents suffering from pressure ulcers, scabies and falls are deemed indicators of good care (Donabedian, 1988:1743-1748).

2.3.3.2 Functional outcomes

Functional outcomes include residents' capacity to achieve activities of daily living. For example, quality of care may be measured in terms of prevalence of decline of range of motion among residents. Moreover Donabedian (1988:743-1748) noted that functional outcome standards measure the effects of healthcare on the health status of care recipients and homes for the elderly.

2.3.3.3 Resident satisfaction

According to Donabedian (1988:743-1748), standards should cover the effects of healthcare on residents, such as changes to health status, performance, awareness, residents' satisfaction and quality of life. Furthermore, good satisfaction outcomes should reflect person-centred decisions about life maintenance and residents' health. Residents' attitudes and satisfaction can be measured either qualitatively or quantitatively. Shirley, Josephson and Sanders (2016:12) found that patient satisfaction can be accurately measured using a quantitative approach with a common assessment tool to evaluate patient satisfaction that can be applied in any format (e.g., self-reported, interviewer-administrated or by telephone).

2.3.3.4 Measuring outcomes

Data on outcome standards may be acquired from different sources, such as medical records, and interviewing residents and care providers. This information can also be obtained through direct observations during healthcare delivery that relate to identified outcome standards. Botma and Labuschagne (2019:363-372) applied Donabedian's model in their study that measured quality of care in homes for the elderly. These indicators of quality care should be identified in the clinical environment against which quality of care is measured. They identified several quality indicators, including incidence of falls, bowel incontinence, home-acquired pressure ulcers, scabies, new fractures, management of pain and immobility. Moreover, adverse events such as an infection rate and urinary tract infections are among the incidents used to measure quality care. Residents must also be free of any significant medication errors.

These three dimensions of measuring quality of care are presented in figure 2.2.

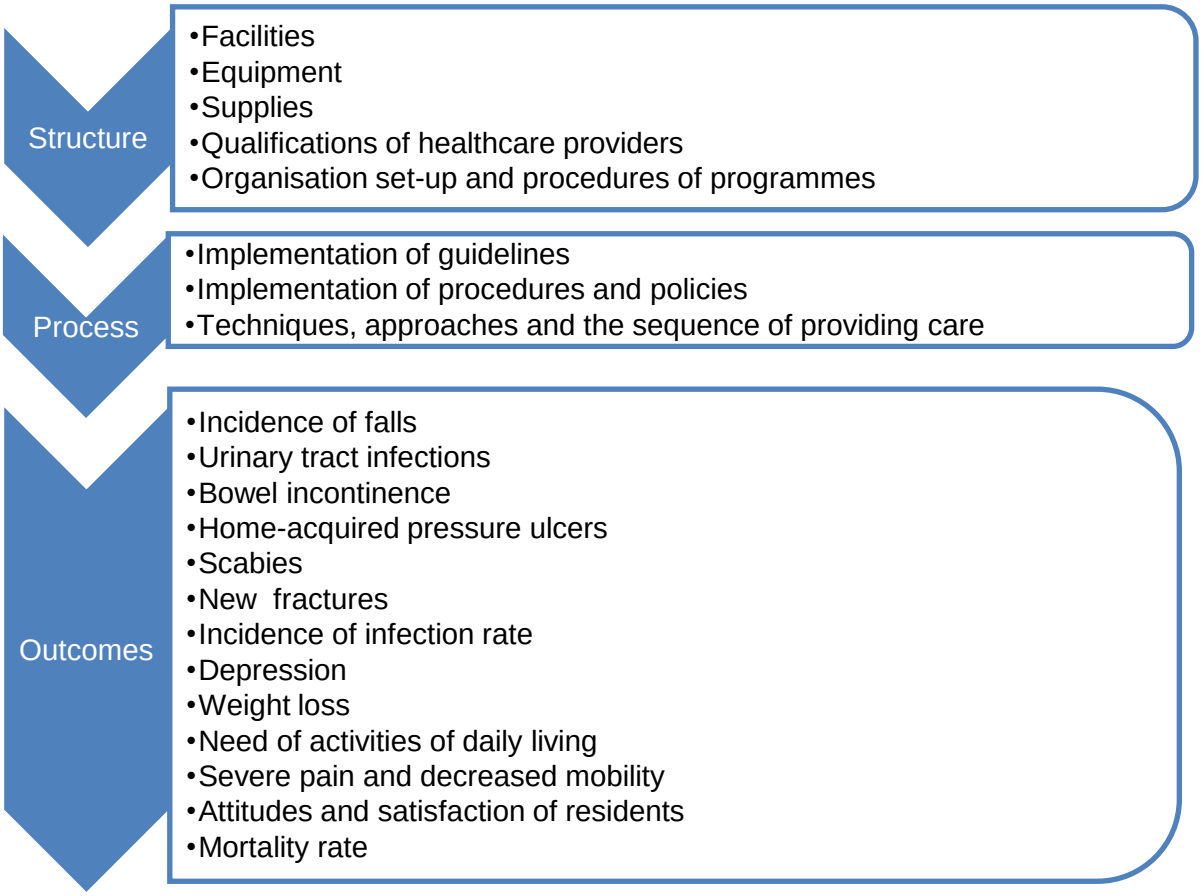

Figure 2.2: Indicators of quality of care, adapted from Donabedian's healthcare quality framework (Donabedian, 1988:1743-1748)

2.3.4 Application of the model in this study

Although the Donabedian model has three dimensions (structure, process and outcome standards), this study focused on developing and validating structure standards. Many structure standards are required to establish a home for the elderly. Therefore, for the purpose of this study, only structure standards were developed. It is important to start by developing structure standards, as this provides a foundation for the other dimensions i.e., process and outcome standards. The development of structure standards focused on the fields within which standards and criteria were developed. The newly developed standards and criteria were based on the literature and findings of objective (i), and validated through a quantitative application of the Delphi technique (Njuangang et al., 2017:737-754).

2.4 SUMMARY

Critical Realism is the paradigm used in this study. This paradigm was preferred in this study because of its applicability in human situations, such as institutions and organisations. The paradigm was useful in the study because it is a philosophy about the world, human agency and the interaction between world and human agency.

Donabedian conceptual quality model is the framework that was used in this study. The framework encompasses three dimensions namely structure, processes and outcomes. However, for the purpose of this study, only structure standards and associated criteria, which are the requirements of the healthcare unit to deliver safe, and quality health care were developed and validated.

2.5 CONCLUSION

CR provides a coherent framework for evaluation research that is based on the understanding of causal mechanisms. This is important for health providers to use evidence-based interventions in clinical practice. The Donabedian conceptual quality model framework captured this research as it had set out the focus and content of the study. Moreover, the framework acted as the link between the literature, the methodology and the results.

CHAPTER 3: LITERATURE REVIEW

3.1 INTRODUCTION

Chapter 3 is based on the objectives of the study, which include literature reviews that include theoretical and empirical literature. The literature reviews include previous studies on homes for the elderly nationally (in Tanzania) and internationally. An overview and situation of healthcare standards for the homes for the elderly are described in this chapter.

3.2 SEARCH STRATEGY

Most of the literature used were studies published from 2016 to 2020. A few references used older than 10 years were primary, foundational, influential, and relevant references. In addition, the references included significant theories for this study. Peer-reviewed scientific journals based on the structure standards in healthcare that contribute to the care of residents in homes for the elderly were obtained from three databases (Google scholar, PubMed, HINARI). These databases were searched for articles published in peer-reviewed scientific journals. In addition, various grey literature, namely legislation, acts, policies, guidelines and reports were referred to. Terms which were searched, were either “care home”, “nursing home”, “homes for the elderly”, “institutional care”, “long term care”, “care institution”, “residential care”, “residential home”, or “assisted living”. Other terms searched were, either “shared housing arrangement”, “special care facility”, “elderly house”, “elderly homes” or “special care unit”. In addition, references of the included articles, were also used to search for other eligible articles. The references that were searched were managed by endnote software.

3.3 AGING PROCESS

The concept of old age no longer focusses on chronological age only but also on other characteristics. Apart from chronological age, conception of old age also includes cognitive functioning, health and morbidity, mortality rate, remaining life expectancy, disability rates and the proportion of adult person-years lived after a particular age (Sanderson & Scherbov, 2013:673-685). The aging process is characterized by advanced deprivation, body dysfunction, and less repair capacity of body tissues and organ systems (Kinser & Pincus, 2020:291-308). Loss of physical integrity leads to muscle atrophy, body weakness and physical dysfunction (Distefano, Standley, Zhang, Carnero, Yi, Cornnell & Coen, 2018:279-294). The aging process is accompanied by inherent physiological changes which lead to frailty, the status that limits functional and personal ability of an older person to take care of him/herself (Dos Santos, Cyrino,

Antunes, Santos & Sardinha, 2017:245-250). Frailty is a biological syndrome (e.g., falls, delirium and urinary incontinence) caused by deficits in five physiological areas, namely general body weakness, overall slowness, exhaustion, low physical activity and weight loss. A pre-frail is identified by two of these symptoms, and frail state is identified by three or more of these symptoms. Other symptoms of frailty includes physical impairments and disability, cognitive impairments and psycho-social risk factors (Shaw, Gwyther, Holland, Bujnowska-fedak, Kurpas, Cano, Marcucci, Riva & D'avanzo, 2018:1223-1252). In addition, Lekan, Hoover and Abrams (2018:20-29) identified physical impairment, loss of independence and mind–body disconnection among symptoms of frailty.

According to the WHO (2018:1-5), the common health problems during the ageing process include a loss of hearing, poor sight, neck and back pain, breathing problems, digestion and psychological problems specifically feelings of hopelessness. The WHO further states that old age is also characterised by several biological changes, commonly called geriatric syndrome. The geriatric syndrome is a collection of several problems including frailty (weakness of the body), inability to control waste elimination (urine and excreta), risk to falls, disorientation, hallucination and pressure sores. Kidd, Mold, Jones, Ream, Grosvenor, Sund-Levander, Tingström and Carey (2019:1-11) identified that physical inactiveness, overtiredness and weak muscles are among the characteristics of frailty referred to as the geriatric syndrome. The geriatric syndrome mostly affects people of 65 years and above related to poor health, frequent admissions to hospitals and homes for the elderly with an increased risk to death.

According to Yun, Moon, Park, Kim, Shin, Cho, Noh, Lim, Chung and Son (2020:395), depression and sleeping disorder problems are among the problems associated with ageing. Furthermore, Andreas, Schulz, Volkert, Dehoust, Sehner, Suling, Ausín, Canuto, Crawford and Da Ronch (2017:125-131) indicate that affective disorders, anxiety, substance abuse such as alcohol dependence are problems among some elderly.

The frail older adults are increasing worldwide. In 2019, one in eleven people was older than 65 years, the number which is expected to increase to one in six by 2050 (UN, 2019:1-17). According to the WHO (2018:1-5), by 2050, the people aged over 60 years will increase from 12% in 2015 to 22%, and 80% of them will be from countries with low and middle-income. Likewise, in 2050 the global population of people aged over 60 years will increase from 900 million in 2015 to two billion.

3.3.1 Importance of introducing healthcare standards for the elderly

An increasing number of the elderly demands quality care, due to age-related problems and an inability to care for their basic needs such as taking a bath or shower, putting on or taking off clothes and eating on their own (Manti, Pratesi, Falotico, Cianchetti & Laschi, 2016:833-838).

Yang, Ren and Zhang (2016:24-34) identified that falls are among the main risks among the elderly, due to related factors such as a lack of appropriate light, unfixed furniture, unfree passages and floors that are slippery in their homes. The authors indicated further that every year there are >1.6 million of elderly who face the problem of falling. Liu, Zhang, Yang, Zhou, Ren, Wang, Liu, Pang and Deen (2019:49088-49101) identified that health threats of the elderly include prolonged diseases such as high blood pressure, stroke, diabetes mellitus, malignancy, tumours and respiratory diseases. In addition, Li, Dou, Wang, Jing and Yin (2017:842) stated that despite the various common health problems associated with ageing such as hypertension and diabetes, getting access to quality health care has been a critical problem. The authors insisted further that, the elderly have memory loss and weaker bodies which lead to them falling more easily, thus requiring standards, operating procedures, guidelines and policies to guide their care. Substantiating further Hazra, Rudisill and Gulliford (2018:831-842), indicated that weakening of the elderly both physically and mentally indicate the importance of standardized care. According to Wang, Li, Chen and Si (2018:1-13), the elderly need quality of care, due to being at risk of multiple health problems and a lack of formal health systems for them.

Abd Aziz, Teng, Hamid and Ismail (2017:1615) indicated that dependency, quality of life and appropriate interventions for the elderly should be addressed earlier to avoid chronic problems such as cancer, heart disease, dementia, physiological changes, malnutrition and health changes. The authors further identified other common problems affecting the elderly, namely bone density and sarcopenia due to osteoporosis and weak muscles. The increase in the frailty among the elderly demands for standards of quality care which include equipping healthcare providers to be in the position to provide the required care (Lim, Wong, Leong, Choo & Pang, 2017:1448).

Substantiated further Akpan, Roberts, Bandeen-Roche, Batty, Bausewein, Bell, Bramley, Bynum, Cameron and Chen (2018:1-10) indicated that the elderly have several health problems, including falls which demand quality care. It was recommended further that it is important to have healthcare quality standards that guide care of the elderly because of such cognitive impairment and physical disability.

Successfully aging is very important to promote independence, a worthful and good life among the elderly. It includes several constituents such as promoting a healthy life, body functioning and self-healthcare. Furthermore, successfully aging should include three health domains which are physiological, psychological and social adaptation (Lin, Hsieh, Cheng, Tseng & Su, 2016:e0150389). Dos Santos et al. (2017:245-250) insisted that health ageing depends much on early identification and management of elderly who are at risk of ageing related problems.

Jing, Willis and Feng (2016:23-41) indicated that identifying features, including environmental structure standards and high quality care that promotes value of life for elderly people are critical in improving life among the elderly. Xie, Cheng, Tao, Zhang, Robert, Jia and Su (2016:1-9) identified that disability and chronic diseases among the elderly, increase the demand for quality care.

3.3.2 Mobility and independence in elderly

The global increase of the elderly calls for the need to improve the quality of life of the elderly, including independent body functioning; one feature of elderly independence identified, is for them to be able to walk independently in absence of risks to fall (Groessl, Kaplan, Castro Sweet, Church, Espeland, Gill, Glynn, King, Kritchevsky and Manini (2016:656-662). It was further indicated by these authors that the elderly may improve from disability through involvement in physical activities, the activities which include strengthening training to maintain muscle mass and walking around which should be supported by a friendly environment. Physical exercise has been suggested as one of the useful strategies to maintain independence and mobility among the elderly. The strategy has been identified to manage health problems facing the elderly, including delaying the onset of frailty syndrome (Silva, Aldoradin-Cabeza, Eslick, Phu & Duque, 2017:91-96). Roberts, Phillips, Cooper, Gray and Allan (2017:653-670) indicated that physical activity among the elderly is important to promote their independence. However, older adults might experience some functional disability and difficulty with physical function, in spite of physical activities. Therefore, increased multiple health and social problems among the elderly indicates the need for the elderly to be admitted to homes for the elderly where they can access comprehensive and holistic care (Vaughan, Leng, La Monte, Tindle, Cochrane & Shumaker, 2016:S79-S86).

3.3.3 Types of living among the elderly care

There are three main types of living for the elderly namely: independent living, assisted living and frail care. Independent living is for the elderly who are able to attend to personal daily living

activities for themselves, however their preference is to live with other people of the same age group. Assisted living is for the elderly who need some assistance for their living and they are comfortable seeing somebody around them (Ismail, Aziz & Wahab, 2019:012039).

Frail living is for the vulnerable elderly with broad needs for healthcare. Required knowledge, skills, attitude and practice were identified as important requirements to meet the safety of the elderly in this group of living (Andersson, Frank, Willman, Sandman & Hansebo, 2018:e354-e362).

3.4 BASICS FOR DEVELOPING QUALITY HEALTHCARE STANDARDS

3.4.1 Concept of quality healthcare standards

Quality healthcare is about meeting individual health needs of patients, clients and residents in the homes for the elderly through provision of comprehensive healthcare according to the recommended healthcare standards (Mohammad Mosadeghrad, 2013:203-219). It includes patients' safety, cost-effective care, and good environment with a target to continue with improvement in provision of healthcare (Khalid & Abbasi, 2018:899). Roy, Ganache and Dagenais (2018:15-18) emphasise meaningful assessment of healthcare services involving participation of customers and stakeholders such as patients, clients, other users of health services and healthcare providers.

3.4.2 Process for developing healthcare standards

According to Cattacin (2020:115-124), developing healthcare standards should include a review of existing standards and involvement of experts. It was stated further that preliminary standards should be tested in a small scale by several health facilities to identify if the standards are clear, relevant and if they are applicable. Then after some time of application of the standards, a second pilot test must be conducted to explore any challenges and opportunities in order to modify the standards.

Sepucha, Abhyankar, Hoffman, Bekker, LeBlanc, Levin, Ropka, Shaffer, Sheridan and Stacey (2018:380-388), indicated that standards should be developed in three phases: planning for developing standards, drafting standards and reaching consensus. It was further recommended that it is important for the consensus to include the international Delphi process.

Furthermore, Whittaker and Mazwai (2016:42-45) and Whittaker et al. (2011:59-67) indicated that standards should be developed in five stages: normative, empirical, consensus, publishing and

implementation. The normative phase includes the review of the literature and consultations of experts for suggested standards and criteria with the consideration of the context needs. The empirical phase is about testing the developed standards and the associated criteria on a small scale in healthcare facilities. For the consensus phase, the final developed standards and the associated criteria are modified to fit the requirement. In the publishing phase, the standards and the associated criteria are published and shared with stakeholders seeking for any comments. Developed standards and criteria are used for measuring performance of health facilities at implementation phase.

However, according to Pabiś and Kuncewicz (2018:725-734), sustaining the WHO standards such as geriatricians, geriatric beds and outpatient consultations will be very difficult in both Western and developing countries, because the growing number of elderly people need more consultations, more geriatric healthcare workers and more geriatric beds. The authors stated further that when the WHO created their standards, they did not take into account that the elderly may live longer with illnesses.

3.5 APPROACHES AND COMPOSITION OF DOMAINS, PRINCIPLES AND STANDARDS FOR QUALITY HEALTHCARE

To have universal healthcare standards for homes for the elderly, a number of experts have developed guiding principles, domains and basic standards.

3.5.1 Principles

Milte, Ratcliffe, Chen and Crotty (2018:843-849) identified ‘foundation’ principles that should be applied as guidance in developing standards for homes for the elderly. The recognized principles are resident-related centred care, dignity, privacy, physical and mental wellbeing of the resident, self-fulfilment, autonomy, equality and rights to complain. Furthermore, six principles were designed by ISQua, namely development and measurement of standards, role, planning and quality performance of the organization; safety and risk management of residents and focus of staff and patients or residents (ISQua, 2018:1-60).

3.5.2 Domains

There are seven interrelated domains in which healthcare standards are organized; the domains which might help to redirect health systems and describe how to assess the quality or safety of health services. The acknowledged domains are residents’ rights, safety and care of the resident, clinical maintenance services, wellbeing of the surrounding community, direction and communal

control, management of daily organisation activities and good facilities and infrastructure. These domains are further comprised of a set of core standards. The core standards focus and are based on delivering comprehensive, safe and quality care (Whittaker & Mazwai, 2016:42-45); (Whittaker et al., 2011:59-67).

The Agency for Healthcare Research and Quality (AHRQ) introduced six domains namely: safety of residents, effectiveness of health services provided, patient centered care, timely care, equitable care and maintaining efficiency during services being provided (Mondoux & Chartier, 2017:1-11). Furthermore, Cattacin (2020:115-124) identified domains known as: incorporating equity in all organizational policies; equity and quality health services for all; prioritizing involvement of customers and collaboration with other sectors in providing care.

The elderly Aged Care Accreditation Scheme developed 40 standards covering four core domains: skilled staff, safe environment, clean environment and facilities, and delivering quality care for homes for the elderly in China. Additional domains are appropriate service flow, establishment of information management and facilitation of good communication (Fong, Ng & Yuen, 2017:1-18). These four domains cover the same issues identified in the standards adopted in England (Fong et al., 2017:1-18) and in Scotland (Donaldson, Neal, McAlpine, Quinn, Shenkin, Ellis, Myint & Group, 2019:105–111).

3.5.3 Standards

Standards are directive items developed in a consensus manner, including important elements such as conditions, measures, approaches, procedures and applications towards achieving a certain goal in a certain community (Schulz S., 2019:19-36). A standard in healthcare was defined by the WHO (2015:1-40) as a level of quality in the provision of services for healthcare that is required to meet the needs of intended customers such as residents, patients and clients. WHO stated further that a healthcare standard defines the performance potentials, structures or processes needed for a healthcare facility to provide quality, safe, equitable, acceptable, accessible, effective and appropriate healthcare services. Furthermore, a group of related standards is known as a field (Jones et al., 2015:1-30). Criterion is the element that measures the specific requirements which indicates that a particular standard is met (COHSASA, 2019:1-9). According to the WHO, criterion is a characteristic of the service that should be attained to meet the required standard (WHO, 2015:1-40).

Healthcare standards can support or delay the producing of changes in provision of required healthcare depending on how they are used. Universal standards are the ones that support people's care needs including health promotion, prevention of health problems and should emphasise better coordination of care (Braithwaite, Vincent, Nicklin & Amalberti, 2019:325-351). The key element of quality management in a health sector should be the standard of the healthcare service (Rudenko & Rozhkov, 2020:1035-1040). Komenda, Karolyi, Woodham and Vaitsis (2021:47-59) insisted that standards in healthcare should be developed to enhance continuous improvements of healthcare of the customers. The residents' safety depends on improvement of performance of the homes for the elderly including staff competence, recording care and progress of residents and modification of required healthcare (Andersson et al., 2018:e354-e362).

3.6 ORGANIZATIONS INVOLVED IN DEVELOPING HEALTHCARE STANDARDS

To improve the situation in homes for the elderly and provision of general healthcare services, institutions such as the Council for Health Service Accreditation of Southern Africa (COHSASA) and the International Society for Quality in Health Care (ISQUA) have developed basic standards. In addition, some countries such as England, Scotland, China and South Africa also have developed basic standards. Most standards developed in these countries and institutions are related to the basic principles and domains described in paragraph 3.5.1 and 3.5.2 respectively.

3.6.1 Council for Health Service Accreditation of Southern Africa (COHSASA)

The COHSASA standards insist on adequate staffing in terms of quantity and quality as a common element of different standards. In addition, the main difference in the COHSASA standards is an emphasis on policies and procedures. According to COHSASA, management of health facilities should be guided by formal policies and procedures. In addition, COHSASA describes the significance of sustainable funding for food, medical supplies and medicines. The standards also emphasise environmental hygiene to reduce the risk for infection, and that the care provided must be participatory. Residents' individual preferences, privacy and confidentiality must be maintained. Furthermore, residents must be protected from assault, harm and falls and there should be a formal process for reporting complaints. Institutions should also secure the process of managing end-of-life care (Whittaker & Mazwai, 2016:42-45;Whittaker et al., 2011:59-67).

3.6.2 World Health Organizations (WHOs) and International Society for Quality in Health Care (ISQua)

ISQua collaborates with the WHO in managing issues pertaining to care of elderly people, such as technical and policy advice, residents' safety and type of healthcare providers required. The organization has adopted a role in accreditation of standards, including standards development and measurement, organisational roles and planning, safety and risk management, patient focus and quality performance for delivering a continuum of quality healthcare. Therefore, any health facility that desires its standards to be accredited by ISQua must cover these principles. (Greenfield, Iqbal & Li, 2017:1).

3.7 LEGISLATION IN HEALTHCARE STANDARDS

3.7.1 England

England's Care Standards Act 2000 for homes for the elderly comprises 38 standards. These standards focus on the service of care provided by skilled staff to residents in homes for the elderly, such as individual nutrition and nursing. Care should consider respect of residents' privacy and dignity and must be provided in a clean environment. Residents must be secured from physical, psychological or any kind of abuse. In addition, residents should be protected from negligence, harm and inhuman treatment. All homes should have clear procedures for reporting complaints, with quick and effective resolutions. Attention and ease must be given to dying residents and the deceased must be handled with dignity (Britain, 2000:Care standards Act Part 1 Section 3).

3.7.2 Scotland

The national policy and legislation about health and social care standards adopted in Scotland insist on good nutrition, skilled staff, environmental hygiene to prevent infection, resolving complaints appropriately and proper management of end-of-life care. Scottish standards also specify participatory and individualised nutritious diets, both of which should be provided by staff with skills and knowledge in geriatric care. Moreover, a clear and accessible channel for residents to express complaints should be created. In addition, supportive care that promotes comfort should be provided in any event associated with grieving (e.g. death) (Greve, 2016:107-121).

3.7.3 South Africa

The Older Persons Act, No. 13 of 2006 was introduced in South Africa to empower and protect older aged people either living in the community or in homes for the elderly. According to the Act,

health service delivery in homes for the elderly should be regulated to combat any kind of abuse and negligence. The care provided should also be participative and ensure the dignity, safety and security of residents. The infrastructure of the homes should include well-ventilated and equipped facilities, bathrooms and toilets with a reliable water supply and non-slippery flooring to prevent falls. There should be proper waste management disposal to control infection. Health service providers should be well trained with required skills. The Act stipulates the need for guiding policies and procedures that must include indicators for quality of care. Finally, dementia care and rehabilitation services should be provided as necessary (Republic of South Africa (RSA), 2006:16-24).

3.7.4 Tanzania

Problems that were facing the elderly in Tanzania since independence in 1961, demanded the development of a national ageing policy to ensure the group is provided with effective health services. The national ageing policy aimed to promote accessible and free health services to the elderly (United Republic of Tanzania, 2003:1-22). In addition, the Public Health Act, 2009 (Act No. 1 of 2009) of The United Republic of Tanzania aims for provision of better health services to residents focussing more on vulnerable groups such as the elderly (United Republic of Tanzania, 2009:1-105).

3.8 COMMON CHALLENGES FACING HOMES FOR THE ELDERLY

Globally, homes for the elderly are experiencing several difficulties as the residents in these homes have multiple health problems related to the ageing process. However, there is a deficiency in how to improve the situation in these homes as most of evidence-based health investigations are found in hospitals (Wiig, Ree, Johannessen, Strømme, Storm, Aase, Ullebust, Holen-Rabbersvik, Thomsen & Pedersen, 2018:1-8).

3.8.1 Skilled staff

Harrington et al. (2016:HSI-S38994) identified that the main problems facing most of the homes for the elderly in the United States of America (USA) include an inadequate number of staff and suboptimal healthcare, despite multiple strategies intended to improve situations. The study identified further that the problems of an inadequate number of healthcare providers also exist in many developed and developing countries which lead to providing poor care to patients, including residents in the homes for the elderly. Choiniere, Doupe, Goldmann, Harrington, Jacobsen, Lloyd, Rootham and Szebehely (2016:40-61) indicated that standards and staffing levels investigated in four countries (the USA, Canada, England and Germany), were lower than the levels

recommended by specialists out of six countries (the USA, Canada, England, Germany, Norway and Sweden).

Backhaus, Beerens, Van Rossum, Verbeek and Hamers (2018:634-638) identified that staffing practices in the homes are often guided by opinions instead of evidence. Harrington, Dellefield, Halifax, Fleming and Bakerjian (2020:1-14) indicated that staffing in many homes for the elderly is not consistent with the required standards about sufficient nursing staff with the appropriate competencies for the well-being of residents. Preshaw, Brazil, McLaughlin and Frolic (2016:490-506) identified that most of the untrained staff in homes for the elderly provide inhumane treatment, which intimidates the lives of residents. It was further identified by these authors that suboptimal care is related to poor knowledge among the staff. Improving awareness and understanding of ethics among the staff were indicated as among the solutions towards solving most of the problems in homes for the elderly. Ouslander and Grabowski (2020:2153-2162) insisted that the homes for the elderly should have in place, skilled and competent staff for the provision of quality care to residents. Wang, Wang, Cao, Jia and Wu (2016:34-43) found that administrators, workers and other staff working in the homes have little training and limited knowledge about geriatric care.

3.8.2 Quality healthcare

Ghavarskhar, Matlabi and Gharibi (2018:1-33) identified that most concerns relating to care in developed countries are related to quality, including prevention of pressure ulcers, malnutrition, pain management, negligence, abuse, incontinence and not meeting residents' rights. The study stated further that despite of some movement for change in developed countries to meet the requirements and standards for care of residents, some of the private homes for the elderly have not shown improved quality care, including inadequate human and non-human resources.

Tuominen, Leino-Kilpi and Suhonen (2016:22-35) identified that barriers for lack of free will in the homes for the elderly are due to adverse behaviours of nurses, rules of the homes for the elderly, residents' disrupting behaviour, attitudes of the elderly, dependency and body fragility. Lanre, Omosefe, Oduyoye and Moturayo (2019:173-186) indicated that homes for the elderly are perceived as plagued with problems such as mishandling, neglect and carelessness. Aboderin and Epping-Jordan (2017:15), and Kamińska, Brodowski and Karakiewicz (2017:139-143) highlighted numerous challenges in the homes for the elderly, including problems experienced by residents such as a deficit in basic care. The studies further indicated that it is more likely that the

problems associated with homes of the elderly will continue to increase given the increasing elderly population.

3.8.3 Funds

In spite of the commitment of the Tanzanian Government indicating in the National Ageing Policy (2003) that elderly should be equally provided free and quality healthcare, Malalika (2016) identified a gap in implementation of the National Ageing Policy as the policy was found not practised as was stated. The study stated further that Tanzania's legal system does not protect this group as was promised; therefore, the elderly do not receive the required care. One of the reasons of not fulfilling the commitment was stated as a lack of adequate funds. Mduba (2019:1-93) indicated that 81.2% of elderly in Tanzania have never received free health services, due to the lack of funds and weak support from the government. Zhang, Flum, Kotejoshyer, Fleishman, Henning and Punnett (2016:34-42) identified that a lack of reliable financial resources is among the factors that lead to poor health outcomes in the homes for the elderly. Lanre et al. (2019:173-186) identified that homes for the elderly face numerous problems, predominantly caused by unreliable funding. Furthermore, it was found by Engle, Tyler, Gormley, Afable, Curyto, Adjognon, Parker and Sullivan (2017:316) that the lack of resources is among the barriers to deliver quality healthcare to residents in homes for the elderly. In addition, McGarry, Grabowski and Barnett (2020:1812-1821), showed that the lack of financial support in the homes for the elderly is a major problem for providing quality healthcare. Aggravated further, Abbasi (2020a:123-125) identified that the lack of national support for homes for the elderly during the pandemic of Covid-19 has been of much concern in the homes for the elderly for most of the countries.

Sources of payment for services in the homes for the elderly, is a growing concern to residents in these homes in most countries. Older people who use paid home-care services, are most costly as most of the elderly have no specific sources of funds (Harris-Kojetin, Sengupta, Lendon, Rome, Valverde & Caffrey, 2019:1-88).

Although the cost of care in the homes for the elderly varies, depending on the country, it has been continuously seen as permanently highly linked with low capability of elderly to contribute out of their funds. Even in some countries in which there is social protection as a source of funds, the elderly or their relatives have to contribute out of their pocket. Out- of-pocket costs cause those elderly and relatives with low income to be more likely to face unaffordable costs, thus missing quality healthcare (Muir, 2017:1-58). Norton (2016:951-989) recommends that despite the increase in the ageing population, the model of care and pay in the homes for the elderly

require changes that focus on providing the required care to all elderly, regardless of their capacity to pay for the services.

3.9 MODELS FOR HEALTHCARE

The section includes three models for healthcare important for elderly care namely: The Donabedian conceptual quality model, The Care Model and Patient Centred Medical Home model.

3.9.1 Donabedian conceptual quality model

The Donabedian Model (Donabedian, 1988:1743-1748) served as the theoretical framework of this study and subsequently, the main concepts and relational statements contained in this model were aligned to the research process applied in the study as detailed in chapter 2.

3.9.2 The Care Model

According to The Agency for Healthcare Research and Quality, the Care Model includes three components, namely community and customers, health systems, and healthcare. The model focuses on improving healthcare of patients and residents in homes for the elderly to ensure optimal high quality care for good and health outcomes (Rockville, 2013:1-6). The care model focuses on providing comprehensive management to a patient as an individual to improve quality of life, while reducing the burden of inappropriate polypharmacy (Salisbury, Man, Bower, Guthrie, Chaplin, Gaunt, Brookes, Fitzpatrick, Gardner & Hollinghurst, 2018:41-50). In addition, the care model includes different determinants, such as the ageing population and long term care policy, physical and mental health of the care receiver and finding solutions on barriers of getting care such as distance, money and lack of competence among the care providers (Bing-Jonsson, Hofoss, Kirkevold, Bjørk & Foss, 2016:1-11). Hallberg, McKenzie, Williams, Bhanpuri, Peters, Campbell, Hazbun, Volk, McCarter and Phinney (2018:583-612) insisted that the care model with comprehensive interventions does perform better than the model providing separated interventions.

3.9.3 Patient Centred Medical Home model (PCMH)

Healthcare in this model is comprised of several purposes and features, namely focusing on residents in the homes for the elderly, holistic care, harmonized care, available and reachable services, worth and wellbeing (Rockville, 2013:1-6). The model includes structures and processes for provision of team-based care, leadership and training to support healthcare providers (Metusela, Usherwood, Lawson, Angus, Kmet, Ferdousi & Reath, 2020:1-13). In implementation,

the model has improved health-care costs, relationships between health-care providers and care receivers, patient-centred and preventive care, thus improving quality of care of patients (Mazevska, Pearse & Tierney, 2021:1-13). PCMH has shown effectiveness towards managing patients with multi and chronic diseases, thus leading to quality health of patients (John, Tannous & Jones, 2020:1-11). According to Alexander and Bae (2012:51-59), the model has been effective for many years in countries which coordinates and integrates care of patients with chronic diseases, thus showing progressive patient outcomes. In addition, John, Ghassempour, Girosi and Atlantis (2018:1-6) indicated that PCMH is more effective for improving outcomes of the patients with chronic conditions, especially those patients with non-communicable diseases. In their study, Metusela et al. (2020:1-13) anticipated the model as a useful means in enabling quality care among the patients with chronic diseases and conditions.

3.10 STRUCTURE STANDARDS FOR HEALTHCARE

Meaningful life for the residents is mostly influenced by the context of the homes for the elderly (Fleming, Goodenough, Low, Chenoweth & Brodaty, 2016). In addition, residents in these homes need special health care that include health problems they have developed due to ageing (Majumder, Aghayi, Noferesti, Memarzadeh-Tehran, Mondal, Pang & Deen, 2017:2496). The needs of the elderly including inability to care for themselves expose them to risk of abuse, exploitation, neglect and injury. Therefore, the homes must improve the physical set-up in order to balance residents' needs and protecting them from physical and psychological maltreatment (Myhre, Saga, Malmedal, Ostaszkiewicz & Nakrem, 2020:1-14).

Tuominen et al. (2016-35) identified that structure healthcare standards should recognize protection needs of residents as their rights to safety. The study indicated further those homes for the elderly should involve the elderly in their care, in order to promote ownership of their services. Although Goodman, Dening, Gordon, Davies, Meyer, Martin, Gladman, Bowman, Victor and Handley (2016:1-14) indicated that, "goodness or badness of care" delivered to residents depends on the home, managers and staff but the study suggested that the balance between what the home can provide and the residents' needs is important for a better outcome for the residents' health.

3.10.1 Infrastructure

Furniture, fittings and equipment in the homes for the elderly should be arranged that they do not interfere with residents' mobility (Rijnaard, Van Hoof, Janssen, Verbeek, Pocornie, Eijkelenboom, Beerens, Molony & Wouters, 2016:111-122). Furthermore, Cary Jr, Hall, Anderson, Burd,

McConnell, Anderson and Colón-Emeric (2018:76) indicated that there should be supportive equipment and aids for residents' movement and communication which meet residents' needs (Cary Jr et al., 2018:76). In the homes, there should be both natural and good quality artificial lighting that enables residents to see well while walking, thus free them of risks to falls (Brauner, Werner, Shippee, Cursio, Sharma & Konetzka, 2018:1770-1778). The homes should make sure that all areas which are used by residents are provided with the necessary facilities such as adequate light, lifts and signage providing easy access (Pettersson, Malmqvist, Gromark & Wijk, 2020:332-350). In addition, the areas used by residents should be naturally ventilated to promote sighting (Pozzi, Lanzoni, Lucchi, Salimbeni, DeVreese, Bellelli, Fabbo & Morandi, 2020:827-833).

3.10.1.1 Doorways, passages and staircases

Nguluma and Kemwita (2018) indicated that homes should have a clear opening and wider doorways to accommodate wheelchairs. Mitton and Nystuen (2016) stated that there should be obstruction free, wider doorways and corridors for the residents to have a free and smooth access to the areas used by them without any obstacles. Backhouse, Penhale, Gray and Killett (2018:1933-1958) identified that there should be a suitable non-slip floor in all rooms which meet health and safety of residents.

3.10.1.2 Bedrooms

Homes must have bedrooms, which meet the residents' requirements, needs and preferences (Arens, Fierz & Zúñiga, 2017:169-179). Eijkelenboom, Verbeek, Felix and Van Hoof (2017:111-122) recommend suitable furniture according to the size of the room, which allows safety and free movement of the residents. Nordin, McKee, Wallinder, von Koch, Wijk and Elf (2017:727-738) indicated good arrangement of furniture and fixtures, items such as tables, chairs, cupboards, shelves and filing cabinets that take into consideration the safety of the residents. According to van den Berg, Winsall, Dyer, Breen, Gresham and Crotty (2020:3254-e269), doors must be fitted with master key locks, and easy opening from inside of the room. Kane and Cutler (2017:25) included the positioning of telephone and light switches suitable for the resident to control. Ürük and Öztürk (2020:769-773) indicated that the bedrooms must contain the following: a suitable bed, adequate light, suitable seating, a place to hang clothes, a bedside cabinet, and hand washing facilities.

3.10.1.3 Bathrooms and showers

Eijkelenboom et al. (2017:111-122) identified the need for handrails and towel rails in bathrooms. Their study stated further that bathrooms and showers should be provided with appropriate light

and equipment to prevent scalding, slipping and flooding. Yu, Ma and Jiang (2017:1170-1183), indicated that there should be a bath and or shower room in every resident's private room and one bath and shower room on every floor, especially for those residents who need assistance during a bath or shower.

3.10.1.4 Toilets

Appropriate toilet requirements are necessary in the homes for the elderly (Yu et al., 2017:1170-1183). Katsuse, Takahashi, Yoshizawa, Tateda, Nakanishi, Kaneko and Kobayashi (2017:296-300) identified that each toilet must be clearly marked, easily accessed by the residents and have an accessible call system. According to Lustig, Levy, Kopplin, Ovadia-Blechman and Gefen (2018:23-31), toilets should be constructed with suitable hand washing facilities to maintain hand hygiene.

3.10.1.5 Kitchen facilities

Eijkelenboom et al. (2017:111-122) showed that it is important that the kitchen production space should have access to an outside wall. The kitchen space must have two access doors: one side of access should be directed into the home service area with easy access to receiving soiled waste and another access must be directed to resident households. De Boer, Beerens, Katterbach, Viduka, Willemse and Verbeek (2018:137) stated that access to natural light from production areas in the kitchen are required.

3.10.1.6 Linen bank

Akumonyo (2019:1-67) identified standards for linen banks as follows: the home must have a place for keeping linen and bedding. It is recommended by Centres for Disease Control and Prevention (CDC) that every floor or ward in health facilities should have a place for clean linen (CDC, 2020:1-2).

3.10.1.7 Dining room

Hung, Chaudhury and Rust (2016:1279-1301) indicated standards for dining rooms as follows: dining rooms should allow for dining and sitting space. Furniture and fittings in dining rooms should be the ones suitable for activities related to provision of meals to residents. According to Johansson, Borell and Rosenberg (2020:1-22) equipment, nutrition and meal activities in the dining room should be appropriate to meet catering services for residents.

3.10.1.8 Supportive facilities

3.10.1.8.1 Staff facilities

Schwendimann, Dhaini, Ausserhofer, Engberg and Zúñiga (2016:1-10) indicated that in the homes for the elderly there should be appropriate and important staff infrastructure such as offices, toilets and shower rooms. De Boer et al. (2018:137) identified offices for leaders and for healthcare providers as among the important physical set-up of nursing homes.

3.10.1.8.2 Sluice rooms

McKevitt (2016:1-24) indicated that the homes for the elderly should be with sluice rooms making it possible to dispose of waste products from residents and from residents' clinical care. The study stated further that cleaning and disinfecting soiled items from sluice rooms should be possible. According to Kearns (2017:1-27), in the sluice room there should be adequate space for storage of bedpans, urinals and for disposable of continence products. Their study stated further that hand-washing facilities should be provided in sluice rooms.

3.10.1.8.3 Laundry

Buse, Twigg, Nettleton and Martin (2018:711-727) indicated that in the homes for the elderly, there should be a laundry to separate dirty clothes and bedding from the clean ones. The study stated further that the laundry or washing room should have a washing machine and facilities for ironing clothes and bedding. Heudorf, Gasteyer, Müller, Serra, Westphal, Reinheimer and Kempf (2017:12) indicated the need of hand-washing facilities that are provided close to the laundry. Buse et al. (2018: 711-727) identified that the laundry should be located where dirty clothes and bedding are not in contact with clean areas of the homes.

3.10.1.9 Facility for residents with Alzheimer's diseases

Homes for the elderly that accommodate residents with Alzheimer's disease should comply with the additional key aspects as follows:

3.10.1.9.1 Physical safety

Falls are the leading cause of injuries in residents with Alzheimer's disease (Marier, Olsho, Rhodes & Spector, 2016:276-282). Therefore, in order to prevent falls in homes for the elderly, the following should be considered: wider doors, stair lifts, wheelchairs, adequate light, handrails and grab bars (Cary Jr et al., 2018:76).

3.10.1.9.2 Positive distraction

In a memory care facility, there should be a positive distraction such as television, music, or a window providing a view of nature that takes a person's mind off any pain or negative emotion (Lood, Kirkevold, Sjögren, Bergland, Sandman & Edvardsson, 2019:2526-2534). To avoid isolation, there should be a place for the residents to entertain their guests (Abbasi, 2020b:619-620). Designers should try to create environments that minimise noise and allow residents to focus easily on activities like reading or talking with friends (Janus, Kosters, van den Bosch, Andringa, Zuidema & Luijendijk, 2020:1-18).

3.10.2 Clinical management

3.10.2.1 Medical devices and equipment

The homes should make sure that medical equipment for providing care to residents are available and are used as required, while not re-using equipment that are for single use (Dumyati, Stone, Nace, Crnich & Jump, 2017:18). Any dirty re-usable medical equipment should be cleaned and sterilized with care that avoids the risk of contamination to any person in the homes (Cousins, 2016:39). Rijnaard et al. (2016:6143645) indicated that the homes should be with the clinical room able to keep appropriately the required diagnostic and clinical equipment, and there should be clinical hand-washing facilities.

3.10.2.2 Emergency trolley

Resuscitation care should be maintained and provided for residents when needed, therefore there must be emergency resuscitation equipment provided and readily accessible (O'Keeffe, 2017:536-537). Emergency medical equipment recommended are laryngoscopes (Trimmel, Kreutziger, Fitzka, Szüts, Derdak, Koch, Erwied & Voelckel, 2016:e470-e476), ambubag, oxygen mask, suction apparatus, nasogastric tubes, urinary catheter and mouth gag (Alsaad, Abu-Grain & El-Kheir, 2017:181). Emergency drugs recommended are adrenaline, atropine, hydrocortisone and lignocaine (Hunie, Desse, Fenta, Teshome, Gelaw & Gashaw, 2020). Candradewi, Al Rasyid, Wardhani and Rudijanto (2020:205-208) indicated that the drug generally used for emergency is epinephrine.

3.10.2.3 Equipment for indirect care

The homes should have an adequate supply of canes, walkers, crutches, walking sticks and wheelchairs for assistance of residents at risk to falls or for those with mobility impairments (Toots, Littbrand, Holmberg, Nordström, Lundin-Olsson, Gustafson & Rosendahl, 2017:227-233). In

addition, Yoon, Kwan, Liu and Lai (2019:53-62) indicated that homes for the elderly should ensure that mobility devices are available for residents in need. Charette, Best, Smith, Miller and Routhier (2018:571-577) identified that older adults using walking aids have shown improvement of balance and facilitation of independent mobility.

3.10.2.4 Disposable items for direct care

Majority of residents will need catheters, urinary bags and bedpans, due to common problems of bowel and urinary incontinence among the elderly. Thus it is essential that the homes have adequate stock of these items (Huion, De Wtte, Everaert, Halfens & Schols, 2020:1731-1740). Lee (2017:450-462) indicated that disposable gloves are important items in feeding the elderly. Goeckner, Lansden, Blanke, Campbell, Minnette, Phelps, Neidig, Robinson, Schentrup and Bailey (2016:1) indicated that blood pressure (BP) cuffs are at risk of reservoirs for bacteria, so disposable cuffs were recommended, in order to prevent transmission of infection from resident to resident.

3.10.2.5 Assessment tools

The home should ensure that equipment such as a scale for measuring body weight, blood pressure apparatus, pulse oximetry and thermometer (Smedbäck, Öhlén, Årestedt, Alvariza, Fürst & Håkanson, 2017:417), are available for obtaining and monitoring vital signs which are mostly affected in elderly such as temperature of the body, breathing patterns, pulse rate, heart beat and oxygen saturation (Toney-Butler & Unison-Pace, 2019:1-13).

3.10.2.6 Infection prevention and control

Montoya, Cassone and Mody (2016:585-607) identified that controlling and preventing infection should be among the strategies to ensure residents are not acquiring new infections. In addition, Herzig, Stone, Castle, Pogorzelska-Maziarz, Larson and Dick (2016:85-88) indicated that there should be a nurse responsible for preventing and controlling infection procedures. Hammerschmidt and Manser (2019:1-13) identified the importance of the availability of hand-hygiene equipment at every point of providing care.

In their study, van den Dool, Haenen, Leenstra and Wallinga (2016:761-767) stated that every home should make sure that important equipment and supplies for infection prevention are at hand namely: masks, plastic aprons, eye protection equipment, soap, paper towels, facial tissues and hand hygiene equipment. Furthermore, Hammerschmidt and Manser (2019:1-13) identified the importance of the provision of disinfectant materials

in nursing homes in order to promote hand hygiene. In their study, McGarry et al. (2020:1812-1821) emphasised a supply of adequate PPE such as hand sanitizer, masks, gowns, goggles and gloves as practices of prevention and control of infection.

3.10.2.7 Medicine records, storage and security

Wouters, Scheper, Koning, Brouwer, Twisk, van der Meer, Boersma, Zuidema and Taxis (2017:609-617) indicated that inappropriate prescribing is a common problem to residents in the homes for the elderly. They noted that this is due to insufficient strategies to reduce or diminish the problem. Andersson et al. (2018:e354-e362) indicated that medicine records in homes for the elderly must comply with professional standards and guidelines. Their study stated further that the following medicine records should be maintained: medicines that are requested, received, administered, refused, doses omitted, transferred and disposed. Mitchell, Mor, Gozalo, Servadio and Teno (2016:769-770) insisted on medicine records that must be clear, precise, upgraded, and there should be a signature and date from the responsible individual for medical records. Furthermore, Al-Jumaili and Doucette (2017:470-488) insisted that medicines should be safely and securely stored according to the manufacturers' instructions.

3.10.3 Meals and water

3.10.3.1 Meals

Grøndahl and Aagaard (2016:204-213) identified that residents in the homes for the elderly are at risk to malnourishment. Malnourishment among the elderly resulted from insufficient intake of nutrition (Van Damme, Buijck, Van Hecke, Verhaeghe, Goossens & Beeckman, 2016:471-477). Palese, Bressan, Kasa, Meri, Hayter and Watson (2018:1-10) indicated that meal requirements for residents should focus on the residents' nutritional needs. Although several research studies insist on a specific mealtime in the homes but what comprises the meals remain unclear (Harnett & Jönson, 2017:823-844).

Murphy, Holmes and Brooks (2017:1-14) found that despite that many homes provide menus, participants insist on flexibility of menus which should consider the following components: nutrition requirements, hydration needs and residents' preferences. Their study recommended further that the daily menu should be in a simple format and displayed in an appropriate place, showing types of foods available at each mealtime.

3.10.3.2 Water

Water is among one of the critical needs of residents in the homes for the elderly as it is needed for drinking, washing, bathing and cleaning. Therefore, the provision of adequate water in terms of quality and quantity is vital (Arcipowski, Schwartz, Davenport, Hayes & Nolan, 2017:1-18). Allen, Clark, Cotruvo and Grigg (2018:301-309) identified that managers of homes for the elderly should ensure that there is always a supply of good quality hot and cold clean running water for the needs of residents and the homes.

3.10.4 Residents' rights

3.10.4.1 Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information

3.10.4.1.1 Consent forms

It is important that residents sign informed consent forms before any service, as an indication that the resident understands and is informed about the intended service (Øye, Jacobsen & Mekki, 2017:1906-1916). Informed consent indicates an agreement between the health service provider and the resident towards accepting such services. In compliance with a resident's rights, an informed consent gives the resident the right to authorize or refuse the intended care and or treatment (Sivanadarajah, El-Daly, Mamarelis, Sohail & Bates, 2017:645-649). It is important that before obtaining informed consent for the proposed care, the healthcare provider must provide the resident with adequate information about the services, the expected benefits and the consequence of not getting the services (Bhattacharya & Bhattacharya, 2020:271-273).

3.10.4.1.2 Human and Individual Rights

Caspari, Råholm, Sæteren, Rehnsfeldt, Lillestø, Lohne, Slettebø, Heggestad, Høy and Lindwall (2018:4119-4127) indicated that the rights of residents should be valued and safeguarded during the process of providing healthcare; focusing on individual outcomes, dignity, privacy, choice and control. Staff in the homes for the elderly should be aware of these rights and initiate their implementation (Slettebø, Sæteren, Caspari, Lohne, Rehnsfeldt, Heggestad, Lillestø, Høy, Råholm & Lindwall, 2017:718-726). According to Bates and McLoughlin (2019:276-284), the residents' rights should be respected and confidentiality about the residents' information should be maintained and should not be shared with anybody without consent of the residents.

3.10.4.1.3 Complaints

Homes for the elderly should make sure that all complaints of residents are managed efficiently and successfully. Homes should seriously work on complaints towards seeking a solution (Hansen, Hyer, Holup, Smith & Small, 2019:736-757). Taking care of residents' complaints contribute towards improving staff accountability, consequently improving the quality of health service towards residents, reduce abuse and assure compliance with standards (Mirzoev & Kane, 2018:1-75). In any heath facility that values holistic care and safety, residents' and or patients' complaints should be recorded and critically analysed. The process of dealing with complaints of residents enables healthcare facilities to identify any challenges and weaknesses about the way care is provided, thus improving the services (Harrison, Walton, Healy, Smith-Merry & Hobbs, 2016:240-245).

3.10.4.1.4 Management of records

Homes should develop and have systems for documenting residents' care, services and records (Hitt & Tambe, 2016:834-859). Clinical records are used to audit the care given to patients and residents in homes for the elderly (Mathioudakis, Rousalova, Gagnat, Saad & Hardavella, 2016:369-373).

3.10.5 Guiding documents for the care of residents

3.10.5.1 Standard operating procedures for valuables of the residents

As was identified by Van Hoof, Douven, Janssen, Bosems, Oude Weernink and Vossen (2016:1-14), residents' money and valuables should be safe and secure. Residents should be in the position to control their money and valuables. According to Kennedy (2016:1-23), homes need policies and procedures to make sure that money and valuables of residents are kept safely.

3.10.5.2 Policies and procedures

According to Slettebø et al. (2017:718-726), quality of care and services of residents should be guided by clear policies and procedures, which should focus towards evidence-based practice treatment and care, be accessible and should receive input from staff, residents and relatives. The study stated further that those policies and procedures should be reviewed annually and compiled into a policy manual. Furthermore, Palacios-Ceña, Gómez-Calero, Cachón-Pérez, Velarde-García, Martínez-Piedrola and Pérez-De-Heredia (2016:110-115) identified the following policies and procedures: training of staff on the available policies and procedures, policy on securing of documents and records, how to use, decontaminate and dispose of medical

equipment; in addition policies and procedures on how to deal with complaints of residents, management of medicines and fire safety.

3.10.5.3 Specific indicators set to monitor and evaluate care provided to residents

3.10.5.3.1 Falls prevention

According to Jin (2018:1734-1734) the risk of falls among the elderly increases with age due to muscle weakness, frailty, balance and vision problems, polypharmacy, several diseases and other environmental risks. Therefore, homes should make sure that residents are properly evaluated to identify those at risk to falls and have strategies in place to protect them (Álvarez Barbosa, del Pozo-Cruz, del Pozo-Cruz, Alfonso-Rosa, Sanudo Corrales & Rogers, 2016:16-25). Colón-Emeric, Corazzini, McConnell, Pan, Toles, Hall, Cary, Batchelor-Murphy, Yap and Anderson (2017:1634-1641) indicated that there should be a quality programme to prevent falls in the homes for the elderly which includes training of staff. It was identified further in their study that new approaches for prevention of falls among the elderly due to geriatric syndromes are of urgency. Jin (2018:1734-1734) indicated that among the strategies to prevent falls in the homes is to have adequate equipment to prevent falls and having staff trained in fall prevention.

3.10.5.3.2 Prevention of pressure ulcers

Guidelines in how to prevent pressure sores, early detection and treatment were identified as measures to deal with the prevention of the problem (Courvoisier, Righi, Béné, Rae & Chopard, 2018:45-50). Recording and evaluating the pressure ulcers, their treatment and outcomes were identified as important factors to prevent high incidences of the problem among the residents living in homes for the elderly (Lavallée, Gray, Dumville & Cullum, 2019:e417-e427).

3.10.5.4 Guidelines to provide guidance in the home

3.10.5.4.1 Recognizing the signs of dementia and responding to the need

Klapwijk, Caljouw, Pieper, van der Steen and Achterberg (2016:186-197), recommend that staff in homes for the elderly need to have adequate knowledge and skills in identifying residents with clinical manifestations of dementia. Staff have to provide and seek further advice and assistance where necessary towards caring for residents who are having retention and communication of information, confusion, disorientation, restlessness, hallucination, disorganization, problems with harmonization, failure in coordination, abnormal behaviours and incapacity of decision making (Sondell, Rosendahl, Gustafson, Lindelöf & Littbrand, 2019:E16).

3.10.5.4.2 Care of residents with dementia

The status of residents suffering from dementia is neither stable nor permanent, therefore the care should be based on assessment and care planning which meets the required needs of the resident (Hamiduzzaman, Kuot, Greenhill, Strivens & Isaac, 2020:e0233450). Smythe, Jenkins, Galant-Miecznikowska, Bentham and Oyebode (2017:119-123) stated that requirements for providing care to residents suffering from dementia should be updated regularly to provide care according to the specific need. Furthermore, Smythe et al. (2017:119-123) emphasise that homes that accommodate people with dementia should have secure fencing and security guards at the entry gate which is of high importance.

3.10.5.4.3 Death and dying resident

Liu, Koerner, Lam, Johnston, Samara, Chapman and Forbat (2020:305-312) identified that despite the high mortality rate in nursing homes, care of dying residents is of low standard. Cagle, Unroe, Bunting, Bernard and Miller (2017:198-207) indicated that dying residents should be cared for in a comfortable condition with dignity, including handling the dead body with respect.

3.10.6 Safety and security

3.10.6.1 Requirements to ensure safe home environment and residents' protection

Safety is an obvious dominant element for residents' care, therefore it is important that the homes have arrangements to protect residents (Mobley, Leigh & Malinin, 2017:49-69). In particular, Braithwaite and Donaldson (2016:325-351) stated that resident safety is the basis of quality healthcare. Furthermore, Gram-Hanssen and Darby (2018:94-101) indicated that security measures should be in place to make sure residents and their valuables are safe. Nygaard, Halvorsrud, Grov and Bergland (2020:1-13) identified security and control as among the main aspects of the home. In his study, Lorenzi (2016:1-13) recommends that the homes for the elderly should have the means of limiting unauthorised people to access the place, such as locking doors and fixing card opening doors in order to control the threat of terrorism. It was further stated that access-control systems must be available in all departments and environments of the homes, in addition to closed circuit television (CCTV) systems. However, Rebellato, Briggs and Hausler (2019: 411) recommend that CCTV cameras have to be used in compliance with country-related laws and human rights. In his study, Bottom (2020:379-389) identified the importance of guarded gates at entrance of homes for the elderly which was also acknowledged by residents.

3.10.6.2 Preventing abuse of residents

Elderly abuse includes different forms namely psychological, physical, neglect and sexual abuse; 10% of the elderly experience some form of abuse (Baker, Francis, Hairi, Othman & Choo, 2016:1-105). This was substantiated by Pillemer, Burnes, Riffin and Lachs (2016:S194-S205) that elderly abuse is a growing problem which requires attention of the general public, social welfare policy makers and healthcare systems. Braithwaite and Donaldson (2016:325-351) recommend that residents' safety should focus on quality indicators including prevention of adverse events. In their study, Myhre et al. (2020:1-14) indicate that homes have to protect residents from all forms of mishandling, carelessness, abuse and injuries.

3.10.6.3 Fire safety

Homes should make sure that residents and staff are protected from events of fire by taking measures that decrease the risk of fire. The physical fire safety infrastructure of the homes should be regularly maintained. Exit doors from the homes during a crisis and disaster are essential (Kodur, Kumar & Rafi, 2019:1-23). It is very important to install a fire detection system (e.g. fire alarm) and fire-fighting equipment (e.g. fire extinguishers) (Yu et al., 2017:1170-1183). Regular fire drill demonstrations are important to update emergency outlet knowledge and skills among staff including evacuation of residents (Folk, Gonzales, Gales, Kinsey, Carattin & Young, 2020:585-606). Folk, Gales, Gwynne and Kinsey (2016:775-781) indicated that there should be monthly fire drill training in the homes for the elderly, aiming to equip staff with skills and knowledge on how to act in the case of a real fire emergency. Their study also indicated that training should include fire evacuation procedures, smoke detectors alert, checking and entering of the fire room, confirming that all rooms have been evacuated, and communicating with staff in the fire-free zone.

3.10.6.4 Communication support systems

Communication has been identified as an important clinical management component which improves care and relationship between healthcare providers and patients or residents (Chichirez & Purcărea, 2018:119). It is important that the environment of the homes for the elderly supports effective communication between residents and staff. Resident call systems should be accessible by residents in all rooms they are using; the systems should be able to alert staff when help and support are required by residents (Forsgren, Skott, Hartelius & Saldert, 2016:112-121). Updated and current communication systems may improve health behaviour outcomes and high healthcare utilization (Posadzki, Mastellos, Ryan, Gunn, Felix, Pappas, Gagnon, Julious, Xiang & Oldenburg, 2016:1-211).

3.10.6.5 Recreational activities for socialization

In their study, van den Berg et al. (2020:e254-e269) indicated that recreational activities are important for residents to experience activeness. They further identified that there should be safe and easily accessible garden space. de Boer, Hamers, Zwakhalen, Tan, Beerens and Verbeek (2017:40-46) indicated that in the garden, there should be opportunities for resting and sitting, that the garden should have the following features for stimulation of the senses: odorous plants and flowers, water and planting with natural ability to attract wildlife and birds. Nguluma and Kemwita (2018:355-362) indicated that the outdoor environment has to promote sociable activity for all residents.

Adcock, Sonder, Schättin, Gennaro and de Bruin (2020:1-15) indicated that playing music among the elderly should be a daily life intervention to improve cognitive and promote enjoyable life. In their study, Kihl and Kim (2019:1-18) identified the importance of exercise, music and games among the elderly to improve health and quality of life, mentally, physically and socially. Wollesen, Wildbredt, van Schooten, Lim and Delbaere (2020:1-22) proposed music played alongside stepping exercise to improve physical performance among the elderly. In addition, Ford, Tesch, Dawborn and Courtney-Pratt (2018:e12186) indicated that music, singing, dancing, reading and poems stimulate and make the elderly active, thus improving their health and wellness. Furthermore, Kim, Wu, Tanaka, Watanabe, Watanabe, Chen, Ito, Okumura, Arai and Anme (2016:76-80) identified that reading among the elderly has shown a significant role in delaying dementia signs and symptoms. In their study, Fang, Ye, Huangfu and Calimag (2017:1-8) insisted music therapy is a low cost treatment among patients with Alzheimer's Disease and dementia for improving neurons, psychology, cognitive, and social performance. Furthermore, Douka, Zilidou, Lilou and Manou (2019:75) asserted that dancing is an important treatment for the elderly as it coordinates movement and activates the brain, specifically requiring the dancer to learn and recall steps.

3.10.7 Human resources

3.10.7.1 Characteristics of required staff

Harrington et al. (2016:HSI.S38994) indicated that every day there should be an adequate number of care providers, who can provide care according to the basic needs of residents such as assessment of residents' health problems, essential and leisure needs. In addition, Geng, Stevenson and Grabowski (2019:1095-1100) indicated that homes for the elderly need qualified, competent and experienced staff appropriate for caring for the elderly.

3.10.7.2 Human resource policies

3.10.7.2.1 Recruitment of staff policy

Kiljunen, Välimäki, Kankkunen and Partanen (2017:e12146) indicated that homes for the elderly should have in place a policy and procedure for staff employment. The study states further that those homes must use interview techniques to ascertain candidates' suitability to care for the elderly. It was further stated by these authors that staff should be given job descriptions on appointment to be aware of what is expected from them. In their study, Smith and Tsutsumi (2016:339-353) stated that there should be a recruitment policy that enable homes to have staff with the required characteristics and good behaviour. The study stated further that the type of policy influences the type of staff and the type of staff influences the quality of care provided to residents. Chernenko, Lebedeva, Klimovskikh and Gorlova (2020:598-603) indicated that a good staff recruitment policy in health facilities determines the type of staff recruited in terms of quantity and quality.

3.10.7.2.2 Staff training and development policy

Kercado (2016:1-24) reported that caregivers in the homes for the elderly, often have inadequate skills, which lead to providing poor quality care. Substantiated by Backhaus et al. (2018:634-638) found that elderly people who have been cared for by unprofessional staff in care homes contributes to poor quality of care of residents. They identified a poor level of knowledge among staff in elderly care homes. In addition, the study recommended the need to formulate acceptable standards for homes for the elderly.

Poor leadership and ineffective management were identified as among the factors contributing to poor quality care to residents (Gil, 2019:126-143). Gurwitz, Bonner and Berwick (2017:118-119) observed major neglect of mental health-related problems and mistreatment of mental illnesses among the residents in homes for the elderly. Tarugu, Pavithra, Vinothchandar, Basu, Chaudhuri and John (2019:847) found that residents were experiencing loneliness, depression and an inability to adapt to ageing-related changes, which were attributed to a lack of counselling and caring skills of age-related problems. Daamen, Hamers, Brunner-la and Schols (2016:D390-D390) identified that higher rate of heart failure and several comorbidities among the residents were attributed to poor healthcare (Daamen et al., 2016:D390-D390).

A need for policies to monitor staff training and development were indicated by Anstey, Powell, Coles, Hale and Gould (2016:353-361). These policies include training of staff for their roles and

responsibilities that meet requirements to provide care to the elderly. Bing-Jonsson et al. (2016:1-11) indicated that there should be a strategy for training and for staff development. In addition, the strategy should be reviewed at least once per year to meet standards of providing quality healthcare to residents.

3.10.7.2.3 Staff supervision and appraisal

White, Aiken and McHugh (2019:59-67) identified that suboptimal care provided by nurses was a common problem in homes for the elderly and was due to job dissatisfaction among nurses. The study stated further that improved work environments for nurses' retention is needed. Ryan, Ellem, Heaton, Mulvogue, Cousins and De George–Walker (2018:182-187) recommend policies and procedures for staff supervision and performance appraisal.

3.11 SUMMARY

In this chapter several summarized studies related to the care of residents in homes for the elderly were discussed. Literature reviews have been used to evaluate past research, identify experts and determining methodologies for developing healthcare standards used in past studies. In addition, basics for developing healthcare standards have been described. Approaches and composition of domains, principles and standards for quality healthcare were discussed. Common challenges facing homes for the elderly such as unskilled staff, lack of funds and poor-quality healthcare were highlighted. Organizations involved in developing healthcare standards such as the WHO, COHSASA, ISQua and OHSC were identified, and their roles explained. Legislation related to healthcare standards such as England's Care Standards Act 2000, the national policy and legislation in Scotland, the Older Persons Act, No. 13 of 2006 in South Africa, Tanzania national ageing policy and Tanzania Public Health Act, 2009 (Act No. 1/09) were discussed.

The researcher has focused, identified and summarized relevant global research conducted in healthcare standards for the homes for the elderly. The standards discussed were based on the infrastructure, clinical management, meals and water, residents' rights, human resources required, and safety and security.

3.12 CONCLUSION

Through the literature review, the researcher was able to identify several healthcare structure standards that are required for the care of residents in the homes for the elderly in Tanzania. The literature review helped the researcher to collect the relevant sources of information related to developing and validating healthcare structure standards.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

The methodology as applied in this study is described in this chapter. It provides information concerning the method that was used in undertaking this research, as well as a justification for the use of this method. An overview is provided of the methods of the three phases of the research, namely situational analysis, development and validation of the standards and criteria.

Phase 1

Phase one concerns the situational analysis which was conducted by applying a quantitative research approach with an exploratory research design.

Phase 1 comprised of a situational analysis that was achieved through 2 sub-studies:

- Sub-study 1: An audit of homes of the elderly using an audit instrument
- Sub-study 2: A questionnaire completed by staff of these homes on whether the homes meet the structured standards contained in the audit instrument.

Phase 2

During the second phase, drafted standards and associated criteria were developed based on the findings of phase one and the relevant literature aligned with objective (ii).

Phase 3

In this phase, the developed drafted standards and criteria were validated applying the Delphi technique which was applied quantitatively. This phase was aligned with objective (iii).

4.2 PHASE ONE: SITUATIONAL ANALYSIS

A quantitative research approach with an exploratory descriptive design was used to conduct the situational analysis. This was aligned with the first research objective, which was to determine whether any healthcare standards were applied in homes for the elderly in Tanzania that contributed to safe, quality resident care.

4.2.1 Research methodology

4.2.1.1 Study design

The cross-sectional descriptive design was considered suitable as it enabled the collection of data over a wide geographical area at one point, in a cost-effective way.

4.2.1.2 Study area and setting

This study was conducted in the mainland of Tanzania, which is approximately 940 000 square kilometres. Tanzania is bordered by Uganda in the north, Kenya in the northeast, Rwanda and Burundi in the northwest and the Democratic Republic of Congo in the west. Malawi and Zambia are to the southwest, Mozambique is in the south and the Indian Ocean forms the east and southeast borders. Tanzania has a dry season, which extends from May to October, followed by a rainy season from November to April. The current population of Tanzania is 59 237 370 people; the population is diverse with more than 120 ethnic groups. Each ethnic group has their own language, but Tanzania's official language is Kiswahili, which is an Arabic-influenced Bantu language. Although many Tanzanians speak Swahili, very few speak English.

The mainland of Tanzania is divided into 25 regions for administrative purposes, as shown in figure 4.1. However, Tanzania is divided into six different geographical zones. The total number of homes for the elderly found in these six geographical zones of the country were included in the study. These zones are shown in figure 4.2.

Figure 4.1: Map of Tanzania showing the 25 administrative regions

Figure 4.2: Map of Tanzania showing the six geographical zones

4.2.1.3 Population and sampling

4.2.1.3.1 Homes for the elderly

Initially the target population for this study was the 41 homes for the elderly found in Tanzania. Seventeen of these homes were managed by the state (public) and 24 were managed by faith-based organisations (private) (Spitzer, Mabeyo & Rosenmayr, 2011). Unfortunately, only 34 homes for the elderly were found to still exist, of which 17 are managed by the state (public) and 17 are by faith-based organisations (private). The 34 functioning homes included in the study are distributed across the six geographical zones, as shown in table 4.1.

Two homes of the 34 homes were used for the pilot study, and the remaining 32 homes were all included in the data collection as the number of staff per home was low. Thus, no sampling was done. Including all homes across all six zones enabled the researcher to identify differences in management of homes for the elderly in different parts of the country. Moreover, both public and faith-based homes were included (Table 4.1) to determine any differences in management of these homes. Table 4.1 shows a breakdown of the number of homes in each zone, further divided into private and public.

Table 4.1: Distribution of homes for the elderly according to zones and entity (public and private)

Zones	Total number of homes	Total number of private homes	Total number of public homes
Central Zone	3	2	1
Coastal Zone	8	5	3
Lake/Western Zone	12	6	6
Northern Highland Zone	5	1	4
Southern Highland Zone	3	1	2
Southern Zone	3	2	1
Total	34 (100%)	17 (50%)	17(50%)

4.2.1.3.2 Staff

The targeted population included general managers, professional registered nurses, non-professional nurses and caregivers. The actual number of staff in homes for the elderly could not be obtained because of the limited information about these homes, meaning it was not possible to anticipate a specific sample size. Evidence from the two homes that were contacted before data collection, indicated staffing was relatively low, with two staff members in one home and three in the other. Therefore, it was expected that there are few staff in the homes for the elderly in Tanzania. Consequently, all staff members, the total population working in these homes were included in the study. Thus, no sampling was done. A total of 65 staff members consented to participate in the study and all completed and returned the questionnaires.

4.2.1.4 Inclusion and exclusion criteria

4.2.1.4.1 Inclusion criteria

General managers, professional registered nurses, non-professional nurses and caregivers at the homes who were available during the data collection period and who were willing to provide consent were included in this study.

4.2.1.4.2 Exclusion criteria

Any staff member identified for the purpose of this study who did not give consent or who was away on leave such as on holiday or sick leave was excluded.

4.2.1.5 Pilot study

A pilot study was conducted to pre-test the methodology to be used in this study. The pilot study population included homes for the elderly and staff not included in the actual study. According to

the study conducted by Muhamad et al. (2017:292-299), a pilot study sample should be 10% of the sample planned for the actual study.

4.2.1.5.1 Homes for the elderly

A 10% sample (n=2) of the actual population size of the homes was included in the pilot study. The audit instrument was applied to explore existing structure standards and the associated criteria. The two homes involved, one home was managed by the public, and the other home was managed by faith-based organizations (private). The pilot study assisted in identifying problems with the duration of data collection and the time required to complete the audit of one home to explore existing structure standards and the associated criteria. In addition, the pilot study assisted the researcher to become familiarised with the subjects of the study, the setting and environment of homes for the elderly and the methodology of the study.

4.2.1.5.2 Staff

Five staff of the two homes were included in the study. The Likert questionnaire for the staff based on the audit instrument to determine existing structure standards and the associated criteria were tested in the homes for the elderly. The pilot study identified the time required to complete a questionnaire. The participants involved in the pilot study identified grammatical errors, especially errors caused by the process of translation of the staff questionnaire from English to Swahili. The comments given by these participants were used to modify the instrument to fit the context of Tanzania. Thus, enabling a smooth completion of the data collection.

The findings of the pilot study from both the researcher and the staff were captured in SPSS and analysed. To ensure clarity during analysis of the actual study findings, specific codes were given to zones, homes entity (public and private), individual home and variables under guidance of the biostatistician.

4.2.1.6 Data collection tools

Data collection instruments used to explore the structure standards and criteria in the homes for the elderly were developed by the researcher. To meet data quality and utilisation of research, the context in which the standards were applied was considered. Moreover, the process of developing these instruments was based on various sequential steps: research background, questionnaire conceptualisation, format and data analysis, and establishing validity and reliability (Son, 2018:89-100).

In the research background, the purpose, objectives, research questions and participants' background (e.g., education background) were examined. The researcher also performed a thorough literature review to gain sufficient knowledge about the research problem. The second step was to generate statements and questions for the questionnaires and audit instrument used in this study. The statements and questions were based on the relevant literature and the chosen theoretical framework and established a link between the research objectives and the study content. The main areas considered were the items measured by the Likert questionnaire and identifying the independent variables (structure healthcare standards e.g., doorways, passages and staircases provide safe access to residents, human resource policies available to ensure efficient and effective management of human resources) and dependent variable (quality care for residents in homes for the elderly in Tanzania.

Drafting of the statements and questions were based on consideration of details such as the questionnaire layout, format, order of items, font size, front and back cover and proposed data analysis processes. The validity of the instruments was established as described in paragraph 4.2.1.8.1. The reliability of the instruments was established as described in paragraph 4.2.1.8.2.

4.2.1.6.1 Audit instrument

An audit instrument was used to complete an audit of the homes and explore existing structure standards and associated criteria based on established standards as identified in the literature, the researcher's experience and established international standards. The audit instrument was based on previously identified domains, standards and corresponding criteria. For the purpose of this study domains were referred to as fields. For example, the infrastructure field refers to basic physical structures and facilities, linked with various standards, such as doorways, passages and staircases with safe access for residents; bedrooms that provide total comfort for residents; bathrooms and showers that provide safe access to these facilities; safe and accessible toilets; and adequate kitchen facilities for preparation of meals for the number of residents. In turn, these standards are linked with various criteria. For example, criteria for doorways, passages and staircases with safe access for residents are: footlights at the sides of the stairs, clearly marked start/end of stairs (top and bottom), stairs that are free from damage, handrails on both sides of stairs; and doorways wide enough for the passage of residents, wheelchairs and hoists. The remaining structure standards for the audit instrument are described in table 4.2.

4.2.1.6.2 Staff questionnaire

A Likert-type questionnaire was used to collect data from participating staff. This questionnaire was based on the audit instrument and only included structure standards; and was used for the situational analysis. The staff questionnaire was based on the items of the audit instrument to compare the findings of the audit instrument with that of the Likert scale questionnaire. In addition, the questionnaire had four open-ended questions that allowed the participant to provide depth to the choices they made. Findings obtained from staff assisted in developing appropriate healthcare standards and associated criteria. An example of a structure standard in this questionnaire is infrastructure, which is linked to various criteria such as therapy equipment, toilets, bathrooms, dining rooms, recreation rooms, kitchens and bedrooms. Table 4.2 shows the remaining structure standards as listed in the audit and staff questionnaire.

Table 4.2: Data collection tools linked to specific structure standards

Data collection tool	Fields	Healthcare structure standards
Audit instrument	Infrastructure: Basic physical structures and facilities enabling efficient and effective functioning of the home	Doorways, passages and staircases provide safe access to residents
		Bedrooms provide total comfort to residents
		Bathrooms and showers provide safe access to bath or shower
		Toilets are safe and accessible
		Kitchen facilities for preparation of meals for the number of residents
		Linen bank provides bedding and night clothes for the number of residents
		Dining room provides facilities for residents to have their meals
		Supportive facilities to sustain and support day-to- day services
		Sub-standards: Sluice room, Dressing room, Nurses' station, Other supportive facilities (Secretary's office, Rest rooms for staff, Activity room for residents, Laundry)
		Facility for residents with Alzheimer's disease to ensure their safety and security
	Clinical management	Equipment for direct care available
		Emergency tray available for emergency care
		Equipment for indirect care available
		Disposable items for direct care available
	Meals and water	Residents provided with meals according to individual needs
		Water is available

Data collection tool	Fields	Healthcare structure standards
	Residents' rights	Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information are respected
	Guiding documents for residents' care	Standard operating procedures available to provide safe quality care to residents
		Policies available to provide guidance to activities in the home
		Specific indicators set to monitor and evaluate care provided to residents
		Guidelines available to provide guidance for specific activities in the home
	Safety and security	Requirements available for ensuring residents' protection and home environment that is free from danger and threats
		Communication support systems available to allow communication with staff
		Recreational activities available to allow socialisation
	Human resources	Staff available for the various activities in the home
		Human Resource policies available to ensure efficient and effective management of human resources
Staff questionnaire		Infrastructure, clinical management, clinical monitoring, staff/human resources, food/meals, water, procedures, guidelines, policies, recreational activities, safety and security, communication and residents' rights

4.2.1.7 Data collection

Before visiting any home for data collection, the researcher arranged an appointment and obtained verbal consent from each home. On arrival at every home, the researcher introduced himself and informed the staff about the research, thereafter he obtained written informed consent. After providing participants with information about the study and obtaining written informed consent, the researcher started collecting data.

4.2.1.7.1 Audit of the homes

The homes were audited with an audit instrument based on established standards, based on the literature, the researcher's experience and established international standards. Thereafter, the researcher accompanied by the general manager of the home, used the audit instrument to audit the home to identify if the required structure standards to contribute to quality healthcare were in place. For each home, the researcher used an audit instrument to rate the standards and criteria as either compliant, non-compliant or not applicable. The duration of an audit of a home was 12 hours to complete.

4.2.1.7.2 Staff

A convenient place or room in each of the homes was used to meet with participating staff. The researcher introduced the questionnaire to staff and explained the purpose of the research before obtaining informed consent from each eligible staff member. After obtaining written informed consent, the questionnaire was distributed to staff for completion. As with the audit instrument, most of the items in the questionnaire required staff to rate standards and criteria as yes (existing), no (not existing) or not applicable and providing comments to non-applicable standards and criteria. The staff were able to complete the questionnaire within two to four hours. The questionnaires were collected on the same day.

Finally, after the completion of the data collection, findings from the audited homes and staff questionnaires were captured, stored, secured and organized by the researcher using Research Electronic Data Capture (REDCap), the online database system. Data collection was completed over 4 months.

4.2.1.8 Validity and reliability

The following discussion concerns validity and reliability that was contained in the research process as applied in the study such as appropriate research language, content and face validity of the data collection tools and the interrelatedness of options in the Likert scale questions.

4.2.1.8.1 Validity

It was noted in the study conducted by Beck (2016) that 'Validity refers to a test's ability to reflect the extent to which differences in scores reflect true differences rather than constant or random errors'. In this study, the data collection tools were developed in English and underwent professional translation into Swahili, which is the national language of Tanzania. The translation process followed four steps: forward translation, expert panel back-translation, pre-testing and cognitive interviewing and confirmation of the final version as was found in the study conducted by Son (2018:89-100). In the forward translation, the instruments were sent to Kiswahili language experts from the Department of Swahili in Dar es Salaam University in Tanzania. After translation, the instruments were returned to the researcher, and then sent to English experts to translate the instruments back into English to assess the consistency of the concepts. The Swahili version was tested in two homes for the elderly, one home managed by the public and the other one from the faith-based organizations homes as a part of the pilot study.

Some inconsistencies were identified. The main inconsistency recognized was in the management structure. Before the pilot study, the questionnaire referred to the general manager to indicate the person in charge of a home for the elderly. However, the term was consistent with private homes only; in the public homes the social worker was in charge, and this was the preferred title used to indicate the person in charge of the home. In addition, some of the words were translated into Kiswahili which do not fit the context of homes for the elderly, which caused some ambiguities to participants. Therefore, the participants assisted in replacing the right words as they are used daily in their homes.

Moreover, the pilot study assisted in identifying time required by the participant to complete a questionnaire and the time required by the researcher to complete an audit of one home. Moreover, the pilot study assisted the researcher to familiarise with the setting and environment of homes for the elderly and the methodology of the study. Finally, all inconsistencies were corrected, and a final version developed.

Content validity was assured by considering the relevance, quality and applicability of the content of the instruments to be measured as was noted in the study conducted by Almanasreh, Moles and Chen (2019:214-221). Therefore, the content validity was based on the literature, and guided by standards developed by ISQUA and England's Care Standards Act, 2000.

To ensure construct validity, the instruments were checked by the researcher's supervisor, co-supervisor and the biostatistician to ensure that the instruments were constructed to successfully test what they claimed to test (i.e., standards and associated criteria for homes for the elderly). The supervisor, co-supervisor and the biostatistician assisted in modifying the instruments, after which the instruments were accepted to be applicable, thus ensuring face validity.

Furthermore, the audit instrument was checked by experts in geriatrics, including the researcher's supervisor and co-supervisor. Moreover, the researcher underwent a practical training in Cape Town, South Africa, on how to audit homes for the elderly and completed an audit of a home under guidance of the supervisor.

4.2.1.8.2 Reliability

Reliability refers to the stability, consistency and recurrence of outcomes and results that match the conditions, even in different circumstances as was found in the study conducted by Mohajan (2017:59-82). In addition to the pilot study, the Cronbach alpha coefficient was calculated for the options contained in the Likert scale questions. The alpha coefficient of .928 was obtained for the

questionnaire thus indicating that the instrument had relatively high internal consistency. A reliability coefficient of ≥.7 is considered acceptable as was noted in the study conducted by Kiliç (2016:47). Reliability was further assured through generalisability, which is the extent to which the findings can be realistically applied to other groups and locations as was found in the study conducted by Tiokhin (2018:6-24). Additionally, the homes were distributed across all six geographical zones in Tanzania thus representing the whole country, as described in paragraph 4.2.1.3.1. Furthermore, the number of homes that was used for the study is sufficiently large to enable the results to be applicable to homes for the elderly in Tanzania and other developing countries, especially in Africa.

4.2.1.9 Data analysis and presentation

4.2.1.9.1 Data analysis

The data were analysed using the Statistical Package for Social Sciences (SPSS) according to Green and Salkind (2016:289, 688), version 26.0. The data were captured on the SPSS spreadsheet and cleaned by confirming the frequencies of the various responses, and subsequent removal of errors and inconsistencies from the dataset. In addition, data cleansing involved recognizing, removing and updating information that were incomplete, inaccurate, improperly formatted, duplicated, or irrelevant. Descriptive statistics were used to summarize and describe characteristics of a data set. Descriptive statistics used were measures of frequency (count and percent), measures of central tendency (mean, median, and mode) and measures of dispersion or variation (range, variance, standard deviation).

4.2.1.9.1 Data presentation

Data are presented as frequencies using tables.

4.3 PHASE TWO: DEVELOPMENT OF THE DRAFTED STANDARDS AND CRITERIA

Developing the drafted standards and criteria followed three stages of the model as introduced by Whittaker and Mazwai (2016:42-45): normative, empirical and consensus. The publishing and implementation stages were not followed in this study. The researcher, supervisor and co-supervisor, biostatistician and organizations involved in providing services to the elderly in Tanzania were involved in the development of the drafted standards and criteria. The organizations involved were Tanzania Older People's Platform (TOP) and Saidia Wazee Karagwe (SAWAKA). Minimum standards that were realistic in the context of the country were introduced through involving local experts.

4.3.1 Normative stage

During the second phase, drafted standards and associated criteria were developed based on the findings of phase one and relevant literature aligned with objectives (ii) and (iii). The development process was facilitated by considering standards that have been applied in similar situations in a developing country.

4.3.2 Empirical stage

During the empirical phase, the standards and criteria were tested in a pilot study through the situational analysis to assess and ensure their applicability and suitability. In addition, the researcher simultaneously checked whether the homes were compliant or non-compliant with these standards and criteria. After the situational analysis, the standards and criteria were refined according to the findings. Thereafter, the experts were consulted.

4.3.3 Consensus stage

For this study, the researcher checked the developed standards and associated criteria with experts, the supervisor, co-supervisor and biostatistician. These experts evaluated these structure standards and agreed or disagreed with each standard and the associated criteria. This resulted in modifications and changes to the developed standards on which the experts did not agree.

4.3.4 Publication stage

For this study, publishing of standards and criteria will follow the examination of the dissertation submitted to Stellenbosch University and after the degree is awarded.

4.3.5 Implementation stage

Once the standards and criteria are published, it is expected that the standards and the associated criteria will be implemented in homes for the elderly in Tanzania in the post-doctorate period.

4.4 PHASE THREE: VALIDATION OF THE DRAFTED STANDARDS AND CRITERIA

The Delphi technique was applied to validate the drafted standards and associated criteria. It is an organised progression technique which allows a sequence of survey rounds of the required standards and criteria until consensus among experts is reached as was noted in the study conducted by Njuangang et al. (2017:737-754). Validation included 26 drafted standards and 262 associated criteria that were developed in phase two. By reaching consensus among the experts with reference to the standards and criteria, acceptance was set at ≥80%. The Delphi process was started by identifying national and international experts. The experts included local experts

and stakeholders from the Tanzania Ministry of Health, Division of Social Welfare, section of People with Disabilities and Elderly Persons and from Tanzania Nursing and Midwifery Council (TNMC). In addition, international experts were included as identified through various organisations namely, The Council for Health Service Accreditation of Southern Africa (COHSASA), International Society for Quality in Health Care (ISQua), and South African Nursing Council (SANC). Also, the experts included academics involved in teaching gerontology and geriatrics, nursing specialists in gerontology or geriatrics who practise in homes for the elderly, and Heads of Departments of Nursing at universities. Although the validated standards and criteria are specifically for the homes for the elderly in Tanzania, the standards and criteria were also validated by international institutions, due to the limited number of institutions and experts who could assist with the development and validation of standards and criteria in Tanzania.

4.4.1 Delphi technique methodology

Consensus among the participants was reached after conducting two rounds. A brief overview of Delphi process over the two rounds is shown in figure 4.3 (Skulmoski, Hartman & Krahn, 2007:1-21).

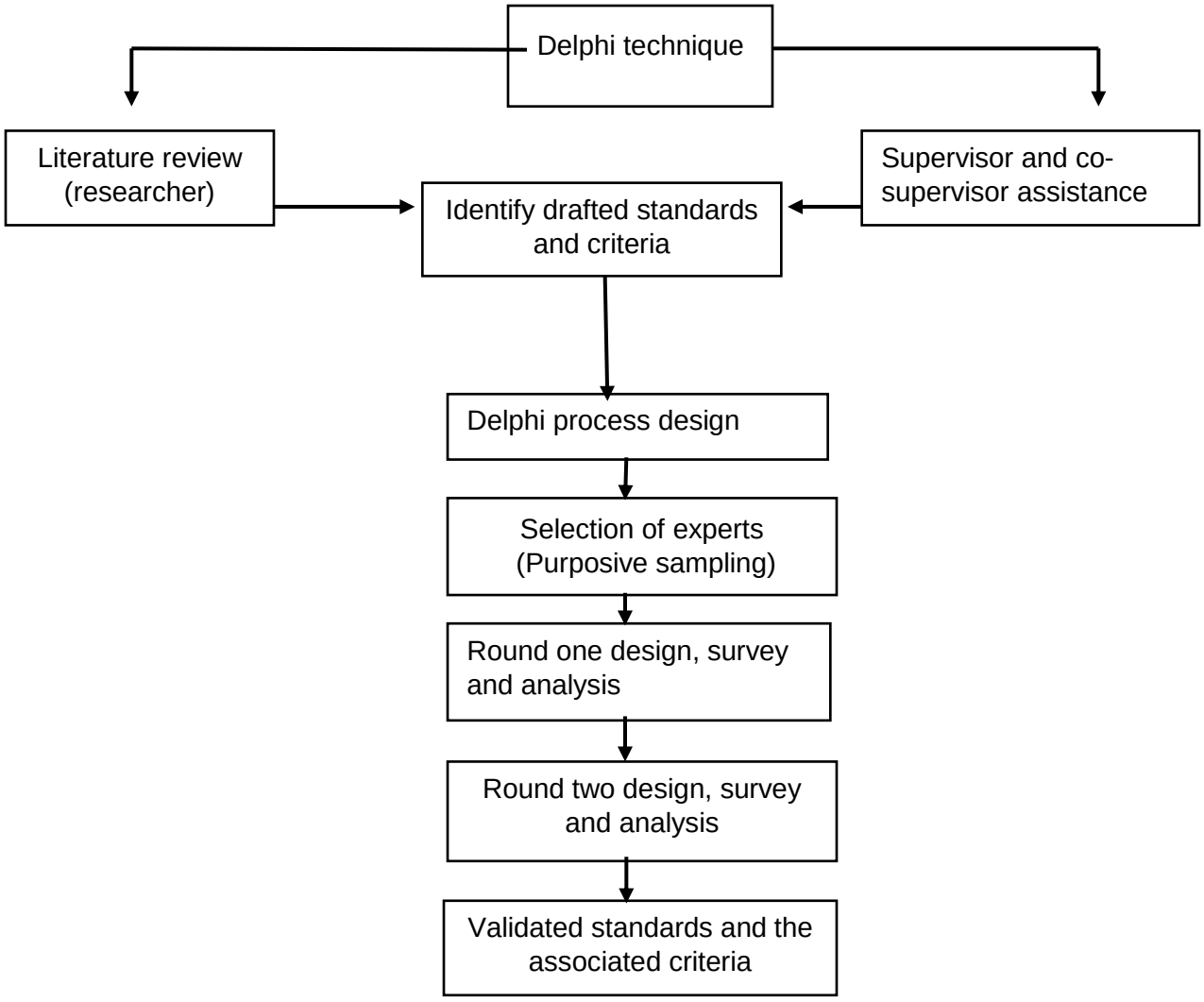

Figure 4.3: Two rounds of Delphi process

4.4.2 Delphi rounds

Consensus among the experts selected to validate the drafted standards and the associated criteria was achieved in two rounds of the process.

4.4.2.1 Round one

A total of 165 experts were consulted to evaluate and validate the drafted standards and criteria (detailed in Chapter 9). The experts were selected based on their expertise of validating drafted healthcare standards, thus purposive sampling was applied (Ogbeifun, Agwa-Ejon, Mbohwa & Pretorius, 2016:1-6;Goodarzi, Abbasi & Farhadian, 2018:219-230;Skulmoski et al., 2007:1-21). The experts were contacted through telephone and by email to confirm their readiness and availability for the Delphi process. Each identified expert was sent an email with the Delphi

questionnaire that included the drafted healthcare standards and associated criteria in a Likert-type questionnaire format. In addition to the drafted standards and associated criteria, the questionnaire also captured the professional role, academic qualifications and area of expertise of each expert. It was stated in the introduction of the questionnaire that by agreeing to participate, it was regarded as giving informed consent to take part in all rounds until the consensus was reached among the experts. The experts were asked to rate each drafted standard and associated criteria as: 'I support the drafted standard and criteria' or 'I support the draft standard and criteria with modification' or 'I do not support the drafted standard and criteria'. The questionnaire also included a comment section for each draft standard and associated criteria allowing justification of responses, suggested modifications or alternative standards and or criteria and the opportunity to propose new standards and or criteria. A one-week deadline was set for returning responses from experts. All experts were sent a reminder email after five days.

Responses from the first round were reviewed, categorised and extracted to SPSS for descriptive analysis (frequencies and percentages) to identify whether or not consensus had been obtained for each drafted standard and or associated criteria, (with consensus defined at ≥ 80% agreement as was found in the study conducted by Stewart, Gibson-Smith, MacLure, Mair, Alonso, Codina, Cittadini, Fernandez-Llimos, Fleming and Gennimata (2017). All standards achieved consensus at a level of ≥80%. Only four criteria with <80% cut-off point agreement were identified and incorporated in the questionnaire for round two of the Delphi process.

4.4.2.2 Round two

As it was stated in paragraph 4.4.1.1, round two included only four criteria that did not reach consensus in round one. In addition, these criteria were modified according to suggested modifications by the experts. Furthermore, round two involved the same 32 experts who participated in round one (refer to paragraph 9.3). Unfortunately, only 25 (78%) of the experts filled and returned the questionnaires. The aim of involving the same experts was to get their opinions on the modified criteria that did not reach consensus in round one. The same as in round one, the experts were asked to rate each drafted standard and criteria as: 'I support the drafted standard and criteria' or 'I support the draft standard and criteria with modification' or 'I do not support the drafted standard and criteria', with a comment section for each draft standard and associated criteria allowing justification of responses, suggested modifications or alternative standards and or criteria and the opportunity to propose new standards and or criteria. As in round one, a one-week deadline was given for completion and return of the questionnaire. A reminder was sent after 5 days.

The same as in round one, responses from the second round were analysed by the researcher using SPSS to identify the level of consensus among the experts. Following analysis, all four criteria that were included in the questionnaire for round two reached consensus among the experts at a level of 96%, thus the Delphi process ended at the second round.

4.5 SUMMARY

This chapter presented the research methodology which was conducted in three phases. Phase one was about the situational analysis to determine whether any healthcare standards are applied in homes for the elderly in Tanzania.

Phase two described the development of the drafted standards and criteria. Drafted standards and associated criteria were developed based on the findings of phase one, relevant literature aligned with the first objective and through involving experts.

Phase three described the validation process of the drafted standards and associated criteria. These drafted standards and associated criteria were validated by applying the Delphi technique, an organised progression technique which allowed a sequence of two survey rounds of the required standards and criteria for homes for the elderly in Tanzania to achieve consensus among the experts.

4.6 CONCLUSION

This research methodology included the situational analysis, development and validating of healthcare standards and criteria. The methodology was implemented effectively and enabled the answering of the three research questions. The answers to the research questions may help to improve the situation in the homes for the elderly in the country.

CHAPTER 5: DATA ANALYSIS AND RESULTS OF THE AUDIT OF THE STANDARDS OF CARE IN HOMES FOR THE ELDERLY IN TANZANIA

5.1 INTRODUCTION

This chapter presents the data analysis and results of the audit of the homes for the elderly in Tanzania. An audit instrument was used to complete a situational analysis of the standards of care in all 32 homes for the elderly in Tanzania. These homes were distributed across Tanzania's six geographical zones. Sixteen of these homes were from the public sector and 16 were from the private sector. Data were collected to determine whether specific healthcare standards were applied to ensure safe, quality care for residents in homes for the elderly in Tanzania.

5.2 DESCRIPTIVE DATA ANALYSIS

Data collected from all 32 homes for the elderly located in Tanzania were analysed and presented as frequencies and in table form. The data were checked, rechecked and crosschecked with the assistance of the researcher's supervisor and co-supervisor and a biostatistician. The purpose of crosschecking the data was to ensure the validity of the data, as this may affect the findings of this study. The IBM Statistical Package for the Social Sciences (SPSS) version 26 was used to create tables and calculate frequencies and percentages for compliance with established healthcare structure standards and associated criteria across the 32 homes.

5.3 FIELDS, STANDARDS AND CRITERIA

The situational analysis of the homes for the elderly was performed to answer the question, 'What are the healthcare standards currently applied to provide safe, quality care for residents in homes for the elderly in Tanzania?' The audit instrument was structured according to specific fields, standards and criteria. Therefore, each home was audited according to these fields, associated standards and criteria. Results were recorded as compliant, non-compliant or not applicable, as relevant.

5.4 FIELD 1 INFRASTRUCTURE: BASIC PHYSICAL STRUCTURES AND FACILITIES ENABLING EFFICIENT AND EFFECTIVE FUNCTIONING OF THE HOME (N=32)

5.4.1 Standard 1.1: Doorways, passages and staircases provide safe access to residents

5.4.1.1 Criteria 1.1.1–1.1.12

As shown in table 5.1, 12 criteria were used to audit the homes for the elderly to evaluate compliance with standard 1.1: “Doorways, passages and staircases provide safe access to residents”. None of the 32 homes (100%) were compliant with all the requirements as required for this standard. All the homes 32 (100%) were non-compliant to have footlights at both sides of the stairs and the end of the stairs (from top to bottom) being clearly marked. In addition, 26 (81%) of the stairs of the homes were non-compliant to have the stairs free from damages. Doorways for all the homes were obstruction free, including 26 (81%) homes were compliant with the required width of passages, which were wide enough for the passage of residents, wheelchairs and hoists. Twenty-seven (84%) homes were compliant with door thresholds being aligned with the floor. However, 24 (75%) homes were non-compliant with the requirement to have handrails on both sides of the stairs.

Table 5.1: Criteria for Standard 1.1: Doorways, passages and staircases provide safe access to residents (N=32)

	Non-compliant		Compliant	
Criteria	**Frequency (N=32)**	**%**	**Frequency (N=32)**	**%**
1.1.1 Footlights at both sides of stairs	32	100	0	0
1.1.2 End of stairs clearly marked (top to bottom)	32	100	0	0
1.1.3 Stairs are free from damage	26	81	6	19
1.1.4 Handrails on both sides of stairs	24	75	8	25
1.1.5 Doorways wide enough for passage of residents, wheelchairs and hoists	6	19	26	81
1.1.6 Doorways are obstruction free	0	0	32	100
1.1.7 Door thresholds aligned with floor	5	16	27	84
1.1.8 Proper lighting	21	66	11	34
1.1.9 Furniture arranged to facilitate mobility	7	22	25	78
1.1.10 Non-slip floors	8	25	24	75
1.1.11 Railings in passages on both sides	24	75	8	25
1.1.12 Overhead lights	7	22	25	78

5.4.2 Standard 1.2: Bedrooms provide total comfort to residents

5.4.2.1 Criteria 1.2.1–1.2.13

Table 5.2 shows the 13 criteria were audited to evaluate compliance with standard 1.2: "Bedrooms provide total comfort to residents". Results have shown that no home (100%) was compliant with all the criteria and thus the homes are non-compliant with the standard. None of the 32 homes (100%) were compliant with the requirements to have bedside rails and emergency alert systems that were accessible from bed. Furthermore, 26 (81%) homes were non-compliant in terms of providing specific beds for care of frail residents.

Table 5.2: Criteria for Standard 1.2: Bedrooms provide total comfort to residents (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.2.1 Bedrooms for the number of residents	6	19	26	81
1.2.2 Hospital beds for frail care provided	26	81	6	19
1.2.3 Spacing between beds	5	16	27	84
1.2.4 Bedside rails	32	100	0	0
1.2.5 Bedside light accessible	29	91	3	9
1.2.6 Emergency alert system accessible from bed	32	100	0	0
1.2.7 Controlled temperature system	32	100	0	0
1.2.8 Floor lights	32	100	0	0
1.2.9 Bedside cupboard	13	41	19	59
1.2.10 Screens/curtains between beds to provide privacy	32	100	0	0
1.2.11 Ventilation	21	66	11	34
1.2.12 Towel rails	27	84	5	16
1.2.13 Cupboard for residents' clothes	13	41	19	59

5.4.3 Standard 1.3: Bathrooms and showers provide safe access to bath or shower

5.4.3.1 Criteria 1.3.1–1.3.12

In total, 12 criteria were audited to evaluate compliance with standard 1.3: "Bathrooms and showers provide safe access to bath or shower". All the homes (100%) were found to be non-compliant with the standard. The results showed that none of the 32 homes (100%) were compliant in terms of the availability of floor lights. Most homes (n=29, 91%) had no access to an

emergency alert system. In addition, only five (16%) homes were compliant with the requirement to have secured grab bars in bathrooms and showers, as shown in table 5.3.

Table 5.3: Criteria for Standard 1.3: Bathrooms and showers provide safe access to bath or shower (N=32)

	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.3.1 Easy access to bathroom	13	41	19	59
1.3.2 Able to safely transfer in/out of tub or shower	21	66	11	34
1.3.3 Floor lights available	32	100	0	0
1.3.4 Grab bars available and secure	27	84	5	16
1.3.5 Non-slip floorings in bath or shower	8	25	24	75
1.3.6 Shower adaptable with shower chair, walk-in shower	24	75	8	25
1.3.7 Container/bin for proper disposal of soiled incontinence pads/napkins	29	91	3	9
1.3.8 Bath positioned in the centre of the bathroom	19	59	13	41
1.3.9 Easy access for a hoist	29	91	3	9
1.3.10 Easy access for wheelchairs	16	50	16	50
1.3.11 Emergency alert system accessible	32	100	0	0
1.3.12 Towel rails	27	84	5	16

5.4.4 Standard 1.4: Toilets are safe and accessible

5.4.4.1 Criteria 1.4.1–1.4.6

Six criteria were audited to evaluate compliance with standard 1.4: “Toilets are safe and accessible”. Non- compliance of all homes (100%) was identified with this standard. The results showed that 29 (91%) homes were non-compliant with the requirement to have clearly marked residents’ toilets. In addition, 29 (91%) homes were non-compliant with the requirement to have clearly marked toilets for males and females. Furthermore, 29 (91%) homes were non-compliant with the requirement to provide a container/bin for the proper disposal of soiled incontinence pads, as shown in table 5.4.

Table 5.4: Criteria for Standard 1.4: Toilets are safe and accessible (N=32)

	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.4.1 Residents' toilets clearly marked	29	91	3	9
1.4.2 Clearly marked toilets for males and females	29	91	3	9
1.4.3 Grab bars available and secure	27	84	5	16
1.4.4 Overhead lighting	12	37	20	63
1.4.5 Staff toilets marked	16	50	16	50
1.4.6 Container/bin for proper disposal of soiled incontinence pads	29	91	3	9

5.4.5 Standard 1.5: Kitchen facilities for preparation of meals for the number of residents

5.4.5.1 Criteria 1.5.1–1.5.12

In total, 12 criteria were audited to evaluate compliance with standard 1.5: "Kitchen facilities for preparation of meals for the number of residents". Thirteen (41%) of the homes did not have sufficient utensils. In addition, 10 (31%) homes failed to have the required cooking equipment. As shown in table 5.5, over half of the homes were non-compliant with seven criteria: freezers; cold storage rooms; crockery; protective clothing for cooks; a cupboard for stainless steel items; a cupboard for glassware; and water jugs and tumblers. Thus, all homes (100%) were non-compliant with standard 1.5.

Table 5.5: Criteria for Standard 1.5: Kitchen facilities for preparation of meals for the number of residents (N=32)

	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.5.1 Storage space for food for present number of residents	7	22	25	78
1.5.2 Stoves available for the size of the home	12	37	20	63
1.5.3 Utensils	7	22	25	78
1.5.4 Utensils within reach	13	41	19	59
1.5.5 Freezer	25	78	7	22
1.5.6 Cold storage room	29	91	3	9
1.5.7 Crockery	27	84	5	16
1.5.8 Water jugs and tumblers	23	72	9	28
1.5.9 Cooking equipment	10	31	22	69
1.5.10 Protective clothing for the cooks	20	62	12	38
1.5.11 Cupboard for stainless steel items	19	59	13	41
1.5.12 Cupboard for glassware	19	59	13	41

5.4.6 Standard 1.6: Linen bank provides bedding and night clothes for the number of residents

5.4.6.1 Criteria 1.6.1–1.6.8

As shown in table 5.6, eight criteria were audited to evaluate compliance with standard 1.6: “Linen bank provides bedding and night clothes for the number of residents”. It was identified that all (100%) of the homes did not meet the criteria of this standard. In total, 24 (75%) homes were compliant with this standard in terms of having sufficient linen, blankets, pillows and pillow covers. However, 11 (34%) homes were non-compliant with the requirement to provide dressing gowns.

Table 5.6: Criteria for Standard 1.6: Linen bank provides bedding and night clothes for the number of residents (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.6.1 Linen	8	25	24	75
1.6.2 Blankets	8	25	24	75
1.6.3 Pillows	8	25	24	75
1.6.4 Pillow covers	8	25	24	75
1.6.5 Night clothes	13	41	19	59
1.6.6 Dressing gowns	11	34	21	66
1.6.7 Washrags	19	59	13	41
1.6.8 Towels	21	66	11	34

5.4.7 Standard 1.7: Dining room provides facilities for residents to have their meals

5.4.7.1 Criteria 1.7.1–1.7.5

Five criteria were audited to evaluate compliance with standard 1.7: “Dining room provides facilities for residents to have their meals”. Table 5.7 shows that none of the 32 homes (100%) were compliant with this standard in terms of the accessibility of an emergency alert system for residents in dining rooms. Only 16 (50%) homes were compliant with the requirement to have sufficient chairs and tables in their dining rooms. However, 16 (50%) homes had a limited number of wheelchair-friendly tables. All homes were thus non-compliant with standard 1.7.

Table 5.7: Criteria for Standard 5.7: Dining room provides facilities for residents to have their meals (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.7.1 Dining tables	16	50	16	50
1.7.2 Chairs	16	50	16	50
1.7.3 Limited number of wheelchair-friendly tables	16	50	16	50
1.7.4 Emergency alert system accessible	32	100	0	0
1.7.5 Tablecloths and serviettes	24	75	8	25

5.4.8 Standard 1.8: Supportive facilities to sustain and support day-to-day services

5.4.8.1 Sub-standard 1.8.1: Sluice room

5.4.8.1.1 Criteria 1.8.1.1–1.8.1.3

Three criteria were audited to evaluate compliance with sub-standard 1.8.1 concerning a sluice room. The results showed that 15 (47%) homes had no sluice rooms available to keep elimination equipment clean and rinse soiled bed linen. Furthermore, only 16 (50%) of the homes had sluice rooms that were capable of cleaning dirty elimination equipment, such as urinal bottles and bed pans, meaning the 16 homes were non-compliant, as shown in table 5.8. All homes were non-compliant with sub-standard 1.8.1.

Table 5.8: Criteria for Sub-standard 1.8.1: sluice room (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.8.1 Sluice room suitable to:				
1.8.1.1 Clean dirty equipment for elimination such as urinal bottles and bed pans	16	50	16	50
1.8.1.2 Keep equipment for elimination clean	15	47	17	53
1.8.1.3 Rinse soiled bed linen	15	47	17	53

5.4.8.2 Sub-standard 1.8.2: Dressing room

5.4.8.2.1 Criteria 1.8.2.1–1.8.2.10

As shown in table 5.9, 10 criteria were audited to evaluate compliance with sub-standard 1.8.2: “Dressing room”. Results show that all homes (100%) were non-compliant with sub-standard 1.8.2. In total, 16 (50%) homes were non-compliant with this standard in terms of having a dressing room with locked cupboards for poisons and non-poisonous substances. In addition, 10 (31%) homes were non-compliant with the requirement to have a locked cupboard for medication and 23 (72%) did not have a locked medication trolley. Furthermore, 11 (34%) homes were non-compliant with this sub-standard in terms of hand washing equipment. Only 22 (69%) homes were compliant with a dressing room that provides antiseptic solutions and dustbins.

Table 5.9: Criteria for Sub-standard 1.8.2: dressing room (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.8.2 Dressing room:				
1.8.2.1 Steriliser	16	5	16	50
1.8.2.2 Locked cupboard for poisons and non-poisonous substances	16	50	16	50
1.8.2.3 Locked cupboard for instruments and utensils	15	47	17	53
1.8.2.4 Locked cupboard for medication stock	10	31	22	69
1.8.2.5 Locked medication trolley	23	72	9	28
1.8.2.6 Antiseptic solutions	10	31	22	69
1.8.2.7 Hand washing equipment	11	34	21	66
1.8.2.8 Drums with sterile equipment	12	38	20	63
1.8.2.9 Dressings trolley	15	47	17	53
1.8.2.10 Dustbin	10	31	22	69

5.4.8.3 Sub-standard 1.8.3: Nurses' station

5.4.8.3.1 Criteria 1.8.3.1–1.8.3.4

Four criteria were audited to evaluate compliance with sub-standard 1.8.3: "Nurses' station". Overall, 19 (59%) homes had nurses' stations that were compliant with this sub-standard in terms of having desks, chairs and locked cupboards for keeping documents. However, 25 (78%) homes had no nurses' station that was compliant with this standard in terms of having a nurse-patient call system, as shown in table 5.10. All homes (100%) were non-compliant with sub-standard 1.8.3.

Table 5.10: Criteria for Sub-standard 1.8.3: nurses' station (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.8.3 Nurses' station with:				
1.8.3.1 Desk	13	41	19	59
1.8.3.2 Chairs	13	41	19	59
1.8.3.3 Locked cupboards for keeping documents	13	41	19	59
1.8.3.4 Nurse-patient call system	25	78	7	21

5.4.8.4 Sub-standard 1.8.4: Other supportive facilities

5.4.8.4.1 Criteria 1.8.4.1–1.8.4.4

Four criteria were audited to assess compliance with sub-standard 1.8.4: "Other supportive facilities" - secretaries' offices, rest rooms for staff, activity room for residents and laundry. Results show that none of the homes (100%) complied with sub-standard 1.8.4. In total, 23 (72%) homes were non-compliant with this sub-standard in terms of the requirement to have rooms for staff to rest. Furthermore, 21 (66%) homes had no laundry facilities and were therefore non-compliant. Only 13 (51%) homes were compliant in terms of having an activity room for residents, as shown in table 5.11.

Table 5.11: Criteria for Sub-standard 1.8.4: other supportive facilities (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.8.4.1 Secretary's office	21	66	11	34
1.8.4.2 Rest rooms for staff	23	72	9	28
1.8.4.3 Activity room for residents	19	59	13	41
1.8.4.4 Laundry	21	66	11	34

5.4.8.5 Standard 1.9: Facility for residents with Alzheimer's disease to ensure their safety and security

5.4.8.5.1 Criteria 1.9.1–1.9.16

Sixteen criteria were audited to evaluate compliance with standard 1.9: "Facility for residents with Alzheimer's disease to ensure their safety and security". As shown in table 5.12, the 32 homes (100%) were all non-compliant with the criteria required to meet this standard.

Table 5.12: Criteria for Standard 1.9: Facility for residents with Alzheimer's disease to ensure their safety and security (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
1.9.1 Spacious rooms available	32	100	0	0
1.9.2 Windows have safety guards attached	32	100	0	0
1.9.3 Windows with covering (no curtains)	32	100	0	0
1.9.4 Beds with minimum linen	32	100	0	0
1.9.5 Built in cupboards with locks	32	100	0	0
1.9.6 No movable furniture	32	100	0	0
1.9.7 Wash basins and baths have taps without a turn-on knob	32	100	0	0
1.9.8 Well ventilated rooms with controlled temperature	32	100	0	0
1.9.9 Rooms with locked doors	32	100	0	0
1.9.10 Access to outdoor secure areas	32	100	0	0
1.9.11 Handrails in the hallways and grab-bars in the bathrooms.	32	100	0	0
1.9.12 Non-slip floors	32	100	0	0
1.9.13 Minimised sharp colour contrasts in flooring, and borders and strong, busy patterns avoided	32	100	0	0
1.9.14 Motion detectors in rooms of residents prone to falls.	32	100	0	0
1.9.15 Exits that lead to unprotected areas monitored	32	100	0	0
1.9.16 Exit doors not intended for resident use situated parallel to the hallway, so they are less visible	32	100	0	0

5.5 FIELD 2: CLINICAL MANAGEMENT

5.5.1 Standard 2.1: Equipment for direct care available

5.5.1.1 Criteria 2.1.1–2.1.11

Table 5.13 shows the 11 criteria that were audited to evaluate compliance with standard 2.1: "Equipment for direct care available". None of the 32 homes (100%) were compliant with this standard. In terms of having oxygen cylinders all homes (100%) were non-compliant. Furthermore, 24 (75%) homes were non-compliant, as they did not have a portable suction machine. In addition, 20 (63%) homes were non-compliant with the requirement to have blood pressure apparatus. The results also showed that 17 (53%) homes did not have wheelchairs and

18 (56%) did not have walking aids, meaning they were non-compliant with this standard. Finally, only six (19%) homes were compliant with this standard with reference to having raised toilet seats, as shown in table 5.13.

Table 5.13: Criteria for Standard 2.1: Equipment for direct care available (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
2.1.1 Surgical instruments	21	66	11	34
2.1.2 Hoist for heavy residents	32	100	0	0
2.1.3 Wheelchairs	17	53	15	47
2.1.4 Walking aids	18	56	14	44
2.1.5 Raised toilet seat	26	81	6	19
2.1.6 Commode	29	91	3	9
2.1.7 Blood pressure apparatus	20	63	12	36
2.1.8 Thermometers	17	53	15	47
2.1.9 Weighing scale	18	56	14	44
2.1.10 Portable suction machine	24	75	8	25
2.1.11 Oxygen cylinders with gauge filled with oxygen	32	100	0	0

5.5.2 Standard 2.2: Emergency tray available for emergency care

5.5.2.1 Criteria 2.2.1–2.2.10

Ten criteria were audited to assess compliance with standard 2.2: “Emergency tray available for emergency care” and all homes (100%) were found non-compliant. None of the 32 homes (100%) had a laryngoscope, spatula and mouth gag. Most of the homes were non-compliant with having the required items to respond to an emergency. Only nine (25%) homes were compliant in terms of having an ambubag, as shown in table 5.14.

Table 5.14: Criteria for Standard 2.2: Emergency tray available for emergency care (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
2.2.1 Laryngoscope	32	100	0	0
2.2.2. Spatula	32	100	0	0
2.2.3 Mouth gag	32	100	0	0
2.2.4 Tongue forceps	24	75	8	25
2.2.5 Ambubag	24	75	8	25
2.2.6 Adrenaline	23	72	9	28
2.2.7 Atropine	23	72	9	28
2.2.8 Phenergan	23	72	9	28
2.2.9 Needles of various sizes	14	44	18	56
2.2.10 Syringes of various sizes	14	44	18	56

5.5.3 Standard 2.3: Equipment for indirect care available

5.5.3.1 Criteria 2.3.1–2.3.2

Two criteria were audited to evaluate compliance with standard 2.3: “Equipment for indirect care available”, as shown in table 5.15; all homes (100%) were non-compliant with this standard. Cleaning equipment was available in a most of the homes (n=19, 59%). However, only 17 (53%) homes were compliant in terms of the availability of flashlights.

Table 5.15: Criteria for Standard 2.3: Availability of equipment for indirect care (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
2.3.1 Flashlights available	15	47	17	53
2.3.2 Cleaning equipment	13	41	19	59

5.5.4 Standard 2.4: Disposable items for direct care available

5.5.4.1 Criteria 2.4.1–2.4.13

As shown in table 5.16, 13 criteria were audited to evaluate compliance with standard 2.4: "Disposable items for direct care available”. None of the 32 homes (100%) were compliant with the requirements to provide oxygen masks and nasal catheters to administer oxygen.

Furthermore, no homes were compliant with all criteria required to meet this standard. Only three (9%) homes had catheters and urinal bags, and only eight (25%) had suction catheters.

Table 5.16: Criteria for Standard 2.4: Availability of disposable items for direct care (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
2.4.1 Dressings	9	28	23	72
2.4.2 Bandages	9	28	23	72
2.4.3 Medication	15	47	17	53
2.4.4 Catheters	29	91	3	9
2.4.5 Urine bags	29	91	3	9
2.4.6 Oxygen masks various percentages (24, 28, 35 and 40)	32	100	0	0
2.4.7 Nasal catheter to administer oxygen	32	100	0	0
2.4.8 Suction catheters	24	75	8	25
2.4.9 Silicone tubing	32	100	0	0
2.4.10 Napkins	26	81	6	19
2.4.11 Soap	10	31	22	69
2.4.12 Antiseptic solutions	10	31	22	69
2.4.13 Skin care cream	18	56	14	44

5.6 FIELD 3: MEALS AND WATER

5.6.1 Standard 3.1: Residents provided with meals according to individual needs

5.6.1.1 Criteria 3.1.1–3.1.4

Four criteria were audited to evaluate compliance with standard 3.1: “Residents provided with meals according to individual needs”. Many of the homes were compliant with the four criteria in this standard, with compliance with each criterion ranging from 19 to 20 homes. The results also showed that rates of non-compliance with each criterion ranged from 12 to 13 homes, as shown in table 5.17, therefore the homes were not fully compliant with standard 3.1.

Table 5.17: Criteria for standard 3.1: Residents provided with meals according to individual needs (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
3.1.1 Meals menu rotated between seasons	12	38	20	63
3.1.2 Special meals provided	13	41	19	59
3.1.3 Schedule for mealtimes	12	38	20	63
3.1.4 Schedule for tea times	12	38	20	63

5.6.2 Standard 3.2: Water is available

5.6.2.1 Criteria 3.2.1–3.2.2

Two criteria were audited to evaluate compliance with standard 3.2: "Water is available". A total of 17 (53%) homes were non-compliant with the requirement to provide ionised water. Only nine (28%) homes were compliant with the requirement to supply hot and cold water for the number of residents, as shown in table 5.18. Thus, the homes are non-compliant with standard 3.2.

Table 5.18: Criteria for Standard 3.2: Availability of water (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
3.2.1 Supply of hot and cold water for the number of residents	23	72	9	28
3.2.2 Ionised water	17	53	15	47

5.7 FIELD 4: RESIDENTS' RIGHTS

5.7.1 Standard 4.1: Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information are respected

5.7.1.1 Criteria 4.1.1–4.1.7

Seven criteria were audited to assess compliance with standard 4.1: "Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information are respected". Only three (9%) homes were compliant with all seven criteria in this standard. The remaining 29 (91%) homes were non-compliant, as shown in table 5.19. Thus, results show that not all homes are in compliance with standard 4.1.

Table 5.19: Criteria for Standard 4.1: Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information are respected (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
4.1.1 Resident surveys	29	91	3	9
4.1.2 Archive facility for residents' records	29	91	3	9
4.1.3 Secure filing system of residents' information	29	91	3	9
4.1.4 Safe recordkeeping facility	29	91	3	9
4.1.5 Complaints/compliments register	29	91	3	9
4.1.6 Consent forms available	29	91	3	9
4.1.7 Locked facility for files of the residents	29	91	3	9

5.8 FIELD 5: GUIDING DOCUMENTS FOR RESIDENTS' CARE

5.8.1 Standard 5.1: Standard operating procedures available to provide safe quality care to residents

5.8.1.1 Criteria 5.1.1–5.1.14

Table 5.20 shows that 14 criteria were audited to evaluate compliance with standard 5.1: "Standard operating procedures available to provide safe quality care to residents". The results showed that only three (9%) homes were compliant with this standard in terms of admission and discharge procedures, and 29 (91%) homes were non-compliant with any of the criteria. Therefore, the homes failed to comply with the criteria required to meet standard 5.1.

Table 5.20: Criteria for Standard 5.1: Standard operating procedures available to provide safe quality care to residents (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
5.1.1 Standards operating procedures (SOP) manual	32	100	0	0
5.1.2 Admission and discharge procedures	29	91	3	9
5.1.3 Lifting patients	32	100	0	0
5.1.4 Bathing/washing residents	32	100	0	0
5.1.5 Keeping residents' files	32	100	0	0
5.1.6 Wound care	32	100	0	0
5.1.7 Urinary catheter care	32	100	0	0
5.1.8 Feeding procedure	32	100	0	0
5.1.9 Safe keeping of valuables	32	100	0	0
5.1.10 Managing scabies	32	100	0	0
5.1.11 Prevention of falls	32	100	0	0
5.1.12 Hand hygiene	32	100	0	0
5.1.13 Personal protective clothes	32	100	0	0
5.1.14 Waste disposal	32	100	0	0

5.8.2 Standard 5.2: Policies available to provide guidance to activities in the home

5.8.2.1 Criteria 5.2.1–5.2.11

There were 11 criteria that were audited to evaluate compliance with standard 5.2: "Policies available to provide guidance to activities in the home". Only five (16%) homes were compliant in terms of having an admission policy, and only three (9%) homes were compliant with the other criteria, as shown in table 5.21. Most homes (n=29, 91%) had no policies that provided guidance for activities in the home. Thus, the homes did not meet compliance with the required criteria to meet standard 5.2.

Table 5.21: Criteria for Standard 5.2: Policies available to provide guidance to activities in the home (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
5.2.1 Admission	27	84	5	16
5.2.2. Living needs	29	91	3	9
5.2.3 Safety and security of residents	29	91	3	9
5.2.4 Resident satisfaction	29	91	3	9
5.2.5 Prohibiting abuse of patients	29	91	3	9
5.2.6 Information to residents and families	29	91	3	9
5.2.7 Quality assurance	29	91	3	9
5.2.8 Infection control and prevention	29	91	3	9
5.2.9 Record keeping	29	91	3	9
5.2.10 Environment hygiene	29	91	3	9
5.2.11 Safe keeping of valuables	29	91	3	9

5.8.3 Standard 5.3: Specific indicators set to monitor and evaluate care provided to residents

5.8.3.1 Criteria 5.3.1–5.3.8

Eight criteria were audited to evaluate compliance with standard 5.3: “Specific indicators set to monitor and evaluate care provided to residents”. The results showed that most homes (n=24, 75%) were non-compliant with five of the criteria related to specific indicators used to monitor and evaluate care provided to residents. These criteria included: bowel incontinence, home-acquired pressure ulcers, scabies and falls. Only five (16%) homes were compliant in terms of having specific indicators to monitor and evaluate care related to infection, as shown in table 5.22. Thus, the homes were non-compliant with standard 5.3.

Table 5.22: Criteria for Standard 5.3: Specific indicators set to monitor and evaluate care provided to residents (N=32)

	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
5.3.1 Bowel incontinence	24	75	8	25
5.3.2 Home-acquired pressure ulcers	24	75	8	25
5.3.3 Scabies	24	75	8	25
5.3.4 Depression	24	75	8	25
5.3.5 Infection	27	84	5	16
5.3.6 Falls	24	75	8	25
5.3.7 Adverse events	27	84	5	16
5.3.8 Residents' satisfaction surveys	27	84	5	16

5.8.4 Standard 5.4: Guidelines available to provide guidance for specific activities in the home

5.8.4.1 Criteria 5.4.1–5.4.7

Seven criteria were audited to evaluate compliance with standard 5.4: "Guidelines available to provide guidance for specific activities in the home". Results have shown that the homes are non-compliant with standard 5.4. Most of the homes had no guidelines that provided guidance for staff regarding specific activities. None of the 32 homes (100%) had guidelines to assist with the management of challenging cases of residents (i.e., those with dementia and Alzheimer's disease). Only three (9%) homes were compliant in terms of guidelines regarding managing geriatric patients, as shown in table 5.23.

Table 5.23: Criteria for Standard 5.4: Guidelines available to provide guidance for specific activities in the home (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
5.4.1 Guidelines manual	29	91	3	9
5.4.2 Purchasing of medications, equipment and other requirements	27	84	5	16
5.4.3 Managing geriatric patients	29	91	3	9
5.4.4 Managing residents with dementia or Alzheimer's disease	32	100	0	0
5.4.5 Transfer residents to a hospital	29	91	3	9
5.4.6 Manage the death of a resident	27	84	5	16
5.4.7 Ordering food	24	75	8	25

5.9 FIELD 6: SAFETY AND SECURITY

5.9.1 Standard 6.1: Requirements available for ensuring residents' protection and home environment that are free from danger and threats

5.9.1.1 Criteria 6.1.1–6.1.13

As shown in table 5.24, most of the homes did not meet the criteria for compliance with standard 6.1: "Requirements available for ensuring residents' protection and home environment that is free from danger and threats". All homes are non-compliant with standard 6.1. None of the 32 homes (100%) were compliant with six of the 13 criteria: doors leading to the outside linked to an alarm system; alarm system for break-ins or robberies; cameras in the passages of the building; surveillance system on the grounds; emergency exits clearly marked; and safe storage for electrical equipment. Only three (9%) homes were compliant in terms of having a fire alarm system and smoke detectors. Furthermore, only four (13%) homes had security guards at entry gates and nine (28%) homes had fire extinguishers. However, the criterion regarding a clearly marked lift was not applicable for 14 (44%) homes as there were no apartments and therefore no need for lifts.

Table 5.24: Criteria for Standard 6.1: Requirements available for ensuring residents' protection and home environment which are free from danger and threats (N=32)

Criteria	Non-compliant		Compliant		N/A	
	Frequency (N=32)	%	Frequency (N=32)	%	Frequency (N=32)	%
6.1.1 Fire extinguishers	23	72	9	28	0	0
6.1.2 Fire alarm system	29	91	3	9	0	0
6.1.3 Smoke detectors	29	91	3	9	0	0
6.1.4. Fire hose	29	91	3	9	0	0
6.1.5 Doors leading to the outside are linked to an alarm system	32	100	0	0	0	
6.1.6 If there is a lift clearly marked not to be used when there is a fire	18	100	0	0	14	44
6.1.7 Alarm system for break-ins or robberies	32	100	0	0	0	0
6.1.8 Cameras in the passages of the building	32	100	0	0	0	0
6.1.9 Surveillance system on the grounds	32	100	0	0	0	0
6.1.10 Security guards at entry gates	28	87	4	13	0	0
6.1.11 Emergency exists clearly marked	32	100	0	0	0	0
6.1.12 Signage clearly marked	29	91	3	9	0	0
6.1.13 Storage for hazardous chemicals	32	100	0	0	0	0

5.9.2 Standard 6.2: Communication support systems available to allow communication with staff

5.9.2.1 Criteria 6.2.1–6.2.3

Three criteria were audited to evaluate compliance with standard 6.2: "Communication support systems available to allow communication with staff". None of the 32 homes (100%) were compliant with all three criteria to meet this standard, namely: a call system accessible to patients in all rooms; availability of emergency response system; and telephone system, resident call system and electronic communication (e.g., email), as shown in table 5.25.

Table 5.25: Criteria for Standard 6.2: Communication support systems available to allow communication with staff (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
6.2.1 Telephone system, resident call system, electronic communication such as email	32	100	0	0
6.2.2 Call system accessible to patients in all rooms namely bathrooms, toilets, dining room and at the bedside.	32	100	0	0
6.2.3 Emergency response system available	32	100	0	0

5.9.3 Standard 6.3: Recreational activities available to allow socialisation

5.9.3.1 Criteria 6.3.1–6.3.3

Three criteria were audited to assess compliance with standard 6.3: “Recreational activities available to allow socialisation”. Most of the homes were compliant with the three criteria for this standard, with compliance rates for each criterion ranging from 16 to 23 homes. The results also showed that rates of non-compliance with each criterion ranged from 9 to 16 homes, as shown in table 5.26. Therefore, the homes were not fully compliant with standard 6.3.

Table 5.26: Criteria for Standard 6.3: Recreational activities available to allow socialisation (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
6.3.1 Gardens	11	34	21	66
6.3.2 Library	16	50	16	50
6.3.3 A variety of recreational activities	9	28	23	72

5.10 FIELD 7: HUMAN RESOURCES

5.10.1 Standard 7.1: Staff available for the various activities in the home

5.10.1.1 Criteria 7.1.1–7.1.13

Table 5.27 shows that 13 criteria were audited to evaluate compliance with standard 5.10: (Staff available for the various activities in the home”. It was found that all 32 homes (100%) had either a qualified social worker in charge of the home (public sector) or a general manager in charge (private sector). However, none of the homes (100%) had a geriatric-trained professional nurse

on staff. The results also showed that 29 (91%) homes were non-compliant with the requirement to have professional nurses. However, many of the homes (n=19, 59%) were compliant with having non-professional nurses, and 22 (69%) homes were complaint with having caregivers on staff. Results thus show that the homes were non-compliant with criteria to meet standard 7.1.

Table 5.27: Criteria for Standard 7.1: Staff available for the various activities in the home (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
7.1.1 General manager/social workers	0	0	32	100
7.1.2 Geriatric trained professional nurse(s)	32	100	0	0
7.1.3 Professional nurses	29	91	3	9
7.1.4 Non-professional nurses	13	41	19	59
7.1.5 Caregivers	10	31	22	69
7.1.6 Cleaners	16	50	16	50
7.1.7 Cooks	7	22	25	78
7.1.8 General maintenance workers	22	69	10	31
7.1.9 Security at the gates	13	41	19	59
7.1.10 Administrative staff	23	72	9	28
7.1.11 Accountant	23	72	9	28
7.1.12 Secretary	24	75	8	25
7.1.13 Housekeepers	11	34	21	66

5.10.2 Standard 7.2: Human resource policies available to ensure efficient and effective management of human resources

5.10.2.1 Criteria 7.2.1–7.2.7

As shown in table 5.28, seven criteria were audited to assess compliance with standard 7.2: “Human resource policies available to ensure efficient and effective management of human resources”. None of the 32 homes (100%) were compliant with four criteria: training and development; grievance; recognition of long service; and wellness and disciplinary policies. Only nine (28%) homes had policies related to leave and six (19%) had recruitment and selection policies. The homes are therefore non-compliant with standard 7.2.

Table 5.28: Criteria for Standard 7.2: Human resource policies available to ensure efficient and effective management of human resources (N=32)

Criteria	Non-compliant		Compliant	
	Frequency (N=32)	%	Frequency (N=32)	%
7.2.1 Training and development	32	100	0	0
7.2.2 Leave	23	72	9	28
7.2.3 Grievance	32	100	0	0
7.2.4 Recognition of long service	32	100	0	0
7.2.5 Recruitment and selection	26	81	6	19
7.2.6 Wellness	32	100	0	0
7.2.7 Disciplinary	32	100	0	0

5.11 SUMMARY

The researcher audited all 32 homes for the elderly in Tanzania by using an audit instrument. The instrument covered seven fields, 26 healthcare standards, four sub- standards and 262 criteria. No home met the criteria as required for all the standards.

5.12 CONCLUSION

An audit of the standards of care in all homes for the elderly in Tanzania (N=32) was completed. The audit was one data collection method to answer the question, 'What are the healthcare standards currently applied to provide safe, quality care for residents in homes for the elderly in Tanzania?' The results show that none of the homes in Tanzania are compliant with each established healthcare structure standard and associated criteria.

CHAPTER 6: DATA ANALYSIS AND RESULTS OF THE LIKERT QUESTIONNAIRE

6.1 INTRODUCTION

This chapter contains a presentation of the data analysis and results obtained from the Likert questionnaire that was completed by staff who worked in the 32 homes for the elderly in Tanzania. These homes for the elderly are distributed across the six geographical zones in Tanzania and included both in the public sector (n=16, 50%) and private sector (n=16, 50%) homes. Participants (N=65, 100%) completed a Likert questionnaire that captured their perceptions of whether specific healthcare standards were applied in their homes to ensure safe, quality care for residents in Tanzania. In addition, the Likert questionnaire had four open questions which gave the participant an opportunity to explain in more depth about their responses. The questionnaire comprised of two main sections: participants' demographic data and their perceptions of the established standards of care. The demographic data section included six items covering institution type, age, gender, qualifications, and work experience in homes for the elderly (previous experience and in the current home at time of data collection). The standards of care section had 13 subsections covering:

- infrastructure
- clinical management
- clinical monitoring
- human resources
- foods and meals
- water
- procedures
- guidelines
- policies
- recreational activities
- safety and security
- communication and
- residents' rights.

In total, the standards of care section included 19 questions that required participants to indicate whether they perceived that each criterion was met in the home in which they worked.

6.2 DESCRIPTIVE DATA ANALYSIS

The IBM Statistical Package for the Social Sciences (SPSS) version 26 was used to analyse the demographic and standard of care data obtained from the survey. The analysis of demographic data included participants' institution type, age, gender, qualifications and work experience (previous and in the current home). The analysis of standards of care was based on participants' responses concerning whether their home had specific healthcare standards and associated criteria. The analysed data are presented in frequency distribution tables. In total, the researcher analysed data obtained from 65 participants who worked in the 32 homes for the elderly in Tanzania. The data were checked, rechecked and crosschecked with the assistance of the researcher's supervisor and co-supervisor, as well as a biostatistician. The purpose of crosschecking the data was to ensure the validity of the data, as this may affect the results of the study.

6.3 SECTION A: DEMOGRAPHIC DATA (QUESTIONS 1–6)

6.3.1 Question 1: Institution type

Table 6.1 shows that 35 (54%) participants worked in public sector homes and 30 (46%) worked in private sector homes.

Table 6.1: Participants' institution type (N=65)

		Frequency	%
Home type	Public	35	54
	Private	30	46
	Total	**65**	**100**

6.3.2 Questions 2: Age of participants

As shown in table 6.2, the largest group of participants (n=24, 37%) were aged 35–44 years. The smallest age groups were those aged 55–64 years (n=4, 6%) and 65–74 years (one participant).

Table 6.2: Participants' age (N=65)

		Frequency	%
Age group, years	25–34	13	20
	35–44	24	37
	45–54	23	35
	55–64	4	6
	65–74	1	2
	Total	**65**	**100**

6.3.3 Question 3: Gender

Over half of the participants (n=38, 58%) were female (male: n=27, 42%), as shown in table 6.3.

Table 6.3: Gender (N=65)

		Frequency	%
Gender	Female	38	58
	Male	27	42
	Total	**65**	**100**

6.3.4 Question 4: Qualifications of participants

As shown in table 6.4, 33 participants (51%) held management or in-charge positions in the homes in which they worked. These staff were general managers in private homes, and social workers in public homes. Only five (8%) participants were geriatric trained professional nurses and six (9%) were professional registered nurses.

Table 6.4: Participants' qualifications (N=65)

		Frequency	%
Qualification	General manager/social worker	33	51
	Geriatric trained professional nurses	5	8
	Professional registered nurses	6	9
	Non-professional nurses	15	23
	Caregivers	6	9
	Total	**65**	**100**

6.3.5 Question 5: Participants' work experience in homes for the elderly

The most common total duration of experience working in homes for the elderly was ≥10 years (n=37, 57%), as shown in table 6.5.

Table 6.5: Overall work experience in homes for the elderly (N=65)

		Frequency	%
Period, years	<1	6	9
	1 to <4	8	12
	4 to <7	8	12
	7 to <10	6	9
	≥10	37	57
	Total	**65**	**99**

Note: The total shows 99% as the decimals were rounded to the nearest whole number.

6.3.6 Question 6: Work experience at the current home for the elderly

The most common duration of work experience of participants at the current home was ≥10 years (n=30, 46%), as shown in table 6.6.

Table 6.6: Work experience at the current home for the elderly (N=65)

		Frequency	%
Duration, years	<1	6	9
	1 to <4	9	14
	4 to <7	14	22
	7 to <10	6	9
	≥10	30	46
	Total	**65**	**100**

6.4 SECTION B: STANDARDS OF CARE (QUESTIONS 7–25)

6.4.1 Infrastructure

6.4.1.1 Question 7(i): Infrastructure meets the needs for the number of residents in the home

Table 6.7 shows the analysis of participants' perceptions as to whether there was sufficient infrastructure to meet the needs of the number of residents in the home. Not all homes were compliant with all criteria for this standard. Nineteen (29%) participants indicated that their homes were non-compliant with having the required number of toilets, and 32 (49%) participants indicated that their homes were non-compliant in terms of the number of bathrooms or showers. Furthermore, eight (12%) participants indicated that their home had insufficient bedrooms to meet the needs of the number of residents. The results also showed that nine (14%) participants indicated that their home had no equipment for therapy.

Table 6.7: Infrastructure in homes for the elderly (N=65)

	Agree		Disagree		Total	
Infrastructure present	**Frequency**	**%**	**Frequency**	**%**	**N**	**%**
Equipment for therapy	56	86	9	14	65	100
Toilets	46	71	19	29	65	100
Bathrooms/showers	33	51	32	49	65	100
Dining room	35	54	30	46	65	100
Recreation room	37	57	28	43	65	100
Kitchen	42	65	23	35	65	100
Bedrooms	57	88	8	12	65	100
Store for unused items	41	63	24	37	65	100
Free space	54	83	11	17	65	100
Linen bank	35	54	30	46	65	100

6.4.1.2 Question 7(ii): Reasons for insufficient infrastructure to meet the needs of the number of residents in the home

Six themes emerged from the responses to the open-ended question on infrastructure to meet the needs of the number of residents (see Annexure 3); question 13(ii).

6.4.1.2.1 Referral of residents to health centres

Theme 1: Referral of residents to health centres (92%): The participants indicated that residents with medical conditions were usually referred to health centres external to the homes. No provision was made to manage sick residents in the homes. One manager indicated, “When I was employed, I found staff referring sick elderly to the dispensary, so I have continued doing the same”.

6.4.1.2.2 Lack of bathrooms and dining rooms

Theme 2: Lack of bathrooms and dining rooms (49%). According to the participants’ responses, the homes did not all have the required infrastructure of sufficient bathrooms and dining rooms for the number of residents in place, because of the lack of sources of funding. One participant stated, “How can we build big and good bathrooms and dining rooms without money?”

6.4.1.2.3 Unprepared homes

Theme 3: Unprepared homes (87%). The participants indicated that in general, the homes were not well prepared to care for the elderly and lacked appropriate infrastructure. One manager cited, “For those years these homes were prepared to care for people suffering from leprosy, most of them were not old”.

6.4.1.2.4 Informal homes

Theme 4: Informal homes (86%). Eighty six percent of the participants indicated that homes were not formal to provide care for the elderly, as a result, they lacked the necessary formal infrastructure to care for the elderly. One participant cited, “I think the government thought that the residents would be in these homes for some times then go back to their ordinary home, but now no(t) any elderly agrees to go back”.

6.4.1.2.5 Lack of sponsors

Theme 5: Lack of sponsors (79%). The participants acknowledged that there was no financial support from the government or any other sponsor to assist with the infrastructure in the homes. Therefore, the homes were unable to put essential infrastructure in place. One manager indicated, “We don’t get adequate money from the government, and nowadays even white people do not provide aids anymore so we are not even able to repair the building we have”.

6.4.1.2.6 Government prohibiting health services

Theme 6: Government prohibiting health services (43%). Forty three percent of the participants reported that the government prohibited the homes from managing sick patients because of the

lack of qualified healthcare personnel. One manager stated, “We had everything, building and equipment to manage sick residents, but our government prohibited such services that we had no qualified staff”.

6.4.1.3 Question 8: Supportive infrastructure to meet the requirements of the home

Table 6.8 shows that many of the participants (n=41, 63%) indicated that their homes did not have sufficient dressing rooms to meet residents’ requirements. In addition, 43 (66%) participants indicated that their homes did not have sluice rooms, and 43 (66%) participants indicated that their homes had no laundry.

Table 6.8: Supportive infrastructure in the homes for the elderly (N=65)

Infrastructure	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Sluice room	43	66	22	34	65	100
Dressing room	41	63	24	37	65	100
Nurses’ station	39	60	26	40	65	100
Secretary’s office	50	77	15	23	65	100
Rest rooms for staff	55	85	10	15	65	100
Activity room for residents	50	77	15	23	65	100
Laundry	43	66	22	34	65	100

6.4.2 Clinical management

6.4.2.1 Question 9: Availability of clinical equipment to meet the needs of the number of residents in the home

Table 6.9 shows the analysis of participants’ perceptions regarding whether there was sufficient clinical equipment to meet the needs of the number of residents in the home. Not all homes complied with all criteria to meet this standard. Most participants (n=58, 89%) indicated that their homes had no portable suction machines and oxygen cylinders, as shown in table 6.9. In addition, 32 (49%) participants indicated their homes had no thermometers, although only 16 (25%) said that their homes had no blood pressure apparatus. Furthermore, many homes had no wheelchairs (n=26, 40%), walking aids (n=37, 57%), hoists for heavy residents (n=46, 71%), commodes (n=40, 62%) and flashlights (n=43, 66%). The results also showed that 32 (49%) participants indicated that their homes had no raised toilet seats, although only 10 (15%) homes had no cleaning equipment. The lack of surgical instruments in most homes may be related to the referral of residents to external healthcare.

Table 6.9: Equipment in the homes for the elderly (n=14)

Equipment	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Surgical instruments	58	89	7	11	65	100
Hoist for heavy patients	46	71	19	29	65	100
Wheelchairs	26	40	39	60	65	100
Walking aids	37	57	28	43	65	100
Commode	40	62	25	38	65	100
Raised toilet seat	32	49	33	51	65	100
Blood pressure apparatuses	16	25	49	75	65	100
Thermometers	32	49	33	51	65	100
Weighing scale	37	57	28	43	65	100
Portable suction machine	58	89	7	11	65	100
Oxygen cylinders with gauge filled with oxygen	58	89	7	11	65	100
Flashlights available	43	66	22	34	65	100
Cleaning equipment	10	15	55	85	65	100

6.4.2.2 Question 10: Availability of an emergency tray to meet the needs of the number of residents in the home during an emergency

As shown in table 6.10, 59 (91%) participants indicated that their homes did not have sufficient mouth gags, tongue forceps, ambubags and atropine to meet the needs of the number of residents in the home. Furthermore, 57 (88%) participants indicated that their homes did not have adrenaline, and 53 (82%) participants indicated that their homes did not have a laryngoscope. The results also showed that many of the participants (range 54%–91% for each item) indicated that their homes did not have all items required to meet the needs of the number of residents in an emergency.

Table 6.10: Emergency tray (N=65)

Items	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Laryngoscope	53	82	12	19	65	100
Spatula	52	80	13	20	65	100
Mouth gags	59	91	6	9	65	100
Tongue forceps	59	91	6	9	65	100
Ambubags	59	91	6	9	65	100
Adrenaline	57	88	8	12	65	100
Atropine	59	91	6	9	65	100
Phenergan	43	66	22	34.	65	100
Needles of various sizes	35	54	30	46	65	100
Syringes of various sizes	35	54	30	46	65	100

6.4.2.3 Question 11: Clinical requirements

6.4.2.3.1 Question 11(i): Clinical requirements to provide healthcare to meet the needs of the number of residents in the home

Most participants indicated that their homes did not have sufficient oxygen masks (n=54, 83%) or nasal catheters (n=61, 94%) to meet the needs of the number of residents, as shown in table 6.11. In addition, 45 (69%) participants indicated that their homes did not have suction catheters. The results also showed that most participants indicated that their homes did not always have the clinical requirements necessary to meet the needs of the number of residents.

Table 6.11: Clinical requirements in the homes for the elderly (N=65)

	Always		Most times		Sometimes		Never		Total	
Item	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**N**	**%**
Dressings	32	49	19	29	12	19	2	3	65	100
Bandages	32	49	21	32	12	19	0	0	65	100
Medication	32	49	23	35	10	15	0	0	65	100
Catheters	9	14	0	0	13	20	43	66	65	100
Urine bags	9	14	0	0	13	20	43	66	65	100
Oxygen masks	0	0	0	0	11	17	54	83	65	100
Nasal catheter to administer oxygen	0	0	0	0	4	6	61	94	65	100
Suction catheters	0	0	10	15	10	15	45	69	65	100
Silicone tubing	0	0	10	15	10	15	45	69	65	100
Napkins	18	28	1	2	11	17	35	54	65	100
Soap	47	72	8	12	5	8	5	8	65	100
Antiseptic	44	68	10	15	7	11	4	6	65	100
Skin care cream	41	63	2	3	17	26	5	8	65	100

6.4.2.3.1 Question 11(ii): Reasons for insufficient clinical requirements to meet the needs of the number of residents in the home

Three themes emerged from the responses to the open-ended question about clinical requirements to meet the needs of the number of residents (see Annexure 3); question 11(ii).

a. Budget deficit

Theme 1: Budget deficit (83%). The participants described that there were financial constraints that prevented the homes buying the required items. Availability of the items depended on the availability of money. One participant cited, “We had most of the items in those days when we were receiving money from the government and aids from white people”.

b. No need for such requirements

Theme 2: No need for such requirements (74%). It was stated by many participants that sick residents were referred to health centres external to the homes; therefore, it was not considered necessary to have clinical requirements. One participant indicated, “Sick elderly are referred to health centres around so (no) need of clinical equipment”.

c. Lack of required infrastructure to keep clinical requirements

Theme 3: Lack of required infrastructure to keep clinical requirements (69%). Lack of essential infrastructure to clean, sterilise and keep clinical requirements was also a commonly cited reason for not having such items. One participant noted, “Even if we could have clinical equipment, they could be useless as no infrastructure to make them safe for use, nowhere to clean the equipment.” Other participants cited, “We don’t have steriliser machines to sterilize medical equipment.” Other participants indicated, “We don’t have drums to keep the clinical equipment”.

6.4.3 Clinical monitoring

6.4.3.1 Question 12: Register to monitor health indicators

Most participants (n=63, 97%) indicated that their homes did not have a register to monitor urinary tract infections. In addition, 57 (88%) participants said that their homes did not have a register to monitor important health indicators such as bowel incontinence, home-acquired pressure ulcers and scabies. Furthermore, 50 (77%) participants indicated that their homes did not have a register to monitor falls. The results also showed that many participants (range n=42, 65% to n=63, 97%) indicated that their homes did not have a register for recording and monitoring health indicators, as listed in table 6.12.

Table 6.12: Health indicators (N=65)

Health indicators	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Urinary tract infection (UTI)	63	97	2	3	65	100
Bowel incontinence	57	88	8	12	65	100
Home-acquired pressure ulcers	57	88	8	12	65	100
Scabies	57	88	8	12	65	100
Depression	50	77	15	23	65	100
Infection	47	72	18	28	65	100
Falls	50	77	15	23	65	100
Adverse events	51	79	14	22	65	100
Resident satisfaction surveys	42	65	23	35	65	100

6.4.4 Staff/human resources

6.4.4.1 Question 13(i): Required staff to deliver care according to the number of residents

As shown in table 6.13, only 22 (34%) participants indicated that their homes had the required staff to deliver care according to the number of residents.

Table 6.13: Availability of required staff (n=65)

	Frequency	%
Always	22	34
Most times	11	17
Sometimes	14	22
Never	18	28
Total	65	101

Note: The total for table 6.13 shows 101% because the decimals were rounded to the nearest whole number.

6.4.4.2 Question 13(i): Reasons for not having the required staff to deliver care according to the number of residents

Two themes emerged from the responses to the open-ended question on staffing to enable the provision of care (see Annexure 3); question 13(ii).

6.4.4.2.1 Difficult working environment

Theme 1: Difficult working environment (94%). The participants stated that there was an unfriendly working environment for staff in the homes for the elderly and indicated that this contributed to not having the required staff. One manager indicated, “Almost all staff who were employed to work in this home, they left as they found no basic needs for them, for example no electricity, no supply of safe and adequate water, no big shops, no reliable transport to town; our government should find solutions”.

6.4.4.2.2 Budget deficits

Theme 2: Budget deficits (83%). The participants mentioned inadequate budget as a reason for the inability to employ the required staff in terms of the number and qualifications. The manager in one of the private homes indicated, “Lack of adequate budget has caused a lot of problems in this home, including inability to employ adequate number of staff as we will not be able to pay their salary”

6.4.4.3 Question 14: Human resource-related policies

Table 6.14 shows the analysis of responses to the question regarding whether human resource policies were available for a variety of essential activities in the home. Not all homes were compliant with all criteria for this standard. However, most of the participants (n=59, 91%) indicated that their homes had a disciplinary policy, but 49 (75%) participants indicated that their homes did not have a training and development policy.

Table 6.14: Human resource-related policies (N=65)

Policy	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Training and development	49	75	16	25	65	100
Leave	14	22	51	79	65	100
Grievance	33	51	32	49	65	100
Recognition of long service	39	60	26	40	65	100
Recruitment and selection	33	51	32	49	65	100
Wellness	13	20	52	80	65	100
Disciplinary	6	9	59	91	65	100

6.4.5 Food and meals

6.4.5.1 Question 15: Residents' needs for meals

A total of 10 (15%) participants said that their homes did not have sufficient meals to meet residents' needs. In addition, 18 (28%) participants indicated that their homes did not have special meals available when required. Furthermore, 19 (29%) participants indicated that their homes did not have a schedule for mealtimes and tea-times, as shown in table 6.15.

Table 6.15: Needs for food/meals (N=65)

Meals needs	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Enough meals	10	15	55	85	65	100
Special meals if required	18	28	47	72	65	100
Meals' menu rotated between seasons	8	12	57	88	65	100
Schedule for mealtimes	19	29	46	71	65	100
Schedule for tea-times	19	29	46	71	65	100

6.4.6 Water

6.4.6.1 Question 16: Adequate provision of supply of water to residents

Table 6.16 shows that most participants (n=39, 60%) indicated that their homes did not have an adequate water supply to meet the needs of the residents. Only seven (11%) participants indicated that their homes had ionised water, although five (8%) participants indicated that ionised water was not applicable to residents in their homes.

Table 6.16: Adequate supply of water (N=65)

Indicators	NO		YES		N/A		Total	
	Frequency	%	Frequency	%	Frequency	%	N	%
Supply of hot and cold water for the number of residents	39	60	26	40	0	0	65	100
Ionised water	53	82	7	11	5	8	65	100

6.4.7 Procedures

6.4.7.1 Question 17: Manual for standards operating procedures (SOPs)

Table 6.17 shows the analysis of whether SOPs were available for a variety of essential activities in the home. Not all homes complied with all criteria in this standard. Most of the participants (n=41, 63%) indicated that their homes did not have SOPs for prevention of falls and for feeding residents. The results further showed that most participants indicated that their homes did not have a manual for SOPs (range: n=23, 35% to n=58, 89%).

Table 6.17: Manual for standard operating procedures (SOPs) (n=12)

SOPs	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Admission and discharge procedure	46	71	19	29	65	100
Lifting patients	39	60	26	40	65	100
Bathing/washing residents	34	52	31	48	65	100
Keeping residents' files	26	40	39	60	65	100
Wound care	26	40	39	60	65	100
Urinary catheter care	58	89	7	11	65	100
Feeding procedure	41	63	24	37	65	100
Safe keeping of valuables	29	45	36	55	65	100
Managing scabies	39	60	26	40	65	100
Prevention of falls	41	63	24	37	65	100
Hand hygiene	23	35	42	65	65	100
Personal protective clothes	53	82	12	18	65	100

6.4.8 Guidelines

6.4.8.1 Question 18: Manual with guidelines

Table 6.18 shows the analysis of whether a manual with guidelines was available for a variety of essential activities in the home. Not all homes complied with all criteria in this standard. Almost half of the participants (n=31, 48%) indicated that their homes did not have guidelines for managing geriatric patients. In addition, most participants (n=52, 80%) indicated that their homes did not have a guideline for managing challenging residents, such as those suffering from dementia or Alzheimer's disease.

Table 6.18: Guidelines (n=65)

Guidelines	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Purchasing of medications, equipment and other requirements	31	48	34	52	65	100
Managing geriatric patients	31	48	34	52	65	100
Managing residents with dementia or Alzheimer's disease	52	80	13	20	65	100
Transfer residents to a hospital	41	63	24	37	65	100
Manage the death of a resident	48	74	17	26	65	100
Ordering food	28	43	37	57	65	100

6.4.9 Policies

6.4.9.1 Question 19: Policies in homes for the elderly

Table 6.19 shows the analysis of whether policies were available for a variety of essential activities in the homes. Not all homes complied with all criteria for this standard. Many of the participants (n=34, 52%) indicated that their homes did not have a policy for infection control and prevention. In addition, 30 (46%) participants indicated that their homes did not have policies for prohibiting abuse of residents and guiding residents' safety and security.

Table 6.19: Policies (n=65)

Policies	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Admission	28	43	37	57	65	100
Living	28	43	37	57	65	100
Safety and security of residents	30	46	35	54	65	100
Resident satisfaction	28	43	37	57	65	100
Prohibiting abuse of patients	30	46	35	54	65	100
Information to residents and families	22	34	43	66	65	100
Quality assurance	22	34	43	66	65	100
Infection control and prevention	34	52	31	48	65	100
Record keeping	17	26	48	74	65	100
Environmental hygiene	15	23	50	77	65	100
Safe keeping of valuables	15	23	50	77	65	100

6.4.10 Recreational activities

6.4.10.1 Question 20: Recreational activities to meet the needs of the number of residents in the home

Table 6.20 shows the analysis of participants' perceptions of whether there were sufficient recreational activities to meet the needs of the number of residents in the home. Not all homes complied with all criteria in this standard. Most participants (n=55, 85%) indicated that their homes did not have a library to meet the needs of the number of residents. In addition, 36 (55%) participants indicated that their homes did not have gardens and a variety of recreational activities to meet the needs of the number of residents.

Table 6.20: Recreational activities (N=65)

Recreational activities	NO		YES		Total	
	Frequency	%	Frequency	%	N	100
Gardens	36	55	29	45	65	100
Library	55	85	10	15	65	100
A variety of recreational activities	36	55	29	45	65	100

6.4.11 Safety and security

6.4.11.1 Question 21: Items for residents' safety and security

Table 6.21 shows the analysis of whether equipment was available for the safety and security of residents. Not all homes complied with all criteria in this standard. Most participants (n=61, 94%) indicated that their homes did not have a fire-alarm system and smoke detectors. Furthermore, 42 (65%) participants indicated that their homes did not have security guards at entry gates and there were no clearly marked emergency exits for residents' safety and security.

Table 6.21: Items for residents' safety and security (N=65)

Item	NO		YES		N/A		Total	
	Frequency	%	Frequency	%	Frequency	%	N	%
Fire extinguishers	42	65	23	35	0	0	65	100
Fire alarm system	61	94	4	6	0	0	65	100
Smoke detectors	61	94	4	6	0	0	65	100
Fire hose	63	97	2	3	0	0	65	100
Doors leading to the outside are linked to an alarm system	45	69	20	31	0	0	65	100
If there is a lift clearly marked not to be used when there is a fire	58	89	2	3	5	8	65	100
Alarm system for break-ins or robberies	63	97	2	3	0	0	65	100
Cameras in the passage of the building	63	97	2	3	0	0	65	100
Surveillance system on the grounds	44	68	21	32	0	0	65	100
Security guards at entry gates	42	65	23	35	0	0	65	100
Emergency exits clearly marked	42	65	23	35	0	0	65	100
Storage for hazardous chemicals	61	94	4	6	0	0	65	100
Safe storage for electrical equipment	44	68	21	32	0	0	65	100

6.4.11.2 Question 22: Secured facility for residents suffering from Alzheimer's disease

Most participants (n=52, 80%), indicated that their homes did not have a secured facility for residents suffering from Alzheimer's disease, as shown in table 6.22.

Table 6.22: Facility for residents suffering from Alzheimer's disease (N=65)

	NO		YES		Total	
	Frequency	%	Frequency	%	N	%
Secured facility for residents suffering from Alzheimer's disease	52	80	13	20	65	100

6.4.12 Communication

6.4.12.1 Question 23: Equipment for communication to meet the needs of the number of residents in the home

Almost half of the participants n=31 (48%) indicated that their homes did not have an emergency response system. However, most participants (n=53, 82%) indicated that their homes did have a call system accessible to patients in all rooms (i.e., bathrooms, toilets, dining room and at bedside). Most participants (n=36, 55%) indicated that their homes did not have a telephone system, resident-call system and electronic-communication system to meet the needs of the number of residents in the home, as shown in table 6.23.

Table 6.23: Equipment for communication (N=65)

Equipment	NO		YES			
	Frequency	%	Frequency	%	N	%
Telephone system, resident-call system, electronic communication such as email	36	55	29	45	65	100
Call system accessible to patients in all rooms namely bathrooms, toilets, dining room, and at bedside	53	82	12	19	65	100
Emergency response system available	31	48	34	52	65	100

6.4.13 Residents' rights

6.4.13.1 Question 24: Respect of homes to the basic rights of the residents

Table 6.24 shows the analysis of whether participants perceived that their homes respected the basic rights of the residents. Not all homes complied with all criteria in this standard. Most participants (n=41, 63%) indicated that their homes did not have consent forms that were used to show residents' participation in making decisions. In addition, most participants (n=44, 68%) indicated that their homes did not have a register for residents' complaints.

Table 6.24: Basic rights of residents in the homes (N=65)

Item	NO		YES		Total	
	Frequency	%	Frequency	%	N	100
Residents' surveys are conducted	11	17	54	83	65	100
Archive facility for residents' records	10	15	55	84	65	100
Secure filing system for residents' information	33	51	32	49	65	100
Safe record keeping facility	23	35	42	65	65	100
Complaints register	44	68	21	32	65	100
Consent forms available	41	63	24	37	65	100
Locked facility for files of the residents	10	15	55	85	65	100

6.4.14 Question 25: Important concerns of staff working in the elderly care context

In order to identify whether there were any issues experienced by staff working in the homes for the elderly in Tanzania, the researcher asked each participating staff member to indicate their three most important concerns. The concerns that were reported included both strengths and challenges. For the purpose of analysis, these concerns were grouped into three categories: concerns relating to residents, concerns relating to the homes and concerns relating to staff. As shown in table 6.25, many participants (n=62, 95%) indicated that key concerns were: inadequate number of staff (n=62, 95%); low salary with high workload (n=57, 88%); and lack of medications and need for better health services (n=55, 85%). Furthermore, 54 (83%) participants indicated a lack of required education, knowledge and skills for caring for the elderly, and 52 (80%) participants expressed concern that the homes lacked their own health centres.

Table 6.25: Concerns of staff

Concerns related to residents	n	%	Concerns related to homes for the elderly	n	%	Concerns related to staff	n	%
Lack of good food and clothes	34	52	Need for better homes for the elderly	51	78	Lack of important needs for staff	36	55
Lack of better health services	55	85	Need for good bedrooms	18	28	Low salary, high workload	57	88
Lack of important needs for residents	42	65	Lack of security and security guards	44	68	Staff lack required education, knowledge and skills for caring for the elderly	54	83
Lack of medications	55	85	Need for good infrastructure	19	29	Inadequate number of staff	62	95
Number of elderly in the homes is increasing day to day as their relatives do not want to care for them at their homes	29	45	Budget deficits	54	83	Lack of offices for staff	50	77
Elderly need close care, which needs commitment	44	68	Lack of washing equipment	45	69	Staff gain good experience	22	34
Residents are assisting each other depending on the nature of a problem and capability of each other	42	65	Lack of own health centres	52	80	Staff are becoming aware of not stigmatising the elderly	19	29
			To reopen the health centres that were closed	2	3	Staff gain faith and love	16	25
			Need for grants from the government	30	46	Caring for elderly needs patience and commitment	44	68
						Staff learn how to deal with challenges of elderly care	33	51
						Staff and residents enjoy living like one family	28	43

6.5 SUMMARY

This chapter described the responses of participants that captured their perceptions of whether specific healthcare standards were applied in homes for the elderly in Tanzania to ensure safe, quality care for residents in the homes. Questionnaires using a Likert-type response format were distributed to participants (N=65, 100%) who worked in the 32 homes for the elderly in Tanzania. All participants who met the inclusion criteria completed and returned a questionnaire. As shown by the responses from participants (Paragraph 6.4.1.1–6.4.13.1, Questions 7–24), all the homes were non-compliant to all criteria required for all the standards.

6.6 CONCLUSION

The researcher successfully collected data from participants working in the homes for the elderly in Tanzania to determine what healthcare standards and associated criteria were applied to ensure safe, quality care for residents, which was the first objective of this study.

By completing and analysing both data collection methods, namely the audit of the homes for the elderly and staff completing the Likert questionnaire, the researcher was able to answer the first research question, namely: ‘What are the healthcare standards currently applied to provide safe, quality care for residents in homes for the elderly in Tanzania?’

CHAPTER 7: DISCUSSION OF RESULTS, INTERPRETATION AND CONCLUSION OF THE SITUATIONAL ANALYSIS

7.1 INTRODUCTION

Chapter 7 provides a discussion of the results obtained through an audit of healthcare standards of the homes for the elderly (see Chapter 5) and through exploring quantitatively, the views of staff on existing healthcare standards in these homes (see Chapter 6). This chapter contains a discussion on whether the homes were compliant or non-compliant with the audit criteria required for the homes for the elderly (see Annexure 2).

The researcher audited all homes for the elderly, N=32(100%) found in the country during the period of data collection, June to July 2020 and all staff who met the study inclusion criteria working in these homes, N=65 (100%) completed the Likert questionnaire (see Annexure 3). The audit instrument was structured according to specific fields, standards and criteria. The questionnaire was based on the items of the audit instrument and serves to support the results of the audit of the homes.

This chapter is aligned to phase 1; objective 1 of the study.

7.2 PHASE 1: OBJECTIVE 1

“Determine whether any healthcare standards are applied to ensure safe, quality care for residents in the homes for the elderly in Tanzania”.

7.2.1 Field 1 infrastructure: Basic physical structures and facilities enabling efficient and effective functioning of the homes

7.2.1.1 Standard 1.1: Doorways, passages and staircases provide safe access to residents

The results obtained showed that the homes were non-compliant with standard 1.1: “Doorways, passages and staircases provide safe access to residents”. Twelve criteria were applicable to obtain compliance (Refer to Table 5.1). Results show that all (100%) homes were non-compliant with the criteria as required for standard 1.1, to have footlights at both sides of stairs and end of stairs clearly marked from top to bottom. In addition, 81% and 75% of the homes had damaged stairs and had no handrails on both sides of stairs respectively. It is essential that homes for the elderly comply with infrastructure, including footlights that provide easy movement of residents to

safe and comfortable access to indoor and outdoor facilities. In their study, Chaisomboon, Jomnonkwao and Ratanavaraha (2020:9066) emphasised that homes for the elderly should have adequate lights and facilities such as handrails, free of damage stairs to support them during movement as they are at risk of more accidents because of physical weakness. In addition, Kose, Sugimoto and Goto (2020:210-217) in the study done in Switzerland identified that 30 to 50 millimeters are acceptable diameters of handrails, the diameters that were also in accordance with the guidelines in Sweden, New Zealand, England, Wales and Japan. In their study Lee and Yoo (2020:70-82) indicated that homes for the elderly should have footlights and safety handles, for example “barrier-free design elements” among other requirements.

7.2.1.2 Standard 1.2: Bedrooms provide total comfort to residents

All the homes (100%) were non-compliant with the requirements to have bedside rails and emergency alert systems that were accessible from beds of the residents (Refer to Table 5.2). Participants (12%) indicated that their homes for the elderly had insufficient bedrooms to meet the needs of the number of residents (Refer to Table 6.7). The bed rails are important to protect residents from falling off the bed. Emergency alert systems accessible at the beds of residents are essential during emergencies. In addition, residents should live in rooms that suit their needs. In Spain, Aranda-gallardo, Morales-asencio, De Luna-rodriguez, Vazquez-blanco, Morilla-herrera, Rivas-ruiz, Toribio-montero and Canca-sanchez (2018:1-6) identified that bed rails are the most commonly used as a fall prevention measure among the elderly. According to the study by Arens et al. (2017:169-179) it was stated that homes for the elderly must have bedrooms, with the residents’ requirements to suit their needs and preferences. Thus, the results showed that the homes were non-compliant with the criteria of standard 1.2: “Bedrooms provide total comfort to residents”.

7.2.1.3 Standard 1.3: Bathrooms and showers provide safe access to bath or shower

Standard 1.3: “Bathrooms and showers provide safe access to bath or shower” was audited for compliance. The results showed that 100% of the homes were non-compliant in terms of the availability of floor lights, and 84% of the homes had no grab bars available (Refer to Table 5.3). Forty nine percent of the participants (employees at these homes) indicated that their homes had insufficient bathrooms to meet the needs of the number of residents (Refer to Table 6.7). Good floor lights and grab bars are essential to provide good lighting and support to residents respectively, thus reducing risks to falls. In their systematic review study, Demanze Laurence and Michel (2017:185-200); Saftari and Kwon (2018:1-14) in their study done in South Korea, identified that the elderly are at risk of falls and fractures due to the aging process characterised

by poor eyesight, loss of calcium in their bones, loss of muscle and loss of balance. From the data set derived from a systematic review of mixed studies, Eijkelenboom et al. (2017:111-122) identified the need for handrails and appropriate lighting. Datta, Datta and Elkins (2019:3) identified that environment hazards such as inadequate lighting and lack of grab bars contribute to falls among the residents. The results obtained in this study showed that the homes were non-compliant with the criteria of standard 1.3: “Bathrooms and showers provide safe access to bath or shower”.

7.2.1.4 Standard 1.4: Toilets are safe and accessible

Six criteria audited to meet compliance with standard 1.4: “Toilets are safe and accessible” were found non-compliant (Refer to Table 5.4). The results from the audit showed that the majority (91%) of the homes were non-compliant with the criteria to have clearly marked residents’ toilets. The majority (71%) of the participants indicated that their homes were non-compliant with having the required number of toilets (Refer to Table 6.7). Homes for the elderly should have an adequate number and clearly marked toilets as the elderly are physically slower, experience poor vision, and some of them are confused and most of them have weakened internal anal and urethral sphincters that lead to inability to control elimination. The findings from the quantitative study done within rural nursing homes in China by Yu et al. (2017:1-14) showed that an adequate number and clearly marked toilets are important in order to provide convenience and comfortable elimination to residents and to have in place a clean and hygienic environment. In addition, in a quantitative study done in Japan, Katsuse et al. (2017:296-300) identified that each toilet facility must be clearly marked and conveniently located to communal rooms. The results obtained in this study, from the audit and Likert questionnaire showed that the homes were non-compliant with the criteria of standard 1.4: “Toilets are safe and accessible”.

7.2.1.5 Standard 1.5: Kitchen facilities for preparation of meals for the number of residents

Twelve criteria were also audited to evaluate compliance with standard 1.5: “Kitchen facilities for preparation of meals for the number of residents” (Refer to Table 5.5). The findings from the audit revealed that a few of the homes (31%) have the required cooking equipment in their kitchens. Likewise, 35% of the participants disagreed that the homes had kitchens (Refer to Table 6.7). Adequate nutrition is important to ensure that the elderly have sufficient energy and improve their immune system for their bodies to function. Absence of a kitchen or presence of a kitchen without the required infrastructure and equipment leads to poor preparation of food and endangers the safety and security of food, which may compromise the nutritional needs of the residents.

McWilliams, Hallman, Cuite, Senger-Mersich, Sastri, Netterville and Byrd-Bredbenner (2017:268-281) identified that the elderly's food safety is compromised by poor home kitchen conditions leading to a lack of safe food cooking and storage equipment. In a cross-sectional study done by Nasiri, Foroughan, Rashedi, Makarem and Jafari Mourjan (2016:340-347) in nursing homes of Tehran, Iran found that kitchens in majority of homes for the elderly were compliant with the common and required designing criteria.

The results of this study showed that the homes were non-compliant with the criteria of standard 1.5: "Kitchen facilities for preparation of meals for the number of residents".

7.2.1.6 Standard 1.6: Linen bank provides bedding and night clothes for the number of residents

The results from the audit showed that 25% of the homes were non-compliant with the criteria of standard 1.6 in terms of having sufficient linen, blankets, pillows and pillow covers (Refer to Table 5.6). These results were supported by the findings of 46% of the participants who indicated that their homes had no linen bank (Refer to Table 6.7). Enough bedding is important to accommodate residents and to protect them from cold- related health problems like pneumonia. In addition, lack of adequate bedding means the inability to change bed linen regularly, which may expose residents at risk of skin diseases like scabies. In their qualitative study done in homes for the elderly in the greater Philadelphia, Bangerter, Van Haitsma, Heid and Abbott (2016:702-713) identified that residents voiced preferences for blankets to cover the top sheet to generate heat. Other preferences from residents included neatness of their bedding and mattress. In a report compiled about St Martha's Nursing Home, Ireland, Harrington (2021:1-21) insisted that homes for the elderly need to have a linen cupboard which is fitted with appropriate shelving for storing linen appropriately. In addition, a study done on community services in Indonesia, Pangaribowo, Keban and Darwin (2020:1-11) indicated that regular changing of bed linen is among the important aspects in homes for the elderly.

The results of this study showed that the homes were non-compliant with the criteria of standard 1.6: "Linen bank provides bedding and night clothes for the number of residents".

7.2.1.7 Standard 1.7: Dining room provides facilities for residents to have their meals

Standard 1.7: "Dining room provides facilities for residents to have their meals" (Refer to Table 5.7) was also among the standards audited in the homes for the elderly in Tanzania. Under this

standard, the researcher found that 50% of the homes were non-compliant with the requirement to have sufficient chairs and tables in their dining rooms and had a limited number of wheelchair-friendly tables. The findings of the audit are supported by the findings obtained from the questionnaire for staff; 46% of the participants indicated that their homes had no dining room (Refer to Table 6.7). Having a dining room, without the required facilities leads to an unsupportive mealtime environment. It is inconvenient for the residents to have meals at any other place than in the dining room, as the environment will not support the social interaction among the elderly. In their quantitative, non-experimental study done in South Africa, Bester, Naidoo and Botha (2016:245-266) indicated that elderly interaction is the outcome of mindfulness and life satisfaction. The findings of the study also showed that pleasure, enjoyment and comfort are the way of achieving well-being of the elderly. In addition, in the study done in homes for the elderly in Sweden, Johansson et al. (2020: 1-22) indicated that dining rooms are important communal areas in homes for the elderly because it supports a sense of home and expands everyday life of residents.

The results showed that the homes were thus non-compliant with the criteria of standard 1.7: "Dining room provides facilities for residents to have their meals". Conducive environment for meals is very important as meals keep the residents healthy, help to fight infections and provide required energy.

7.2.1.8 Standard 1.8: Supportive facilities to sustain and support day- to- day services

7.2.1.8.1 Sub-standard 1.8.1: Sluice room

It was identified by the researcher that 47% of the homes had no sluice rooms available to keep elimination equipment clean and rinse soiled bed linen; and able to clean dirty elimination equipment, such as urinal bottles and bedpans (50%) (Refer to Table 5.8). The findings on the views of 66% of participants showed that their homes did not have sluice rooms (Refer to Table 6.8). Sluice rooms are essential for cleaning elimination equipment, and rinse soiled bed linen. The researcher observed that in some of the homes for the elderly in Tanzania, residents were using their own basins (kept in their bedrooms) for elimination, and excreta was then discarded into the toilets. In his study that was done in Ireland, Kearns (2017:1-27) indicated that sluice rooms must have the capacity of storing bedpans and urinals; and have bins for disposable continence products. From the Health Act 2007 in Ireland, McKevitt (2016:1-24) identified that there should be sluice rooms in the homes for the elderly, equipped with facilities for the disposal of clinical waste, including disposable of continence products. It was indicated further that sluice

rooms must have the capacity to clean and disinfect soiled items in accordance with relevant guidelines. Thus, the results obtained from the audit and Likert questionnaire showed that the homes were non-compliant with the criteria of sub-standard 1.8.1: “Sluice room”.

7.2.1.8.1 Sub-standard 1.8.2: Dressing room

Ten criteria were audited to evaluate the homes whether there was compliance with sub-standard 1.8.2: “Dressing room” (Refer to Table 5.9). The findings from the audit showed that 31% of the homes were non-compliant with the requirement to have a locked cupboard for medication and dressing rooms with antiseptic solutions and dustbins. These results are substantiated by the results of the majority (63%) of the participants who indicated that their homes did not have sufficient dressing rooms to meet residents’ requirements (Refer to Table 6.8). Dressing rooms with complete medical equipment and supplies are important and useful in homes for the elderly as most of the elderly are at risk of pressure sores and related wounds, due to changes in their skin because of the aging process. The aging process leads to wrinkles and sagging skin, the outer skin layer thins, thus putting the elderly at risk to skin breakdown. It was observed by the researcher that staff in the homes for the elderly in Tanzania were doing dressings in a dressing room without complete medical equipment and medical supplies, which could cause contamination of wounds. It was further observed that those homes without appropriate dressing rooms and required equipment, referred residents with wounds to nearby health centres for wound dressings. Referring the residents were aggravated with unreliable transport, consequently wounds were not treated. In a study done in Belgian homes for the elderly, Van Tiggelen, Van Damme, Theys, Vanheyste, Verhaeghe, LeBlanc, Campbell, Woo, Van Hecke and Beeckman (2019:100-106) indicated that homes for the elderly need dressing rooms with complete medical items as the elderly are at risk of developing big and multiple wounds, due to increased skin fragility and risk factors like falls. In the qualitative study done in Norway, Aune and Struksnes (2019:178-187) identified a number of medical items required in a dressing room namely: dressing trolley and dressing trays, clinical waste containers, sterile dressing packs, gauze, swabs, scissors, sterile absorbent dressings, sodium chloride 0.9% for irrigation and adhesive tapes and strapping. Thus, the results obtained through the audit and participants showed that the homes were non-compliant with the criteria of sub-standard 1.8.2: “Dressing room”.

7.2.1.8.1 Sub-standard 1.8.3: Nurses’ station

The findings from the audit revealed that 41% of the homes had no nurses’ stations that were compliant with sub-standard 1.8.3 in terms of having desks, chairs and locked cupboards for

keeping documents (Refer to Table 5.10); while the findings on the views of 60% of participants showed that their homes had no nurses' station (Refer to Table 6.8). Homes for the elderly without nurses' stations, and without the required furniture, such as chairs and tables make it difficult for staff to document information related to care provided to residents. In the study done in Swiss homes for the elderly, Schwendimann et al. (2016:1-10) indicated that there should be staff facilities in homes, which included at least one office consistent with the required number of employees. This was substantiated by Eijkelenboom et al. (2017:111-122) in their systematic review who revealed that nursing homes are like hospitals and should also have a nursing station for nurses to work in when not working directly with patients and where they can perform some of their duties. The results of this study showed that the homes were thus non-compliant with the criteria of sub-standard 1.8.3: "Nurses' station".

7.2.1.8.1 Sub-standard 1.8.4: Other supportive facilities

Four criteria were audited to assess compliance with sub-standard 1.8.4: "Other supportive facilities: secretaries' offices, rest rooms for staff, activity room for residents and laundry" (Refer to Table 5.11). The findings from the audit showed that the majority (66%) of the homes had no laundry facilities and were therefore non-compliant; while the findings on the views of 66% of the participants showed that majority of their homes had no laundry facilities (Refer to Table 6.8). Most homes (59%) had no activity room for residents supported by the majority (77%) of the participants.

The researcher identified that homes for the elderly, where there were no laundry facilities, the dirty clothes were kept outside the rooms and washed at nearby rivers or lakes, which compromised safe quality care. In their systematic review of mixed methods, Eijkelenboom et al. (2017:111-122), stated that homes should have a laundry for the separation and washing of soiled articles from clean clothes and linen.

The need for activity rooms for the elderly is essential as activities give comfort to residents physically, psychologically, socially, and spiritually. In terms of physical benefits, activities strengthen muscles and improve body coordination to counteract the reduction in muscles and joint sprains due to aging. Participation in activities help improve their mental well-being and contribute to eliminating depression. Being active with mates helps improve an individual resident's mental health and gives residents a sense of safety. Furthermore, spiritual activities give residents hope in terms of happiness and peace. In the cross sectional-study done by Lood

et al. (2019:2526-2534), it was indicated that there should be an activity room for residents which brings positive distraction.

Thus, the results obtained from the audit and Likert questionnaire showed that the homes were non-compliant with the criteria of sub-standard 1.8.4: “Other supportive facilities”.

7.2.1.9 Standard 1.9: Facility for residents with Alzheimer’s disease to ensure their safety and security

With reference to standard 1.9: “Facility for residents with Alzheimer’s disease to ensure their safety and security” (Refer to Table 5.12), the findings from the audit indicated that all (100%) of the homes were non-compliant with the criteria required to meet this standard. The findings of the views of 80% of the participants showed that their homes did not have a secured facility for residents suffering from Alzheimer’s disease (Refer to Table 6.22). Operating homes for the elderly without a facility to ensure safety and security for residents with Alzheimer’s disease is a critical problem. In their study, Cass (2017:19-22) identified that the majority (81%) of the elderly aged ≥ 75 years are at risk of developing Alzheimer’s disease and dementia. The old age-related diseases do cause multiple problems to elderly related to falls, memory, communication, delirium, recognition and co-ordination, orientation, changes in behaviour, judgement and moods, which need special facilities as indicated in table 5.12. The lack of such facilities does cause mismanagement of residents with Alzheimer’s disease. The qualitative study done in homes for the elderly in North Carolina by Cary Jr et al. (2018:76), emphasised that the design and accessibility considerations for preventing falls among residents with Alzheimer’s disease in the homes are important. In addition, in their randomized controlled trial, Toots et al. (2017:227-233), indicated that there should be adequate stock of walkers, wheelchairs, crutches, braces, bed alarms, shower seats, patient call systems available to help patients with dementia.

The results showed that the homes were thus non-compliant with the criteria of standard 1.9: “Facility for residents with Alzheimer’s disease to ensure their safety and security”.

Six themes emerged from the responses to the open-ended question on infrastructure to meet the needs of the number of residents (see Annexure 3); question 13(ii). The majority (92%) of the participants indicated that residents with medical conditions were usually referred to health centres external to the homes. This finding is not supported by McHugh, Foster, Mor, Shield, Trivedi, Wetle, Zinn and Tyler (2017:1591-1598) in their mixed study done in USA who indicated that establishing medical facilities in the homes for the elderly is one approach which is used by

several hospitals to reduce excess readmissions of elderly to hospitals. Furthermore, 87% of participants indicated that the homes were not well prepared to care for the elderly, thus lacking appropriate infrastructure. According to the cross sectional study done by White, Aiken, Sloane and McHugh (2020:158-164), environments of homes for the elderly should prioritise improving quality care for the elderly. In addition, the majority (79%) of the participants acknowledged that the deficit in infrastructure is due to financial constraints. In their qualitative study done in Norway, Bollig, Gjengedal and Rosland (2016:142-153), substantiated this result, by identifying that the first group of issues in homes for the elderly consists of the lack of resources. Barnett and Grabowski (2020:e200369-e200369) stated that homes for the elderly require funds to cover important infrastructure requirements.

7.2.2 Field 2: Clinical management

7.2.2.1 Standard 2.1: Equipment for direct care available

Standard 2.1: “Equipment for direct care available” was audited (Refer to Table 5.13); the findings from the audit revealed that none of the homes (100%) had oxygen cylinders and 63% of the homes had no blood pressure apparatus and thermometers, while the majority (89%) of the participants indicated that their homes had no oxygen cylinders, blood apparatus (25%) and thermometers (48%) (Refer to Table 6.9). Oxygen cylinders are very important as they are used to provide oxygen for the relief of symptoms related to difficulty in breathing, among the common health problems of the elderly. Lee, Shih, Leu, Chang, Lin and Ku (2017:130-133) indicated that common pulmonary issues in the elderly such as chronic obstructive pulmonary disease, increase the risk of an oxygen desaturation event that indicates the need for oxygen. In addition, in the study done in Toronto, Canada, medical equipment such as oxygen tanks were indicated as important for homes for the elderly (Stall, Farquharson, Fan-Lun, Wiesenfeld, Loftus, Kain, Johnstone, McCreight, Goldman & Mahtani, 2020:1376-1381), as most of the elderly need respiratory treatment, such as ventilators and oxygen (Mahajan & Susheela, 2021:4-8).

Blood pressure measurements assist with regular assessment of an elderly person’s cardiovascular status to prevent strokes. In a quantitative study done in rural Ethiopia, Shukuri, Tewelde and Shaweno (2019:23) identified that prevalence of hypertension in adults aged 65+ years in Sub Saharan Africa is 61%. Blood pressure monitors were among the equipment indicated for residents’ direct care as the elderly are at risk of high blood pressure which if not controlled, can lead to health problems such as heart diseases and stroke (Kirsebom, Hedström, Pöder & Wadensten, 2017:41-48).

Thermometers are equally important in homes for the elderly to monitor the body temperature, as the elderly are at risk of infections because of aging and comorbidities. Stall et al. (2020:1376-1381), in their study identified that medical equipment, such as vital signs monitoring machines were identified as important in the homes for the elderly, as the elderly are more susceptible to infections because the immune system becomes weaker with age.

Thus, the results obtained by the researcher and participants showed that the homes were non-compliant with standard 2.1: “Equipment for direct care available”.

7.2.2.2 Standard 2.2: Emergency tray available for emergency care

Ten criteria were audited to assess compliance with standard 2.2: “Emergency tray available for emergency care” (Refer to Table 5.14). The findings from the audit showed that 72% of the homes had no emergency drugs namely atropine and adrenaline. Similarly, the participants also reported that their homes did not have atropine (91%) and adrenaline (88%) (Refer to Table 6.10). Due to the aging process, the elderly experience several anatomical and physiological emergencies that may need a complete emergency tray. In their study done in USA, Duong, Herrera, Moore, Donnelly, Jacobson, Carlson, Mann and Wang (2018:7-14) identified that the elderly aged ≥65 years commonly require emergency care and that healthcare providers should always be prepared to care for the elderly during an emergency. In addition, in a retrospective cohort study done in Tehran, Iran, Shahriari and Khooshideh (2017:1-11) identified that bradycardia is among the life threatening conditions among the elderly which should be managed with adrenaline and atropine.

The results thus showed that the homes were non-compliant with the criteria of standard 2.2: “Emergency tray available for emergency care”.

7.2.2.3 Standard 2.3: Equipment for indirect care available

With reference to standard 2.3: “Availability of equipment for indirect care” (Refer to Table 5.15), the findings from the audit indicated that 41% of the homes had no cleaning equipment, while the findings on the views of 15% of the participants showed that their homes had no cleaning equipment (Refer to Table 6.9). Lack of cleaning equipment makes the work of cleaners difficult, thus leading to poor cleaning of the homes, which contributes to poor care. Based on ethnographic studies in six countries including Switzerland, Müller, Armstrong and Lowndes (2018:53-73) argued that the extent to which cleaners and cleaning promote quality care of residents and health of staff is related to cleaning equipment among other things. It was further stated that cleaners

and cleaning equipment in homes for the elderly are central to infection control. In addition, in a Delphi study done in Seoul in Korea Shin, Kim and Lee (2019:783-794) indicated that cleanliness and odour are important factors in determining quality of homes for the elderly.

Thus, the results obtained through the audit instrument and Likert questionnaire showed that the homes were non-compliant with standard 2.1: “Equipment for indirect care available”.

7.2.2.4 Standard 2.4: Disposable (clinical requirements) items for direct care available

The researcher audited thirteen criteria (Refer to Table 5.16) for compliance with standard 2.4: “Availability of disposable items for direct care”. The findings from the audit revealed that none of the homes (100%) had oxygen masks and urinal catheters (91%). The results were supported by most participants (83%) who indicated that their homes did not have sufficient oxygen masks to meet the needs of the number of residents and urinal catheters (66%) (Refer to Table 6.11). Difficulty in breathing is among the most common problems among the elderly related to the aging process that require oxygen masks for delivering of artificial oxygen. In a study done in Northern Italy, Trabucchi and De Leo (2020:387-388) identified that managers of homes for the elderly were feeling guilty about the shortage of oxygen masks as these masks were needed for the elderly with difficulty in breathing.

Furthermore, the homes need urinal catheters, due to the increase of dependency in elimination and urinary incontinence among the elderly. In a cross-sectional study done in homes for the elderly in Netherlands, Huion et al. (2020:33277758) indicated that the majority of residents in a home for the elderly need urinary catheters and urinary bags. Therefore, it is essential that the homes have adequate stock of these items.

Thus, the findings of the study showed that the homes were non-compliant with standard 2.4: “Disposable (clinical requirements) items for direct care available”.

Three themes emerged from the responses to an open-ended question on clinical requirements to meet the needs of the number of residents (see Annexure 3); question 11(ii).

The majority (83%) of the participants indicated that there were financial constraints that prevented the homes from buying the required items. In a study done in USA, Werner, Hoffman and Coe (2020:903-905); Miller, Simpson, Nadash and Gusmano (2021:e213-e218) identified that the homes for the elderly that are inadequately financed will always lead to unimproved quality of care. In addition, in their study done in USA, McGarry et al. (2020:1812-1821) stated

that homes for the elderly have a shortage of equipment, due to extremely limited financial capacity to respond to the needs.

It was stated by most participants (74%) that sick residents were referred to health centres external to the homes; therefore, it was not considered necessary to have clinical equipment. However, Ouslander and Grabowski (2020:2153-2162) identified that inadequate resources and personal protective equipment in homes for the elderly in USA during the COVID-19 pandemic created many difficulties in managing sick residents. In addition, in a longitudinal study done in Netherlands, Reijnierse, De Van Der Schueren, Trappenburg, Doves, Meskers and Maier (2017:1-10) indicated that the lack of equipment in homes for the elderly has created difficult working environments which lead to inefficient workplace processes, uncomfortable working conditions and a lack of workplace flexibility and balance.

Many participants (69%) also referred to the lack of essential infrastructure to clean, sterilise and keep clinical requirements. In a cross-sectional study done in Nepal, Panta, Richardson, Shaw, Chambers and Coope (2019:1-14) indicated that cleaning, packaging, sterilization and use of medical equipment should follow standard procedures to achieve and maintain the required level of sterility. Rutala and Weber (2016:e69-e76) identified that poorly handled medical equipment may become contaminated and contribute to cross transmission of infections. The results were substantiated in the study done in the UK by Wilson and Nayak (2019:603-608) that reusable medical equipment can be made free of microorganisms and can be safely used after they had been cleaned, disinfected and sterilized.

7.2.3 Field 3: Meals and water

7.2.3.1 Standard 3.1: Residents provided with meals according to individual needs

The findings from the audit showed that 41% of the homes were non-compliant with providing special meals during the audit of the homes to meet compliance with standard 3.1: “Residents provided with meals according to individual needs” (Refer to Table 5.17). Likewise, 28% of the participants indicated that their homes were non-compliant with providing special meals (Refer to Table 6.15). The elderly need a nutritional and balanced diet that can provide them with all the nutrients, such as carbohydrates for energy, protein to build their body tissues and vitamins and fruits to build body immunity. In addition, some elderly need a special diet depending on individual health conditions. In a qualitative study done in the north-eastern Italian region, Palese et al. (2018:1-10), indicated that it is important that the meals provided should focus on the residents’

nutritional needs. These findings were substantiated by Murphy et al. (2017:1-14) in their qualitative study done in rural and urban UK that residents need flexible menus which should consider the following components: nutrition requirements, hydration needs and residents' preferences. In a systematic literature search for systematic reviews, Volkert, Beck, Cederholm, Cruz-Jentoft, Goisser, Hooper, Kiesswetter, Maggio, Raynaud-Simon and Sieber (2019:10-47) identified that adequate nutrition and hydration in the elderly improve nutritional status and quality of life. In their study done in Padova, Italy, Sergi, Bano, Pizzato, Veronese and Manzato (2017:3684-3689) indicated that residents' preferences promote taste loss following physiological changes, polypharmacy and chronic diseases.

The results showed that the homes were thus non-compliant with the criteria of standard 3.1: "Residents provided with meals according to individual needs".

7.2.3.2 Standard 3.2: Water is available

Two criteria were audited to evaluate compliance with standard 3.2: "Water is available" (Refer to Table 5.18). The findings from the audit revealed that the majority (72%) of the homes were non-compliant with the requirement to supply hot and cold water for the number of residents and 53% of the homes were non-compliant with the requirement to provide ionised water. These results were reinforced by 60% of the participants who indicated that their homes did not have an adequate water supply to meet the needs of the residents, while 82% of the participants noted that their homes had no ionised water (Refer to Table 6.16). Water has key uses including drinking, washing and cleanliness. Therefore, operating homes for the elderly without adequate water in terms of quantity and quality, expose the residents to risks such as dehydration, water-washed diseases (e.g., scabies) and dirty environment. Ionized water has many benefits for the elderly, such as restoring body pH balance, increases energy level, provides extra dehydration and reduces signs of aging. In the study done in the rural Appalachia, USA, Arcipowski et al. (2017:1-18) identified that the provision of adequate water in terms of quality and quantity is vital in the homes for the elderly as it is needed for drinking, washing, bathing and cleaning. In addition, Allen et al. (2018:301-309) indicated that managers of homes for the elderly should ensure that there are supplies of good quality hot and cold clean running water at all times, adequate for the needs of residents and the homes. In a study done in Wien, Austria and in Centro Ricerche Casaccia, Italy, Maringer, Wiedner and Cardellini (2020:108907) indicated that the benefits of ionised water include pH balance, increases the amount of dissolved oxygen in the blood and contributes to flushing out acidic waste and toxins that have accumulated in the body. The Likert questionnaire showed that the homes were non-compliant with standard 3.2: "Water is available".

7.2.4 Field 4: Residents' rights

7.2.4.1 Standard 4.1: Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information are respected

Seven criteria were audited to assess the compliance of the homes for the elderly with standard 4.1: "Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information are respected" (Refer to Table 5.19). The findings from the audit indicated that the majority (91%) of the homes were non-compliant with all the criteria required for this standard, which included availability of consent forms and a register for complaints and compliments. These results were supported by the participants. The majority (63%) of the participants showed that their homes did not have consent forms that were used to show residents' participation in making decisions about their care and 68% of the participants indicated that their homes did not have a register for residents' complaints (Refer to Table 6.24). To obtain informed consent from residents before giving care is a practical application of shared decision making between the health provider and the patient. Non-compliance with consent forms implies that residents are not involved in making decisions about their care.

The absence of a complaint register might imply that the rate of residents' complaints is not registered, thus not known and not solved. In their comparative ethnographic study done in Norway, Øye et al. (2017:1906-1916) indicated that it is important that residents sign informed consent forms before any service, as an indication that the resident has agreed to the intended service. The study done in England identified that informed consent gives an opportunity to the resident to authorize or refuse the intended care and or treatment (Sivanadarajah et al., 2017:645-649).

The results from an overview of the literature showed that taking care of residents' complaints contribute towards improving staff accountability, thus improving the quality of health service towards residents, reducing abuse and assuring compliance with standards (Mirzoev & Kane, 2018:1-75). A qualitative descriptive study done in South Wales, Australia, identified that the process of dealing with complaints of customers enables healthcare facilities to identify any challenges and weaknesses about the way care is provided, thus improving the services (Harrison et al., 2016:240-245).

The results of the study showed that the homes were non-compliant with standard 4.1: “Residents’ basic human rights of confidentiality, respect, privacy, dignity and access to information are respected”.

7.2.5 Field 5: Guiding documents for residents’ care

7.2.5.1 Standard 5.1: Standard operating procedures available to provide safe quality care to residents

The findings of the audit with reference to standard 5.1: “Standard operating procedures available to provide safe quality care to residents” (Refer to Table 5.20), showed that none of the homes (100%) were compliant with a standard operating procedure (SOP) for prevention of falls and urinary catheter care. The majority (63%) of the participants showed that their homes did not have SOPs for prevention of falls, and 89% of them indicated that their homes did not have SOPs for urinary catheter care (Refer to Table 6.17). Many of the residents are at risk of falls, due to weak muscles, lack of balance and poor vision related to the ageing process. Thus, SOPs for the prevention of falls in the homes for the elderly are important.

Catheterization is common in the elderly, due to urethral structure changes, which lead to urinary incontinence and retention. However, catheterization is associated with many risks that include trauma, introduction of infection into the urinary system and renal inflammation.

The recommendations published in The USA PREVENTIVE SERVICES TASK FORCE, showed that the risk to falls among the elderly increases with age, due to muscle weakness, frailty, balance and vision problems, polypharmacy, several diseases and other environmental risks (Jin, 2018:1734-1734). The results from a cross sectional study showed that homes should make sure that residents are properly evaluated to identify those at risk of falls and have strategies in place to protect them (Álvarez Barbosa et al., 2016:16-25). In the study done in health facilities in China, Gu, Balcaen, Ni, Ampe and Goffin (2016:7-10) found that the primary shortcoming in minimizing the risk of falls among residents was the lack of SOPs. In their quantitative study done in Eskişehir Yunus Emre State Hospital, Turkey Alpay, Aykin, Korkmaz, Gulduren and Caglan (2018:67) identified that the elderly who were predisposed to urinary tract infections had a history of catheterization. Hall, Snowie, Davies, Biddulph, Ber, Glendewar, Wilkinson, Foley, Smith and Wilkie (2016:1-19) in their study completed on SOPs in family nursing and home care, identified the importance of a SOP for catheter care.

The results showed that the homes were thus non-compliant with the criteria of standard 5.1: “Standard operating procedures available to provide safe quality care to residents”.

7.2.5.2 Standard 5.2: Policies available to provide guidance to activities in the home

Eleven criteria were audited to evaluate compliance with standard 5.2: “Availability of policies to provide guidance to activities in the home” (Refer to Table 5.21). The findings from the audit showed that the majority (91%) of the homes had no policies that provided guidance for activities in the home on safety and security of residents and on prevention and prohibiting abuse of patients. Many (46%) of the participants indicated that their homes did not have policies for guiding residents’ safety and security; and 46% of them indicated that their homes did not have policies for prohibiting abuse of residents (Refer to Table 6.19). Residents are at risks to human factors, such as physical abuse and are at risk to environmental factors such as falls. Therefore, the policy on protecting the elderly’s safety and security is important. In the mixed methods study done by Mobley et al. (2017:49-69) indicated that safety is an obvious dominant element for residents’ care, therefore it is important that the homes have arrangements to protect residents and to make sure that they are free from maltreatment. Braithwaite and Donaldson (2016:325-351) stated that residents’ safety is the basis of quality healthcare. In addition, in the focus group study of managers of the homes for the elderly, Myhre et al. (2020:1-14) identified that homes have to protect residents from all forms of mishandling, carelessness, mistreatment and injuries. From the scoping reviews, Pillemer et al. (2016:S194-S205) indicated that elderly mistreatment is now recognized internationally as a persistent and growing problem, requiring the attention of healthcare systems, social welfare agencies, policymakers and policy formulation. In a systematic review study, Poudel (2018:1-108) identified that there is a need for policymakers to recognize the severity of elderly mistreatment and develop policies as standard measurement to deal with such problems existing in homes for the elderly.

Thus, the results obtained from the audit instrument and questionnaire showed that the homes were non-compliant with standard 5.2: “Policies available to provide guidance to activities in the home”.

7.2.5.3 Standard 5.3: Specific indicators set to monitor and evaluate care provided to residents

Eight criteria were audited to evaluate compliance with standard 5.3: “Specific indicators set to monitor and evaluate care provided to residents” (Refer to Table 5.22). The findings from the audit revealed that the majority (75%) of the homes were non-compliant in monitoring bowel

incontinence, falls prevention, pressure ulcers and scabies as specific indicators used to evaluate care provided to residents. Likewise, the majority (88%) of the participants showed that their homes did not have a register to monitor important health indicators namely bowel incontinence, scabies, falls prevention and acquired pressure ulcers (Refer to Table 6.12). An indicator is a specific, observable and measurable characteristic that can be used to show changes or the progress a service is making toward achieving a specific outcome. Lack of specific indicators in the homes for the elderly brings difficulty to determine whether the intended services provided to residents were achieved or not. The study done in Czech Republic, Finland, France, Germany, Italy, Israel, Netherlands, and in England, identified the following important indicators set to monitor and evaluate care provided to residents: infections prevalence, bowel incontinence prevalence (Frijters, van der Roest, Carpenter, Finne-Soveri, Henrard, Chetrit, Gindin & Bernabei, 2013:1-10), scabies (Park, Lee, Park, Kwon & Kweon, 2016:75-76); falls prevention (Álvarez Barbosa et al., 2016:16-25) and pressure ulcers (Courvoisier et al., 2018:45-50).

Thus, the results obtained in the audit conducted by the researcher and the Likert questionnaire completed by the participants showed that the homes were non-compliant with standard 5.3: “Specific indicators set to monitor and evaluate care provided to residents”.

7.2.5.4 Standard 5.4: Guidelines available to provide guidance for specific activities in the home

Seven criteria were audited to evaluate compliance with standard 5.4: “Guidelines available to provide guidance for specific activities in the home” (Refer to Table 5.23). The findings from the audit indicated that none of the homes (100%) had guidelines to assist with the management of challenging residents (i.e., those with dementia and Alzheimer’s disease). Likewise, the majority (80%) of the participants indicated that their homes did not have a guideline for managing challenging residents, such as those suffering from dementia or Alzheimer’s disease (Refer to Table 6.18). These findings indicate that residents with dementia and Alzheimer’s diseases in the homes for the elderly in Tanzania were managed poorly, as there were no guidelines to guide the services. The results from systematic review, Husebo, Achterberg and Flo (2016:481-497) identified that official guidelines for assessment and treatment of people with dementia and Alzheimer’s disease living in homes for the elderly are very important. In addition, Indian Psychiatric Society published three Clinical Practice Guidelines for managing dementia, reversible dementias, Alzheimer's disease and vascular dementia (Shaji, Sivakumar, Rao & Paul, 2018:S312). Furthermore, the new clinical practice guidelines were developed in Australia aiming for diagnosis and management of the elderly with dementia and Alzheimer’s disease in the homes

for the elderly (Laver, Cumming, Dyer, Agar, Beattie, Brodaty, Broe, Clemson, Crotty & Dietz, 2016:191-193).

The results of this study showed that the homes were thus non-compliant with the criteria of standard 5.4: “Guidelines available to provide guidance for specific activities in the home”.

7.2.6 Field 6: Safety and security

7.2.6.1 Standard 6.1: Requirements available for ensuring residents’ protection and home environment that are free from danger and threats

The findings from the audit revealed that 91% and 72% of the homes were non-compliant with a fire-alarm system and fire extinguishers respectively (Refer to Table 5.24), while the findings from the majority (94%) of the participants showed that their homes did not have a fire-alarm system and 65% of them indicated that their homes did not have fire extinguishers (Refer to Table 6.21). Failing to provide equipment such as a fire-alarm system and fire extinguishers exposes residents to risk of fire. In a research review, Kodur et al. (2019:1-23) indicated that homes should make sure that residents and staff are protected from events of fire by taking all measures that decrease the risk of fire in the homes. The homes physical fire safety infrastructure should be regularly maintained, such as fixing alarms that detect fire. In the study done in rural nursing homes in China, Yu et al. (2017:1170-1183) stated that it is very important to install fire-fighting equipment and pay special attention to the threats caused by fire.

Thus, the results from the audit instrument and Likert questionnaire showed that the homes were non-compliant with standard 6.1: “Requirements available for ensuring residents’ protection and home environment that are free from danger and threats”.

7.2.6.2 Standard 6.2: Communication support systems available to allow communication with staff

The researcher audited three criteria to determine compliance with standard 6.2: “Communication support systems available to allow communication with staff” (Refer to Table 5.25). The findings from the audit revealed that none of the homes (100%) was compliant with the criteria for this standard, namely: availability of emergency response system and call system accessible to residents in all rooms. The majority (82%) of the participants showed that their homes did not have a call system accessible to residents in all rooms and 48% of them indicated that their homes did not have an emergency response system (Refer to Table 6.23). Equipment for communication are significant in the homes for the elderly, as they simplify communication between residents

and staff, facilitating quick care to residents. Availability of an emergency response system in the homes is important as it connects residents and staff quickly in case of an emergency such as falls. In their study on interpersonal communication in healthcare, Chichirez and Purcărea (2018:119) identified communication as an important clinical management component which improves care and relationship between health-care providers and residents. In their qualitative interview study, Forsgren et al. (2016:112-121) indicated that resident call systems should be accessible to residents in all rooms they are using; the systems should be able to alert staff when help and support are required by residents. According to Stokke (2016:e187) in the integrative review, an emergency response system should be established in the homes for the elderly to support them in an emergency situation when their safety and security are jeopardized.

Thus, the results obtained by the researcher and participants showed that the homes were non-compliant with standard 6.2: “Communication support systems available to allow communication with staff”.

7.2.6.3 Standard 6.3: Recreational activities available to allow socialisation

During the auditing to assess compliance with standard 6.3: “Recreational activities available to allow socialisation” (Refer to Table 5.26). The researcher identified that 28% of the homes were non-compliant with a variety of recreational activities and 34% of the homes were non-compliant with having a garden. The findings on the views of 55% of the participants showed that their homes did not have a variety of recreational activities to meet the needs of the number of residents and 55% of them indicated that their homes did not have a garden (Refer to Table 6.20). It is crucial that residents have access to recreational activities as these activities stimulate their mental and cognitive functions and increase their activity. Gardening has many benefits for residents, including physical exercise and increased mobility. In their systematic review study, van den Berg et al. (2020:e254-e269) identified that recreational activities are important for residents to experience activeness. In their cross-sectional descriptive survey, Zhao, Gao, Li and Wang (2019:759-764) identified that frailty can be prevented by employing interventions that promote older adults' activity engagement. In addition, in the longitudinal observation study done in nursing homes in the Netherlands, de Boer et al. (2017:40-46) indicated that the garden should have the following features for stimulation of the senses: odorous plants and flowers, water and planting with natural ability to attract wildlife and birds. Furthermore, in the study done in Shanghai, China, Zhang, Feng, Lacanienta and Zhen (2017:45-54) found that leisure activities in homes for the elderly, such as doing housework and gardening are beneficial to the elderly both physically and mentally. In the study on housing design for elderly people in Tanzania, Nguluma

and Kemwita (2018:355-362) indicated that the outdoor environment promotes socialization activity for all residents.

The results showed that the homes were thus non-compliant with the criteria of standard 6.3: “Recreational activities available to allow socialisation”.

7.2.7 Field 7: Human resources

7.2.7.1 Standard 7.1: Staff available for the various activities in the home

Thirteen criteria were audited by the researcher to evaluate compliance with standard 5.10: “Staff available for the various activities in the home” (Refer to Table 5.27). The findings from the audit revealed that none of the homes (100%) had a geriatric-trained professional nurse. However, the findings on the views of 8% of the participants indicated themselves as geriatric-trained professional nurses (Refer to Table 6.4). Unfortunately, nurses regarded themselves as geriatric-trained professional nurses, following short courses they attended in elderly care. To provide quality care to the elderly, the staff should be equipped with the required knowledge and skills in geriatrics or gerontology. In a study done in San Francisco, Bates, Kottek and Spetz (2019:1-36) recognized geriatricians as health workers engaged in direct care activities as primary care providers, clinician educators, academic and policy researchers towards the elderly. Furthermore, the researcher identified that only three (9%) of the homes were compliant with the requirement to have professional nurses. Six (9%) of the participants regarded themselves as professional registered nurses. Three participants indicated that they were professional registered nurses, following the short course they attended on how to care for the elderly. The absence of skilled staff in the homes for the elderly do contribute to poor care, as observed by the researcher in the homes for the elderly in Tanzania. In a qualitative descriptive study done in Japan, Yamamoto-Mitani, Saito, Takaoka, Takai and Igarashi (2018:1-22) identified licensed (professional) nurses as the second most important care providers in long-term care hospitals. In a the study done in nursing homes in USA, Harrington et al. (2016:HSI.S38994) indicated that everyday there should be an adequate number of care providers, who can provide care according to the basic needs of residents, such as assessment of residents’ health problems, essential and leisure needs. In addition, Geng et al. (2019:1095-1100) identified that homes for the elderly need qualified, competent and experienced staff appropriate for caring of the elderly.

Thus, the results obtained in this study showed that the homes were non-compliant with standard 7.1: “Staff available for the various activities in the home”.

7.2.7.2 Standard 7.2: Human resource policies available to ensure efficient and effective management of human resources

During the auditing to assess compliance with standard 7.2: “Human resource policies available to ensure efficient and effective management of human resources” (Refer to Table 5.28). The findings from the audit showed that, none of the homes (100%) were compliant with training and development and disciplinary policies. The majority (75%) of the participants indicated that their homes did not have a training and development policy and 9% of them indicated that their homes did not have a disciplinary policy (Refer to Table 6.14). Training of staff does equip them with updates, more skills and knowledge for caring of the elderly.

A disciplinary policy is important to correct staff to provide care according to the set standards. In the cross-sectional survey done in Norway community elderly care, Bing-Jonsson et al. (2016:1-11) identified in their study that there should be a strategy for training and for staff development. According to Policy and Statutory (2017:1-13), the purpose of a disciplinary policy is to set out standards for staff to practise as expected of them and to ensure that all disciplinary matters are dealt fairly and consistently. Thus, the findings of the study showed that the homes were non-compliant with standard 7.2: “Human resource policies available to ensure efficient and effective management of human resources”.

Two themes emerged from the responses to the open-ended question on staffing to enable the provision of care (see Annexure 3); question 13(ii). The majority (94%) of the participants stated that the homes had unfriendly working environments for staff, thus causing the staff to resign from their work. In the study done in Swiss homes for the elderly, Schwendimann et al. (2016:1-10) identified that workers’ job satisfaction is highly relevant to staff retention and ultimately to safe care for residents. In addition, 83% of the participants stated that an inadequate budget was among the reasons for not being able to employ the required staff in terms of numbers and qualifications. From published documents and reviews, Drennan and Ross (2019:25-37) identified that determining factors that influence availability of skilled health workers in homes for the elderly and in health sector depend on a budget in terms of financial resources.

7.3 IMPORTANT CONCERNS OF STAFF WORKING IN THE ELDERLY CARE CONTEXT

In order to identify whether there were any issues experienced by staff working in the homes for the elderly in Tanzania, the researcher asked each participating staff member to indicate their three most important concerns (Refer to Table 6.25). Their main concerns were on human resource issues, lack of medication and the health centre.

7.3.1 Human resources, medication and health centre

The majority (95%) of the participants indicated that their key concerns were inadequate number of staff. In addition, the majority (88%) of the participants stated that low salaries with a high workload was their major concerns. The homes for the elderly need an adequate number of skilled staff who can care for residents at required standards. The findings are aligned with the claims of Harrington et al. (2016:HSI-S38994) in the study done in nursing homes in the USA, that there is a need to establish ways to improve staffing standards and new payment to improve nursing home staffing and quality.

In addition, many (85%) of the participants identified lack of medications and the need for better health services, and 83% of them indicated a lack of required education, knowledge and skills among the staff. Residents in the homes for the elderly are at high risk of acquiring multiple diseases related to ageing, the situation that calls for availability of adequate medications. In addition, high incidence of multiple and frequent health problems among the elderly, need skilled health-care providers able to provide better health services. These findings are substantiated by the results from a systematic literature review by Anstey et al. (2016:353-361) who indicated that the delivery of care in homes for the elderly is challenging, mainly due to limited access to medical care and lack of required education among staff. The findings of the study showed further that providing required education to staff would improve the situation in homes.

Furthermore, 80% of the participants expressed concern that the homes lacked health centres. According to most of the homes for the elderly in Tanzania, there should be special rooms or buildings specifically for providing health services to the elderly who are mostly noted as sick residents. This is what was termed by the staff as health centres.

In their qualitative study done in greater Chicago metropolitan area (both urban and suburban areas), Konetzka and Perraillon (2016:706-713) identified that homes for the elderly serve two groups of elderly, namely short and long stay residents. It was stated further that in many cases, short stay residents become long-stay residents if their health deteriorates. Short stay residents were further described in nursing homes comparing the report by Saliba, Weimer, Shi and Mukamel (2018:1-11), as those residents admitted from an acute care hospital for post-acute or rehabilitation care, often to stay for days or a few weeks. Konetzka and Perraillon (2016:706-713) described the long-stay residents' group as those who spend the remainder of their lives in homes for the elderly, receiving care for functional or cognitive impairment. However, in the study done in public, non-profit and for-profit homes for the elderly in England, Barron and West (2017:137-

146) stated that, the transformation of the residential and homes for the elderly to provide health care to residents has received little attention, despite recommending health services in these homes.

7.4 SUMMARY

The chapter presented a discussion, interpretation and relevance of the findings of phase I, "Situational analysis of the homes for the elderly in Tanzania" based on research objective I, "to determine whether any healthcare standards are applied to ensure safe, quality care for residents in homes for the elderly in Tanzania". The researcher has discussed and interpreted the findings, showing how it relates to the literature review and research questions. The discussion was based on seven fields which the homes were audited for: infrastructure, clinical management, meals and water, residents' rights, guiding documents for residents' care, safety and security and human resources (see Annexure 2). The argument based on the results obtained through the audit of the homes conducted by the researcher with the support of findings from the staff has shown that none of the homes were compliant to all the standards and the associated criteria.

7.5 CONCLUSION

The purpose of this chapter was to discuss and interpret the findings of phase I, "Situational analysis of the homes for the elderly in Tanzania". With the support and evidence from healthcare standards documented in previous studies, this study has shown the absence of health-care structure standards and the associated criteria required to provide quality health care to residents in the homes for the elderly in Tanzania. Research objective 1 "to determine whether any healthcare standards are applied to ensure safe, quality care for residents in homes for the elderly in Tanzania" was successfully explored through an audit of the 32 homes for the elderly in Tanzania and a Likert questionnaire completed by all the staff working in these homes. Therefore, the researcher concludes that none of the homes for the elderly in Tanzania was compliant with all standards and the associated criteria, thus compromising the care of residents, due to a deficiency in healthcare structure standards.

CHAPTER 8: DEVELOPMENT OF THE DRAFTED STANDARDS AND CRITERIA

8.1 INTRODUCTION

This chapter contains a description of the second phase of the research process, namely the development of the drafted structured healthcare standards and the associated criteria. Accordingly, an explanation is provided on the development of the healthcare standards and the accompanied validation process thereof.

The development of the standards and the criteria followed the COHSASA model that comprises five stages: normative, empirical, consensus, publishing and implementation described by Whittaker and Mazwai (2016:42-45). For the purpose of this chapter, the development of the drafted standards and the associated criteria deals with only the first three stages (see Chapter 4).

8.2 PROCESS OF DEVELOPING HEALTHCARE STANDARDS AND ASSOCIATED CRITERIA

The development process was facilitated by considering standards that have been applied in similar situations in developing countries. During the second phase, the drafted standards and the associated criteria were developed based on the findings of phase one and the relevant literature aligned with objective (ii) and (iii). The researcher, supervisor and co-supervisor and experts from organizations involved with providing services to the elderly in Tanzania were involved in the development of the drafted standards and the associated criteria.

8.2.1 Normative stage

This phase concerned the review of national and international literature. The review included grey literature (e.g., policies and legislation) and previous research studies on healthcare standards for homes of the elderly. This process involved the identification and synthesizing of relevant literature on healthcare standards for homes of the elderly.

The information derived from articles from credible researchers (e.g., Avedis Donabedian, Stuart Whittaker and Lizo Mazwai) who were identified through the literature, assisted in the development of the drafted standards and the associated criteria, specifically for the homes for the elderly in Tanzania. Furthermore, various approaches (e.g., best practices research and use of models) applied by researchers and experts increased the researcher's insight in developing

the standards and the associated criteria. The standards and criteria, which were identified through the reviewed literature were used to prepare the instruments applied in the situational analysis of the homes for the elderly.

8.2.2 Empirical stage

The researcher completed the situational analysis of the homes for the elderly through the completion of the audit instrument (see Annexure 2) and the staff working in the homes completed the Likert questionnaire (see Annexure 3) which was based on the audit instrument. In addition, the questionnaire had four open-ended questions that allowed the participant to provide depth to the choices they made. Both data collection methods were to explore the existing structure standards and the associated criteria applied in the homes for the elderly in Tanzania. To meet data quality and utilisation of research, the context, the homes for the elderly in Tanzania in which the standards will be applied were considered.

8.2.2.1 The audit of the homes

The audit instrument was developed based on established standards as identified in the literature, the researcher's experience and established international standards. The homes were audited according to the criteria contained in the audit instrument, notes were made of standards and associated criteria that did not apply to each home. The results showed that no homes (100%) complied with the standards and the associated criteria as indicated in chapter 5.

8.2.2.2 Staff working in the homes

The staff completed the Likert questionnaire that validated the findings of the audit instrument. The staff of all the homes completed the questionnaire indicating whether the homes were compliant or non-compliant with the standards and the associated criteria. In addition, the staff also indicated whether any standards and the associated criteria were not applicable to the homes. The results showed that no homes (100%) were compliant with the standards and the associated criteria referred to in chapter 6. These results substantiated the results obtained from the audit of the homes.

After the situational analysis, the standards and criteria were refined according to the findings, thereafter the experts were consulted.

8.2.3 Consensus stage/Consultative phase

Two Tanzanian organizations, Tanzania Older People's Platform (TOP) and Saidia Wazee Karagwe (SAWAKA), who are involved in developing healthcare standards and associated criteria

in Tanzania, as well as the supervisor and co-supervisor were consulted to assist with the formulation of the drafted standards and associated criteria.

Tanzania Older People's Platform (TOP) is a network of 15 older people's rights organisations who aim to voice and promote the interests of all older people in Tanzania. The expanded interest of the organization (Top, 2016:1-3) is to shape appropriate policy responses in the interest of older people, to provide consultancy services and training to member age-care organizations and to raise awareness at national level of the opportunity and challenges that arise from ageing in the country.

SAWAKA is concerned with welfare of older people in the country. In addition, the organization works with the organization, Help Age International Tanzania to develop social protection policies that recognise universal rights of older people. Furthermore, through working with Help Age International Tanzania, SAWAKA empowers older people to claim their rights and seek protection from violence and discrimination (Mutakyahwa, 2016:92).

The questionnaire sent to the organizations, supervisor and co-supervisor included the standards and the associated criteria, that the researcher adapted, based on the outcome of the situational analysis. The experts, supervisor and co-supervisor were asked to evaluate each standard and the associated criteria. They were granted three options to decide about each standard, namely whether they support the standard, support the standard with modification or do not support the standard. In addition, the experts, supervisor and co-supervisor were asked to suggest modifications or alternative standards if any.

The results showed that out of 26 drafted standards, four sub-standards and 262 associated criteria, all the standards and 257 (98%) of criteria were agreed upon by the experts without any modification. Only 5 (2%) of the criteria underwent some discussions between the researcher and the experts before these were also accepted.

A further process of consulting experts was conducted through the Delphi process to validate the drafted standards and the associated criteria as described in chapter 9.

8.2.4 Publication stage

For the purpose of this study, publishing of the standards and criteria will follow the examination of the dissertation and the awarded of the PhD degree through the University of Stellenbosch.

8.2.5 Implementation stage

The standards and the associated criteria will be implemented in homes for the elderly in Tanzania in the post-doctorate period.

8.3 SUMMARY

The development of healthcare standards and the associated criteria involved the researcher, supervisor and co-supervisor and experts from organizations involved with providing services to the elderly in Tanzania. The process of developing the standards followed COHSASA model with five stages namely: normative, empirical, consensus, publishing and implementation, but for the purpose of this study, only the first three stages namely normative, empirical, consensus were applied (Whittaker and Mazwai, 2016:42-45) in the development of the drafted standards and associated criteria.

8.4 CONCLUSION

The developed drafted standards and criteria considered the needs of residents in the homes for the elderly. A further consultation process was followed to validate the standards and criteria through the Delphi technique described in chapter 9, before implementation thereof in the homes of the elderly.

CHAPTER 9: VALIDATION PROCESS OF THE DRAFTED HEALTHCARE STANDARDS AND THE ASSOCIATED CRITERIA

9.1 INTRODUCTION

This chapter presents the results of the validation process conducted through the Delphi technique of the drafted set of healthcare standards and the associated criteria that contributed to the care of residents in homes for the elderly in Tanzania. The Delphi technique was applied in validating the healthcare standards and criteria. The validation process underwent round one and round two to reach consensus among the experts of ≥ 80%.

9.2 EXPERTS INVOLVED IN THE DELPHI TECHNIQUE

The Delphi questionnaires were sent to 165 experts identified through the literature. The experts were selected based on their expertise of validating drafted healthcare standards, thus purposive sampling was applied (Ogbeifun et al., 2016:1-6;Goodarzi et al., 2018:219-230;Skulmoski et al., 2007:1-21). However, only 32 (19.3%) experts completed and returned the questionnaires. Most of the experts who did not return the questionnaires apologised and provided various reasons such as busy schedule, being sick, too long questionnaire to complete and being out of their offices.

By completing the questionnaire, it was accepted that the expert gave informed consent. The experts who participated in this first round were from various institutions and organizations. These included: Ministry of Health and Social Welfare of Tanzania (MoHCDEC), Tanzania Nursing and Midwifery Council (TNMC), The International Society for Quality in Health Care (ISQua), South African Nursing Council (SANC), Council for Health Service Accreditation of Southern Africa (COHSASA) and experts from various universities that offer health science degrees and individual independent experts.

9.3 RESULTS OF ROUND ONE

Thirty-two experts completed and returned the Delphi questionnaires as indicated in paragraph 9.2. The questionnaire had two sections: demographic profile of the experts and the draft healthcare standards and criteria.

9.3.1 Section A: Demographic profile of the participants (questions 1-3)

The demographic profile of the participants included professional category, academic qualifications and area of expertise.

9.3.1.1 Question1: Professional category

As shown in table 9.1, most of the experts (n=15, 47%) were academics and researchers. In addition, experts (n=4, 13%) who indicated the "other" category in the table were: accreditation organisation chief executive officer, clinical mental health nurse specialist, community health nurse, and an academic and board member of The South African Nursing Council and The Council for Health Service Accreditation of Southern Africa (COHSASA-SANC).

Table 9.1: Professional category of participants (n=32)

Professional category	Frequency (n=32)	%
Gerontology nurse	2	6
Social worker	2	6
Nursing Administrator	1	3
Nursing home/homes for the elderly Nurse	4	13
Academia and Research	15	47
Psychiatrist	2	6
Registered Nurse	2	6
Other	4	13
Total	**32**	**100**

9.3.1.2 Question 2: Academic qualification

Majority of the participants (n=19, 59%) had a doctorate degree as indicated in: 9.2.

Table 9.2: Academic qualifications of the participants (n=32)

Academic qualification	Frequency (n=32)	%
Advanced diploma	1	3
Bachelor	1	3
Masters	11	34
Doctorate	19	59
Total	**32**	**99**

Note: The total shows 99% as the decimals were rounded to the nearest whole number.

9.3.1.3 Question 3: Area of expertise of participants

Apart from the experts (n=13, 41%) who indicated "other", the remaining experts (n=19, 59%) were directly involved with elderly care and for developing healthcare standards, policies and guidelines for elderly care as shown in table 9.3.

Table 9.3: Participants' area of expertise (n=32)

Area of expertise	Frequency (n=32)	%
Teaching care of the elderly	5	16
Clinical practice in homes for the elderly	2	6
Management of homes for the elderly	2	6
Supervision of homes for the elderly	2	6
Participating in preparing guidelines for elderly	1	3
Participating in policymaking for the elderly	3	9
Writing healthcare standards for the elderly	4	13
Others	13	41
Total	**32**	**100**

9.3.2 Section B: Draft healthcare standards and criteria

The Delphi questionnaires (see Annexure 1) included 26 healthcare standards, four sub-standards and 262 criteria. The participants had a choice to rate the drafted healthcare standards and the associated criteria as both, 'I support the draft healthcare standard and criteria' or 'I support the draft healthcare standard and criteria with modification' or 'I do not support the draft healthcare standard and criteria'. In addition, a space was provided for the suggested modifications or alternative healthcare standards and or criteria. All the healthcare standards (100%) included in the questionnaire reached consensus among the experts, including 258 (98.5%) of the criteria at a cut-off point of ≥ 80%.

9.3.2.1 Field 1 infrastructure: Basic physical structures and facilities enabling efficient and effective functioning of the home (n=32)

9.3.2.1.1 Standard 1.1: Doorways, passages and staircases provide safe access to residents

a. Criteria 1.1.1–1.1.12

As shown in table 9.4, the agreement for 12 criteria of standard 1.1: "Doorways, passages and staircases provide safe access to residents" ranged from 84% to 100% (above the cut-off point of ≥80%), thus consensus level among the experts was achieved.

Table 9.4: Criteria for Standard 1.1: Doorways, passages and staircases provide safe access to residents (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.1.1 Footlights at both sides of stairs	28	88
1.1.2 End of stairs clearly marked (top to bottom)	29	91
1.1.3 Stairs are free from damage	28	88
1.1.4 Handrails on both sides of stairs	31	97
1.1.5 Doorways wide enough for passage of residents, wheelchairs and hoists	30	94
1.1.6 Doorways are obstruction free	32	100
1.1.7 Door thresholds aligned with floor	31	97
1.1.8 Proper lighting	27	84
1.1.9 Furniture arranged to facilitate mobility	31	97
1.1.10 Non-slip floors	32	100
1.1.11 Railings in passages on both sides	27	84
1.1.12 Overhead lights	29	91

9.3.2.1.2 Standard 1.2: Bedrooms provide total comfort to residents

a. Criteria 1.2.1–1.2.13

The consensus between the experts for three of the criteria among the 12 criteria required for compliance with standard 1.2: “Bedrooms provide total comfort to residents” failed to reach ≥ 80%. The criteria included bedrooms for the number of residents (n=23, 72%), spacing between beds (n=23, 72%) and cupboard for residents’ clothes (n=24, 75%) as shown in table 9.5. These three criteria were adapted and included in the Delphi questionnaire for the second round.

Table 9.5: Criteria for Standard 1.2: Bedrooms provide total comfort to residents (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.2.1 Bedrooms for the number of residents	23	72
1.2.2 Hospital beds for frail care provided	28	88
1.2.3 Spacing between beds	23	72
1.2.4 Bedside rails	28	88
1.2.5 Bedside light accessible	27	84
1.2.6 Emergency alert system accessible from bed	30	94
1.2.7 Controlled temperature system	26	81
1.2.8 Floor lights	26	81
1.2.9 Bedside cupboard	27	84
1.2.10 Screens/curtains between beds to provide privacy	30	94
1.2.11 Ventilation	28	88
1.2.12 Towel rails	30	94
1.2.13 Cupboard for residents' clothes	24	75

9.3.2.1.3 Standard 1.3: Bathrooms and showers provide safe access to bath or shower

a. Criteria 1.3.1–1.3.12

Table 9.6 shows that one criterion, "Bath positioned in the centre of the bathroom", among the 12 criteria required for compliance with standard 1.3: "Bathrooms and showers provide safe access to bath or shower" had an agreement of 78%, and thus it failed to reach the consensus level of ≥80% among the experts. The criteria were adapted and included in the Delphi questionnaire for round two.

Table 9.6: Criteria for Standard 1.3: Bathrooms and showers provide safe access to bath or shower (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.3.1 Easy access to bathroom	30	94
1.3.2 Able to safely transfer in/out of tub or shower	28	88
1.3.3 Floor lights available	26	81
1.3.4 Grab bars available and secure	31	97
1.3.5 Non-slip floorings in bath or shower	30	94
1.3.6 Shower adaptable with shower chair, walk-in shower	31	97
1.3.7 Container/bin for proper disposal of soiled incontinence pads/napkins	32	100
1.3.8 Bath positioned in the centre of the bathroom	25	78
1.3.9 Easy access for a hoist	31	97
1.3.10 Easy access for wheelchairs	31	97
1.3.11 Emergency alert system accessible	31	97
1.3.12 Towel rails	28	88

9.3.2.1.4 Standard 1.4: Toilets are safe and accessible

a. Criteria 1.4.1–1.4.6

All six criteria required for compliance with standard 1.4: “Toilets are safe and accessible” were agreed upon above the cut-off point ≥80% of the experts as shown in table 9.7. Thus, consensus among the experts was achieved.

Table 9.7: Criteria for Standard 1.4: Toilets are safe and accessible (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.4.1 Residents’ toilets clearly marked	30	94
1.4.2 Clearly marked toilets for males and females	30	94
1.4.3 Grab bars available and secure	30	94
1.4.4 Overhead lighting	31	97
1.4.5 Staff toilets marked	29	91
1.4.6 Container/bin for proper disposal of soiled incontinence pads	31	97

9.3.2.1.5. Standard 1.5: Kitchen facilities for preparation of meals for the number of residents

a. Criteria 1.5.1–1.5.12

As shown in table 9.8, standard 1.5: "Kitchen facilities for preparation of meals for the number of residents" had 12 criteria for compliance. Agreement level for all criteria aligned with this standard ranged from 88% to 94%, thus reaching consensus level of ≥80% among the experts.

Table 9.8: Criteria for Standard 1.5: Kitchen facilities for preparation of meals for the number of residents (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.5.1 Storage space for food for present number of residents	29	91
1.5.2 Stoves available for the size of the home	28	88
1.5.3 Utensils	28	88
1.5.4 Utensils within reach	30	94
1.5.5 Freezer	30	94
1.5.6 Cold storage room	26	81
1.5.7 Crockery	30	94
1.5.8 Water jugs and tumblers	30	94
1.5.9 Cooking equipment	30	94
1.5.10 Protective clothing for the cooks	28	88
1.5.11 Cupboard for stainless steel items	30	94
1.5.12 Cupboard for glassware	30	94

9.3.2.1.6 Standard 1.6: Linen bank provides bedding and nightclothes for the number of residents

a. Criteria 1.6.1–1.6.8

In total, eight criteria were required for compliance with standard 1.6: "Linen bank provides bedding and night clothes for the number of residents" as shown in table 9.9. The agreement rate for all criteria were ≥80% (88-97%), thus indicating acceptance among the experts.

Table 9.9: Criteria for Standard 1.6: Linen bank provides bedding and nightclothes for the number of residents (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.6.1 Linen	29	91
1.6.2 Blankets	30	94
1.6.3 Pillows	30	94
1.6.4 Pillow covers	31	97
1.6.5 Nightclothes	28	88
1.6.6 Dressing gowns	29	91
1.6.7 Washrags	31	97
1.6.8 Towels	31	97

9.3.2.1.7 Standard 1.7: Dining room provides facilities for residents to have their meals

a. Criteria 1.7.1–1.7.5

Table 9.10 shows that the experts supported the five criteria required for compliance with standard 1.7: "Dining room provides facilities for residents to have their meals" reaching an agreement level from 88% to 97% as shown in table 9.10. Thus, the required consensus level of ≥80% was reached.

Table 9.10: Criteria for Standard 5.7: Dining room provides facilities for residents to have their meals (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.7.1 Dining tables	31	97
1.7.2 Chairs	31	97
1.7.3 Limited number of wheelchair-friendly tables	28	88
1.7.4 Emergency alert system accessible	30	94
1.7.5 Tablecloths and serviettes	31	97

9.3.2.1.8 Standard 1.8: Supportive facilities to sustain and support day-to-day services

a. Sub-standard 1.8.1: Sluice room

Criteria 1.8.1.1–1.8.1.3

Six criteria were required for compliance with substandard 1.8: “Sluice room”. The experts reached an agreement level from 84% to 100% as shown in table 9.11. Thus, consensus level among the experts was achieved.

Table 9.11: Criteria for Sub-standard 1.8.1: sluice room (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.8.1 Sluice room suitable to:		
1.8.1.1 Clean dirty equipment for elimination such as urinal bottles and bed pans	27	84
1.8.1.2 Keep equipment for elimination clean	31	97
1.8.1.3 Containers for sharps	31	97
1.8.1.4 Containers for surgical wastes	32	100
1.8.1.5 Dirt bin	32	100
1.8.1.6 Rinse soiled bed linen	30	94

b. Sub-standard 1.8.2: Dressing room

Criteria 1.8.2.1–1.8.2.10

As shown in table 9.12, sub-standard 1.8.2: “Dressing room” had ten criteria for compliance. Experts reached an agreement level, which ranged from 94% to 100%. Thus, a consensus level was reached of ≥ 80%.

Table 9.12: Criteria for Sub-standard 1.8.2: Dressing room (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.8.2 Dressing room:		
1.8.2.1 Steriliser	30	94
1.8.2.2 Locked cupboard for poisons and non-poisonous substances	30	94
1.8.2.3 Locked cupboard for instruments and utensils	30	94
1.8.2.4 Locked cupboard for medication stock	31	97
1.8.2.5 Locked medication trolley	32	100
1.8.2.6 Antiseptic solutions	31	97
1.8.2.7 Hand washing equipment	32	100
1.8.2.8 Drums with sterile equipment	31	97
1.8.2.9 Dressings trolley	31	97
1.8.2.10 Dustbin	31	97

c. Sub-standard 1.8.3: Nurses' station

Criteria 1.8.3.1–1.8.3.4

Table 9.13 shows that all three criteria for compliance with sub-standard 1.8.3: "Nurses' station", reached a consensus level among the experts with an agreement ranging from 94% to 100%.

Table 9.13: Criteria for Sub-standard 1.8.3: Nurses' station (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.8.3 Nurses' station with:	30	94
1.8.3.1 Desk	31	97
1.8.3.2 Chairs	31	97
1.8.3.3 Locked cupboards for keeping documents	32	100

d. Sub-standard 1.8.4: Other supportive facilities

Criteria 1.8.4.1–1.8.4.4

The agreement level of four criteria required for compliance with sub-standard 1.8.4: "Other supportive facilities" were above the cut-off point, ranging from 88% to 97% as shown in table 9.14. Thus, consensus among the experts was reached.

Table 9.14: Criteria for Sub-standard 1.8.4: Other supportive facilities (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.8.4.1 Secretary's office	28	88
1.8.4.2 Rest rooms for staff	31	97
1.8.4.3 Activity room for residents	31	97
1.8.4.4 Laundry	31	97

9.3.2.1.9 Standard 1.9: Facility for residents with Alzheimer's disease to ensure their safety and security

a. Criteria 1.9.1–1.9.16

As shown in table 9.15, the agreement level of 16 criteria required to meet compliance with standard 1.9: "Facility for residents with Alzheimer's disease to ensure their safety and security" ranged from 88% to 100%, which is above the indicated cut-off point of ≥80%. Thus, consensus level among the experts was achieved.

Table 9.15: Criteria for Standard 1.9: Facility for residents with Alzheimer's disease to ensure their safety and security (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.9.1 Spacious rooms available	28	88
1.9.2 Windows have safety guards attached	31	97
1.9.3 Windows with covering (no curtains)	29	91
1.9.4 Beds with minimum linen	29	91
1.9.5 Built in cupboards with locks	32	100
1.9.6 No movable furniture	30	94
1.9.7 Wash basins and baths have taps without a turn-on knob	31	97
1.9.8 Well ventilated rooms with controlled temperature	30	94
1.9.9 Rooms with locked doors	28	88
1.9.10 Access to outdoor secure areas	32	100
1.9.11 Handrails in the hallways and grab-bars in the bathrooms	31	97
1.9.12 Non-slip floors	32	100
1.9.13 Minimised sharp colour contrasts in flooring and borders; strong, busy patterns avoided	32	100
1.9.14 Motion detectors in rooms of residents prone to falls	30	94
1.9.15 Exits that lead to unprotected areas are monitored	31	97
1.9.16 Exit doors not intended for resident use situated parallel to the hallway, so they are less visible	29	91

9.3.2.2 Field 2: Clinical management

9.3.2.2.1 Standard 2.1: Equipment for direct care available

a. Criteria 2.1.1–2.1.11

Eleven criteria were required for compliance with standard 2.1: "Equipment for direct care available". The agreement level ranged from 88% to 97% as shown in table 9.16, which is above the indicated cut-off point (≥80%), thus achieving consensus level among the experts.

Table 9.16: Criteria for Standard 2.1: Equipment for direct care available (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
2.1.1 Surgical instruments	28	88
2.1.2 Hoist for heavy residents	29	91
2.1.3 Wheelchairs	29	91
2.1.4 Walking aids	30	94
2.1.5 Raised toilet seat	30	94
2.1.6 Commode	30	94
2.1.7 Blood pressure apparatus	29	91
2.1.8 Thermometers	30	94
2.1.9 Weighing scale	29	91
2.1.10 Portable suction machine	31	97
2.1.11 Oxygen cylinders with gauge filled with oxygen	31	97

9.3.2.2.2 Standard 2.2: Emergency tray available for emergency care

a. 2.2.1–2.2.10 Criteria

Table 9.17 shows that all 10 criteria required for compliance with standard 2.2: “Emergency tray available for emergency care”, achieved consensus level among the experts by 94% to 97%, which is above the indicated cut-off point.

Table 9.17: Criteria for Standard 2.2: Emergency tray available for emergency care (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
2.2.1 Laryngoscope	30	94
2.2.2. Spatula	30	94
2.2.3 Mouth gag	31	97
2.2.4 Tongue forceps	31	97
2.2.5 Ambubag	31	97
2.2.6 Adrenaline	31	97
2.2.7 Atropine	30	94
2.2.8 Phenergan	31	97
2.2.9 Needles of various sizes	31	97
2.2.10 Syringes of various sizes	31	97

9.3.2.2.3 Standard 2.3: Equipment for indirect care available

b. Criteria 2.3.1–2.3.2

The two criteria required for compliance with standard 2.3: "Equipment for indirect care available", were agreed upon by 91% and 88%, for availability of flashlights and cleaning equipment respectively. The agreement was above the cut-off point of ≥ 80%, which indicated consensus among the experts.

Table 9.18: Criteria for Standard 2.3: Availability of equipment for indirect care (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
Flashlights available	29	91
Cleaning equipment	28	88

9.3.2.2.4 Standard 2.4: Disposable items for direct care available

a. Criteria 2.4.1–2.4.13

As shown in table 5.19, 13 criteria required for compliance with standard 2.4: "Disposable items for direct care available" were all agreed upon by 84% to 97%, thus achieving consensus among experts.

Table 9.19: Criteria for Standard 2.4: Availability of disposable items for direct care (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
2.4.1 Dressings	31	97
2.4.2 Bandages	31	97
2.4.3 Medication	27	84
2.4.4 Catheters	30	94
2.4.5 Urine bags	31	97
2.4.6 Oxygen masks various percentages (24, 28, 35 and 40)	31	97
2.4.7 Nasal catheter to administer oxygen	31	97
2.4.8 Suction catheters	31	97
2.4.9 Silicone tubing	31	97
2.4.10 Napkins	30	94
2.4.11 Soap	30	94
2.4.12 Antiseptic solutions	31	97
2.4.13 Skin care cream	29	91

9.3.2.3 Field 3: Meals and water

9.3.2.3.1 Standard 3.1: Residents provided with meals according to individual needs

a. Criteria 3.1.1–3.1.4

Four criteria required for compliance with standard 3.1: "Residents provided with meals according to individual needs" had an agreement level among experts ranging from 91% to 100%, much higher than the cut-off point (≥ 80%) as shown in table 9.20. Thus, consensus level among the experts was achieved.

Table 9.20: Criteria for standard 3.1: Residents provided with meals according to individual needs (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
3.1.1 Meals menu rotated between seasons	29	91
3.1.2 Special meals provided	31	97
3.1.3 Schedule for mealtimes	32	100
3.1.4 Schedule for tea-times	32	100

9.3.2.3.2 Standard 3.2: Water is available

a. Criteria 3.2.1–3.2.2

Consensus was reached among the experts for the criteria required for compliance with standard 3.2: "Water is available". The agreement level was higher than the cut-off point by 97% for supply of hot and cold water for the number of residents and by 81% for ionised water as shown in table 9.21.

Table 9.21: Criteria for Standard 3.2: Availability of water (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
3.2.1 Supply of hot and cold water for the number of residents	31	97
3.2.2 Ionised water	26	81

9.3.2.3.3 Standard 3.3: Water sources

a. Sub-standard 3.3.1: Municipal water

Criteria 3.3.1.1–3.3.1.5

As shown in table 9.22, five criteria are required for compliance with sub-standard 3.3.1: "Municipal water", all experts agreed with an agreement level from 91% to 94% which is above the cut-off point (≥ 80%), thus reaching consensus level among the experts.

Table 9.22: Criteria for Sub-standard 3.3.1: Municipal water (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
3.3.1 Municipal water	30	94
3.3.1.1 Check for bacteriological indicators of faecal contamination	30	94
3.3.1.2 Free chlorine residual	30	94
3.3.1.3 Check pH	29	91
3.3.1.4 Check for turbidity	29	91
3.3.1.5 Check for conductivity/total dissolved solids	30	94

9.3.2.3.4 Sub-standard 3.3.2: Borehole water

a. Criteria 3.3.2.1–3.3.2.5

Table 9.23 shows that the agreement for the criteria required for compliance with sub-standard 3.3.2: "Borehole water" was from 91% to 94%, which is above the cut-off point (≥ 80%). Thus, consensus level among the experts was reached.

Table 9.23: Criteria for Sub-standard 3.3.2: Borehole water (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
3.3.2 Borehole water	29	91
3.3.2.1 Situated far away from sewage material	30	94
3.3.2.2 Proper sanitary survey	29	91
3.3.2.3 Water treatment	29	91
3.3.2.4 Water purification method such as boiling, filtration	30	94
3.3.2.5 Proper pre-settlement	29	91

9.3.2.3.5 Sub-standard 3.3.3: Wells Criteria 3.3.3.1–3.3.3.5

All the criteria required for compliance with sub-standard 3.3.3: "Wells", were agreed upon among the experts (88%) which is above the indicated cut-off point of ≥ 80% as shown in table 9.24.

Table 9.24: Criteria for Sub-standard 3.3.3: Wells (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
3.3.3 Wells	28	88
3.3.3.1 Determination of the concentrations of inorganic constituent	28	88
3.3.3.2 Measurement of pH	28	88
3.3.3.3 Evaluation of temperature, colour, turbidity, odour and taste	28	88
3.3.3.4 Bacteria analysis	28	88
3.3.3.5 Measurement of specific electrical conductance	28	88

9.3.2.3.6 Sub-standard 3.3.4: Rainwater tanks

a. Criteria 3.3.4.1–3.3.4.2

Criteria required for compliance with sub-standard 3.3.4: "Rainwater tanks" were all agreed upon by the experts (84% to 91%), which is higher than the cut-off point of ≥ 80%. Thus, the required consensus among the experts as shown in table 9.25 was reached.

Table 9.25: Criteria for Sub-standard 3.3.4: Rainwater tanks (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
3.3.4 Rainwater tanks	29	91
3.3.4.1 Check for quality of pH	27	84
3.3.4.2 Check for quality of turbidity	27	84

9.3.2.4 Field 4: Residents' rights

9.3.2.4.1 Standard 4.1: Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information are respected

a. Criteria 4.1.1–4.1.7 Criteria

Table 9.26 shows that the consensus level among the experts for criteria required for compliance with standard 4.1: "Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information are respected" was from 88% to 100%. Thus, consensus was reached among the experts.

Table 9.26: Criteria for Standard 4.1: Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information are respected (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
4.1.1 Resident surveys	29	91
4.1.2 Archive facility for residents' records	32	100
4.1.3 Secure filing system of residents' information	32	100
4.1.4 Safe recordkeeping facility	30	94
4.1.5 Complaints/compliments register	30	94
4.1.6 Consent forms available	28	88
4.1.7 Locked facility for files of the residents	30	94

9.3.2.5 Field 5: Guiding documents for residents' care

9.3.2.5.1 Standard 5.1: Standard operating procedures available to provide safe quality care to residents

a. Criteria 5.1.1–5.1.14 Criteria

The criteria as shown in table 9.28, required for compliance with standard 5.1: "Standard operating procedures available to provide safe quality care to residents", the agreement level among experts was from 91% to 100% which is higher than the indicated cut-off point (≥ 80%). Thus, the consensus level among the experts was reached.

Table 9.27: Criteria for Standard 5.1: Standard operating procedures available to provide safe quality care to residents (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
5.1.1 Standards operating procedures (SOP) manual	30	94
5.1.2 Admission and discharge procedures	32	100
5.1.3 Lifting patients	31	97
5.1.4 Bathing/washing residents	32	100
5.1.5 Keeping residents' files	31	97
5.1.6 Wound care	32	100
5.1.7 Urinary catheter care	32	100
5.1.8 Feeding procedure	31	97
5.1.9 Safe keeping of valuables	32	100
5.1.10 Managing scabies	29	91
5.1.11 Prevention of falls	32	100
5.1.12 Hand hygiene	32	100
5.1.13 Personal protective clothes	32	100
5.1.14 Waste disposal	32	100

9.3.2.5.2 Standard 5.2: Policies available to provide guidance to activities in the home

a. Criteria 5.2.1–5.2.11

Eleven criteria required for compliance with standard 5.2: "Policies available to provide guidance to activities in the home" were agreed upon by 94% to 100% of the experts, which was higher than the cut-off point, thus reaching consensus among the experts as shown in table 9.29.

Table 9.28: Criteria for Standard 5.2: Policies available to provide guidance to activities in the home (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
5.2.1 Admission	32	100
5.2.2. Living needs	32	100
5.2.3 Safety and security of residents	32	100
5.2.4 Resident satisfaction	32	100
5.2.5 Prohibiting abuse of patients	31	97
5.2.6 Information to residents and families	31	97
5.2.7 Quality assurance	30	94
5.2.8 Infection control and prevention	32	100
5.2.9 Recordkeeping	32	100
5.2.10 Environment hygiene	32	100
5.2.11 Safe keeping of valuables	32	100

9.3.2.5.3 Standard 5.3: Specific indicators set to monitor and evaluate care provided to residents

a. Criteria 5.3.1–5.3.9

Nine criteria required for compliance with standard 5.3: “Specific indicators set to monitor and evaluate care provided to residents” reached consensus among experts ranging from 91% to 100%, higher than the cut-off point as shown in table 9.30, thus indicating consensus among experts.

Table 9.29: Criteria for Standard 5.3: Specific indicators set to monitor and evaluate care provided to residents (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
5.3.1 Urinary tract infection (UTI)	32	100
5.3.2 Bowel incontinence	31	97
5.3.3 Home acquired pressure ulcers	32	100
5.3.4 Scabies	30	94
5.3.5 Depression	32	100
5.3.6 Infection	31	97
5.3.7 Falls	32	100
5.3.8 Adverse events	29	91
5.3.9 Residents' satisfaction surveys	30	94

9.3.2.5.4 Standard 5.4: Guidelines available to provide guidance for specific activities in the home

a. Criteria 5.4.1–5.4.7

As shown in table 9.31, seven criteria that were required for compliance with standard 5.4: "Guidelines available to provide guidance for specific activities in the home" were agreed by 94% to 100% of the experts, thus reaching consensus level among the experts.

Table 9.30: Criteria for Standard 5.4: Guidelines available to provide guidance for specific activities in the home (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
5.4.1 Guidelines manual	30	94
5.4.2 Purchasing of medications, equipment and other requirements	31	97
5.4.3 Managing geriatric patients	30	94
5.4.4 Managing residents with dementia or Alzheimer's disease	31	97
5.4.5 Transfer residents to a hospital	32	100
5.4.6 Manage the death of a resident	32	100
5.4.7 Ordering food	31	97

9.3.2.6 Field 6: Safety and security

9.3.2.6.1 Standard 6.1: Requirements available for ensuring residents' protection and home environment that are free from danger and threats

a. Criteria 6.1.1–6.1.14

Table 9.32 shows that the agreement of 14 criteria required for compliance with standard 6.1: "Requirements available for ensuring residents' protection and home environment that are free from danger and threats" ranged from 97% to 100% which is above the cut-off point (≥ 80%), thus reaching consensus level among the experts.

Table 9.31: Criteria for Standard 6.1: Requirements available for ensuring residents' protection and home environment which are free from danger and threats (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
6.1.1 Fire extinguishers	31	97
6.1.2 Fire alarm system	31	97
6.1.3 Smoke detectors	31	97
6.1.4. Fire hose	31	97
6.1.5 Doors leading to the outside are linked to an alarm system	32	100
6.1.6 If there is a lift clearly marked not to be used when there is a fire	32	100
6.1.7 Alarm system for break-ins or robberies	31	97
6.1.8 Cameras in the passages of the building	31	97
6.1.9 Surveillance system on the grounds	31	97
6.1.10 Security guards at entry gates	31	97
6.1.11 Emergency exists clearly marked	32	100
6.1.12 Signage clearly marked	32	100
6.1.13 Storage for hazardous chemicals	32	100
6.1.14 Safe storage for electrical equipment	32	100

9.3.2.6.2 Standard 6.2: Communication support systems available to allow communication with staff

a. Criteria 6.2.1–6.2.3

Three criteria as required for compliance with standard 6.2: "Communication support systems available to allow communication with staff", were agreed by 97% of the experts, which is higher

than the cut-off point (≥ 80%). Thus, consensus level was reached among the experts as shown in table 9.37.

Table 9.32: Criteria for Standard 6.2: Communication support systems available to allow communication with staff (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
6.2.1 Telephone system, resident call system, electronic communication such as email	31	97
6.2.2 Call system accessible to patients in all rooms namely bathrooms, toilets, dining room and at the bedside	31	97
6.2.3 Emergency response system available	31	97

9.3.2.6.3 Standard 6.3: Recreational activities available to allow socialisation

a. Criteria 6.3.1–6.3.3

With reference to the criteria as required for compliance with standard 6.3: "Recreational activities available to allow socialisation", the agreement level for the three criteria were 97% and one criterion agreed by 100% as shown in table 9.38. Thus, all three criteria reached consensus level among the experts.

Table 9.33: Criteria for Standard 6.3: Recreational activities available to allow socialisation (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
1.1.1 Gardens	31	97
1.1.2 Library	31	97
1.1.3 A variety of recreational activities	32	100

9.3.2.7 Field 7: Human resources

9.3.2.7.1 Standard 7.1: Staff available for the various activities in the home

a. Criteria 7.1.1–7.1.13

As shown in table 9.38, the 13 criteria as required for compliance with standard 7.1: "Staff available for the various activities in the home" were agreed upon by the experts ranging from

88% to 97%, which were above the cut-off point of ≥ 80%. Thus, consensus level among the experts was reached.

Table 9.34: Criteria for Standard 7.1: Staff available for the various activities in the home (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
7.1.1 General manager/social workers	28	88
7.1.2 Geriatric trained professional nurse(s)	31	97
7.1.3 Professional nurses	29	91
7.1.4 Non-professional nurses	28	88
7.1.5 Caregivers	30	94
7.1.6 Cleaners	31	97
7.1.7 Cooks	30	94
7.1.8 General maintenance workers	31	97
7.1.9 Security at the gates	31	97
7.1.10 Administrative staff	31	97
7.1.11 Accountant	31	97
7.1.12 Secretary	31	97
7.1.13 Housekeepers	31	97

9.3.2.7.2 Standard 7.2: Human Resource policies available to ensure efficient and effective management of human resources

a. Criteria 7.2.1–7.2.9

Among the nine criteria required for compliance with standard 7.2: “Human Resource policies available to ensure efficient and effective management of human resources”, three criteria were agreed upon by 97% and six criteria were agreed by 100% of the experts as shown in table 9.39. Therefore, all nine criteria were agreed upon above the indicated cut-off point (≥ 80%), thus reaching consensus level among the experts.

Table 9.35: Criteria for Standard 7.2: Human Resource policies available to ensure efficient and effective management of human resources (n=32)

Criteria	Consensus level	
	Frequency (n=32)	%
7.2.1 Training and development	32	100
7.2.2 Leave	32	100
7.2.3 Grievance	32	100
7.2.4 Recognition of long service	31	97
7.2.5 Recruitment and selection	32	100
7.2.6 Wellness	32	100
7.2.7 Disciplinary	31	97
7.2.8 Job descriptions	31	97
7.2.9 Performance appraisal/ work agreements	32	100

9.3.3 Criteria in disagreement (<80% consensus level)

As shown in table 9.40, after the completion of round one, four criteria of two healthcare standards, did not reach a consensus level of ≥ 80%. Amendments were recommended by the experts. Consequently, these criteria were modified and incorporated in the Delphi questionnaire for round two.

Table 9.36: Criteria in disagreement (n=32)

Healthcare standards	Criteria	Consensus level	
		Frequency (n=32)	%
1.1 Bedrooms provide total comfort to residents	1.1.1 Bedrooms for the number of residents	23	72
	1.1.2 Spacing between beds	23	72
	1.1.3 Cupboard for residents' clothes	24	75
1.2 Bathrooms and showers provide safe access to bath or shower	1.2.1 Bath is positioned in the center of the bathroom	25	78

9.4 RESULTS OF ROUND TWO

In round two of the Delphi technique, the Delphi questionnaires were sent to the same 32 experts (refer paragraph 9.3) who participated in round one, but only 25 (78%) of the experts completed and returned the questionnaires. Four criteria of the two healthcare standards which did not reach

consensus among the experts in round one (refer to paragraph 9.3.3) were included in the Delphi questionnaire for round two. The questionnaire had two sections: demographic profile of the Delphi experts and the draft healthcare standards and criteria.

9.4.1 Section A: demographic profile of the experts (questions 1-3)

The demographic profile of the participants included professional category, academic qualifications and area of expertise.

9.4.1.1 Question1: Professional category

Most of the experts (n=11, 44%) were academics and researchers as shown in table 9.41. In addition, the expert (n=1, 4%) who indicated the "other" category was a nurse educator.

Table 9.37: Professional category of participants (N=25)

Professional category	Frequency	%
Gerontology nurse	2	8
Social worker	1	4
Nursing Administrator	3	12
Nursing home/homes for the elderly Nurse	1	4
Academia and Research	11	44
Registered Nurse	6	24
Other (please specify)	1	4
Total	**25**	**100**

9.4.1.2 Question 2: Academic qualification

As shown in table 9.42, majority of the participants (n=15, 60%) had a doctorate degree

Table 9.38: Academic qualifications of the participants (N=25)

Academic qualification	Frequency	%
Advanced diploma	1	4
Bachelor	1	4
Masters	8	32
Doctorate	15	60
Total	**25**	**100**

9.4.1.3 Question 3: Area of expertise of participants

The expertise of most of the participants (n=9, 36%) was teaching care of the elderly as shown in table 9.43. The participants who indicated “other” (n=9, 36%), specified their expertise in quality assurance and research, clinical community nursing, academic and research, part-time volunteering in providing care in the homes for the elderly and supervising students conducting research about the elderly.

Table 9.39: Participants’ area of expertise (N=25)

Area of expertise	Frequency	%
Teaching care of the elderly	9	36
Management of homes for the elderly	1	4
Participating in policymaking for the elderly	1	4
Writing healthcare standards for the elderly	5	20
Other	9	36
Total	**25**	**100**

9.4.2 Section B: Draft healthcare standards and criteria

The Delphi questionnaire included the four criteria that did not reach consensus among the experts in round one. The four criteria were from two healthcare standards of one field. As indicated in round one, the participants had a choice to rate the draft healthcare standards and the associated criteria as both ‘I support the draft standard and criteria’ or ‘I support the draft standard and criteria with modification’ or ‘I do not support the draft standard and criteria’. In addition, a space was provided for the suggested modifications or alternative criteria. The four criteria (100%) included in the questionnaire for round two reached consensus among the experts of ≥ 80%.

9.4.2.1 Field 1 infrastructure: Basic physical structures and facilities enabling efficient and effective functioning of the home (n=25)

9.4.2.1.1 Standard 1.1 Bedrooms provide total comfort to residents

a. Criteria 1.1.1 – 1.1.3

The criteria were modified according to the experts’ suggestions and comments. After modification, the three criteria of standard 1.1: “Bedrooms provide total comfort to residents” had an agreement of 96% as indicated in table 9.44, which is above the cut-off point of ≥80%. Thus, consensus among the experts was achieved.

Table 9.40: Criteria for Standard 1.1: Bedrooms provide total comfort to residents (N=25)

	Consensus level	
	Frequency (n=25)	%
1.1.1 Sufficient bedrooms for the number of residents; rooms could be for a single resident, two residents or four to a room providing the required space of 1.58m^2 per resident	24	96
1.1.2 Good spacing of 1.5 to 2m between beds	24	96
1.1.3 Accessible individual cupboard for clothes, clearly labelled with resident's name	24	96

9.4.2.1.2 Standard 1.2 Bathrooms and showers provide safe access to bath or shower

a. Criteria 1.1.1

As shown in table 9.45, following modification, the agreement of the criterion of standard 1.2: "Bathrooms and showers provide safe access to bath or shower" was 96%, which is above the cut-off point of ≥ 80%, thus achieving consensus among the experts.

Table 9.41: Criteria for Standard 1.2: Bathrooms and showers provide safe access to bath or shower (n=25)

Criteria	Consensus level	
	Frequency n=25	%
1.1.1 Bathtub is positioned in the centre of the bathroom to allow nurses/ careers to assist the resident on both sides of the bath, also to allow space on both sides of the bath for the use of a hoist	24	96

9.5 SUMMARY

Two rounds were conducted to validate the healthcare standards and the associated criteria. A total of seven fields, 26 validated healthcare standards, four sub-standards and 262 criteria were included in the Delphi questionnaire for round one (Annexure 1). During this first round, 32 experts participated. All the healthcare standards (100%) included in the questionnaire reached consensus among the experts, including 256 (98.5%) of the criteria at a cut-off point of ≥ 80%. Four criteria of two healthcare standards and of one field did not achieve consensus among the experts. These criteria were modified according to the suggestions and comments that were provided by the experts. After incorporating the feedback from the experts, the criteria were included in the Delphi questionnaire for round two. In round two of the Delphi technique, the

questionnaire was sent to the same panel of 32 experts who participated in round one, but only 25 (78%) of the experts returned the questionnaires. Following round two of the Delphi technique, all four criteria had an agreement level of 96%, thus achieving consensus among the experts above the cut-off point of ≥ 80%.

9.6 CONCLUSION

In order to increase validity, both national and international experts were involved in the validation of the drafted healthcare standards and criteria. After two rounds of the Delphi technique, all the drafted healthcare standards and the associated criteria were validated. The agreement among the experts provided an insight on how to undertake the validated healthcare standards and the associated criteria to the next steps of publication and implementation.

CHAPTER 10: SUMMARY OF FINDINGS, RESEARCH OUTCOMES DISCUSSION AND RECOMMENDATIONS

10.1 INTRODUCTION

Chapter 10 concludes the study. A summary of the research findings is presented, discussed and interpreted. The potential significance of the research is explained; recommendations and suggestions for future research are presented. Furthermore, the chapter provides a plan for publication and implementation of the validated healthcare standards and the associated criteria. The validated standards and the associated criteria with the permission from the government should be implemented in homes for the elderly in Tanzania in the post-doctorate period.

10.2 RESEARCH PARADIGM

The philosophical underpinning of this study was guided by the critical realism theory (Gross, 2016:1-3), as described in paragraph 2.2. The care given to residents was explored, and the findings informed the development of healthcare standards and criteria for the homes for the elderly in Tanzania. The theory shaped the outcome and guided the study to describe how the developed standards and criteria for the homes for the elderly might result in positive outcomes for residents.

10.3 CONCEPTUAL FRAMEWORK

The Donabedian conceptual quality healthcare model framework (Donabedian, 1988:1743-1748) that was applied in this study, provided a basis to determine whether specific structure healthcare standards were applied to ensure safe, quality care for residents in the homes for the elderly in Tanzania. The framework was applied to audit the homes for the elderly in Tanzania. In addition, the framework guided the development of healthcare standards and criteria that are expected to contribute to the care of residents in the homes for the elderly in the country.

The model describes healthcare in three dimensions, namely structure, process and outcome, but for the purpose of this study, only structure healthcare standards were applicable. The situational analysis was completed to determine whether these homes for the elderly were compliant with the structure healthcare standards and the associated criteria. The results obtained through the audit of the homes were supported and validated with the findings obtained from the Likert questionnaire completed by all staff working in the homes for the elderly at the time of data collection. The healthcare standards and the associated criteria based on the situational analysis

were developed, based on the findings of phase one and relevant literature aligned with objectives (ii) and (iii) (refer to paragraph 4.3.1) and validated by using Delphi technique (refer to paragraph 4.4). The purpose of developing and validating healthcare standards and the associated criteria was to contribute to quality care for residents in homes for the elderly in Tanzania.

10.4 RESEARCH GOAL

The goal of developing and validating healthcare standards and the associated criteria to contribute to quality care for residents in homes for the elderly in Tanzania were achieved. At the end of the study, the researcher had validated healthcare standards and the associated criteria.

10.5 SUMMARY OF THE FINDINGS

The findings are summarized under three phases of the study. These three phases were situational analysis of the homes for the elderly, development and validation of healthcare standards and the associated criteria. In addition, this research had three research objectives (refer to paragraph 1.7) which guided the study to answer three research questions (refer to paragraph 1.6).

10.5.1 Situational analysis

A situational analysis was completed to meet research objective one, “To determine whether any healthcare standards were applied to ensure safe, quality care for residents in homes for the elderly in Tanzania”. The researcher used an audit instrument to complete a situational analysis of the standards of care in all (32) homes for the elderly found in Tanzania. In addition, all participants N=65 (100%), working in these homes for the elderly completed a Likert scale questionnaire to determine whether any healthcare standards are applied in the homes to ensure safe, quality care for residents in Tanzania. The findings from these 2 sub-studies contained in the situational analysis, showed that all (100%) of the homes for the elderly in Tanzania are non-compliant to the healthcare structure standards and associated criteria. Therefore, findings of objective one were the responses to research question one, “What are the healthcare standards currently applied to provide safe, quality care for residents in homes for the elderly in Tanzania?”.

10.5.2 Development of healthcare standards and the associated criteria

The development of healthcare standards and the associated criteria included the input of the researcher, supervisor and co-supervisor, biostatistician and experts from organizations involved with providing services to the elderly in Tanzania. The process of developing the standards and associated criteria followed the COHSASA model (Whittaker & Mazwai, 2016:42-45) of five

stages namely: normative, empirical, consensus, publishing and implementation, but for the purpose of this study, only the first three stages namely normative, empirical and consensus stages were included. In total, 26 drafted standards, four sub-standards and 262 drafted associated criteria were developed to meet objective two, thus answering the second research question, “What are the healthcare standards that should be developed and validated to provide safe, quality care to residents in homes for the elderly in Tanzania?”

10.5.3 Validation of healthcare standards and the associated criteria

National and international experts were involved in the validation of the drafted healthcare standards and criteria. These experts included staff from the Ministry of Health and Social Welfare of Tanzania (MoHCDEC), the Tanzania Nursing and Midwifery Council (TNMC), The International Society for Quality in Health Care (ISQua), The South African Nursing Council (SANC), the Council for Health Service Accreditation of Southern Africa (COHSASA) and experts from various universities that offer health science degrees and individual independent experts.

Two rounds were conducted to validate the healthcare standards and the associated criteria. A total of 26 drafted healthcare standards, four sub-standards and 262 associated criteria were included in the Delphi questionnaire for round one. During this first round, 32 experts participated. All the healthcare standards (100%) included in the questionnaire reached consensus among the experts, including 256 (98.5%) of the criteria at a cut-off point of ≥ 80%. Four criteria of two healthcare standards and of one field did not achieve consensus among the experts. These criteria were modified according to the suggestions and comments that were provided by the experts. After incorporating the feedback from the experts, the criteria were included in the Delphi questionnaire for round two. In round two of the Delphi technique, the questionnaire was sent to the same panel of 32 experts who participated in round one, but only 25 (78%) experts returned the questionnaires. Following round two of the Delphi technique, all four criteria had an agreement level of 96%, thus achieving consensus among the experts above the cut-off point of ≥ 80%. The validation process answered the research question three, “What are the validated criteria that should be developed to measure these developed healthcare standards for safe, quality care for residents in homes for the elderly in Tanzania?”

Thus, the three objectives set for this study were reached successfully after the completion of the three phases. The three research questions were answered successfully.

10.6 RESEARCH OUTCOMES: DISCUSSION

The purpose of this study was to develop and validate healthcare structure standards and criteria that contribute to the care of residents in the homes for the elderly in Tanzania. The homes for the elderly were audited under seven (7) fields namely infrastructure, clinical management, meals and water, residents' rights, guiding documents for residents' care, safety and security and human resources which included 26 healthcare standards, four sub-standards and 262 criteria. As presented in chapter 5, 26 healthcare standards, four sub-standards and 262 associated criteria captured in an audit instrument, were applied to audit the homes. The research findings showed that all (100%) of the homes for the elderly in Tanzania were non-compliant with all validated healthcare structure standards and associated criteria. Likewise, as presented in chapter 6, the findings obtained through the Likert scale questionnaire completed by the staff, indicated that none of the homes were compliant with the criteria required for the healthcare standards. From the findings of chapter 5 and 6 as discussed in chapter 7, the researcher showed that none of the homes was compliant to all healthcare standards and the associated criteria, thus compromising residents' care. This study has shown the limitations in healthcare structure standards and the associated criteria that contribute to poor quality health care to residents in the homes for the elderly in Tanzania.

10.7 SIGNIFICANCE OF THE STUDY

As referred to in paragraph 10.4.1, a situational analysis of the homes for the elderly was done in this study to determine whether any healthcare standards were applied in homes for the elderly in Tanzania to contribute to safe, quality resident care. The problems experienced in homes for the elderly highlighted the need to develop healthcare standards and the associated criteria. Once these healthcare standards are implemented in the homes for the elderly, it may give guidance to the provision of safe, quality care; addressing residents' needs and influencing healthcare outcomes, thus improving care to the residents. In addition, the healthcare standards may give guidance to the healthcare of the residents, thus improving the situation in the homes.

Furthermore, the healthcare standards and the associated criteria may help health systems build firm healthcare structures that stakeholders, policy makers, healthcare practitioners and the public social services may rely on, assuring quality healthcare services in homes for the elderly. The standards may be useful for government and policymakers to access best evidence and best decision-making processes towards homes for the elderly.

These healthcare standards and the associated criteria may also be used as benchmarking between countries and between healthcare organizations. Furthermore, the standards and the associated criteria may be used as a teaching resource in universities, colleges and healthcare workers.

10.8 DISSEMINATION AND PUBLICATION OF FINDINGS

The findings will be submitted and presented to the University of Stellenbosch for the examination of the dissertation for attainment of a doctorate degree. The findings of the research, validated healthcare standards and the associated criteria will be shared with the Ministry of Health and Social Welfare in Tanzania. Publishing of the healthcare standards and the associated criteria will follow after the examination of the dissertation and after the degree has been awarded. The results will be presented at related national and international conferences. In addition, the study findings will be shared on academic platforms such as through seminars and workshops. Various seminars will be conducted with practitioners to bring awareness of the required healthcare standards and the associated criteria for quality care in the homes for the elderly. Furthermore, the study findings will be shared with policymakers through newsletters and policy briefs.

10.9 RECOMMENDATIONS

The researcher recommends that the validated standards and criteria as discussed in chapter 7 and details referred to in annexure 1, be implemented to provide safe quality care to residents in homes of the elderly in Tanzania. In this chapter a brief overview of the fields as recommended are described.

10.9.1 Infrastructure: Basic physical structures and facilities enabling efficient and effective functioning of the homes

Homes for the elderly should have a physical environment appropriate for the conditions of the elderly. The space in the homes needs to be designed to allow free movement of the residents and space which can facilitate the provision of quality services. Doorways, passages and staircases should be able to provide safe access to residents. The homes should have adequate lighting, a hygienic environment, and functional waste disposal facilities.

10.9.2 Clinical management

Adequate stocks of medicines, medical supplies and equipment in the homes for the elderly are very important. Residents who need referrals to hospital should always be referred without delay.

Residents are at risk of an emergency; thus emergency resources should be always available and accessible. A reliable transport service is required to transfer sick residents when necessary.

10.9.3 Meals and water

Diets provided to residents should meet their individual needs. An adequate safe and clean water supply for the number of residents should be available for drinking, washing and cleanliness.

10.9.4 Residents' rights

Residents' basic human rights of confidentiality, respect, privacy, dignity and access to information should be respected. Every resident should have a complete set of standardized medical records. Complete and accurate medical recording is important for documenting care, early detection of complications, clinical follow-up and health outcomes. In addition, medical records help to identify areas for improvement.

Communication with residents and their families should be effective and respond to their needs. Residents should receive the required information and should participate in decision-making about their care. Effective communication between staff and residents may calm the residents, especially in times when they are experiencing difficulties.

10.9.5 Guiding documents for residents' care

Standard operating procedures are important to provide safe quality care to residents. Policies and guidelines are needed to provide activities in the homes. Care provided to residents should be monitored according to the set of specific indicators to evaluate the progress of services provided towards achieving the intended outcome.

10.9.6 Safety and security

Physical and psychosocial safety and security of the residents should be maintained. The residents need an environment that is free from danger and threats, free from harmful practices and communication.

10.9.7 Human resources

Homes need well-trained and motivated staff, committed to provide compassionate safe and quality care. Staff should be competent and skilled and in sufficient numbers to provide quality care to the number of residents. They should be free from factors that demotivate them such as high workload, low social esteem, poor pay, long working hours, insufficient staffing and poor working environment. Therefore, availability of human resource policies to ensure efficient and

effective management of human resources are important. Motivating staff is vital to make sure residents are provided with the right care at the right time.

10.10 SUGGESTIONS FOR FUTURE RESEARCH

The purpose of this study was to explore whether any healthcare structure standards are applied in homes for the elderly in Tanzania. By using the conceptual quality healthcare model framework of Donabedian (Donabedian, 1988:1743-1748) which includes three dimensions (structure, process and outcomes), it is suggested that process and outcome healthcare standards are also explored.

10.11 SUMMARY

The chapter has briefly described the research paradigm and conceptual framework which gave guidance to this research study, stated the study goal and explained the significance of the study. A summary of the findings based on the three phases namely situational analysis, development and validation of the healthcare standards and criteria were briefly described. The dissemination process of the findings is described, including the recommendations and future research.

10.12 CONCLUSION

The inspiration to conduct this study was based on the researcher's observations who observed residents from the homes for the elderly begging and pleading for help and assistance in streets. Similarly, the study findings have shown that the homes have a deficit in healthcare standards required for safe quality care of residents. Consequently, poor quality care to residents is provided. Based on the evidence obtained through this study, the Government is urged to respond to the plight of the elderly and urgently introduce the validated standards and the associated criteria that may give guidance to the provision of safe, quality care; addressing residents' needs and influence healthcare outcomes, thus improving care to the residents.

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ANNEXURES

ANNEXURE 1: VALIDATED HEALTHCARE STANDARDS AND ASSOCIATED CRITERIA

Validated healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania

1. Introduction

Experts using Delphi Technique validated the healthcare standards and the associated criteria. The consensus level among the experts was between ≥ 80% to 100% in agreement that will contribute to the care of residents in homes for the elderly in Tanzania.

The standards and the associated criteria are divided into seven fields as follows;

Field 1: Infrastructure

Basic physical structures and facilities for the homes enabling efficient and effective functioning of the home.

Standards	Criteria
1.1 Doorways, passages and staircases provide safe access to residents.	1.1.1 Footlights to both sides of stairs
	1.1.2 End of stairs is clearly marked (top and bottom)
	1.1.3 Stairs are free from damage
	1.1.4 Handrails on both sides of stairs
	1.1.5 Doorways wide enough for passage of residents, wheel chair and hoist
	1.1.6 Doorways are obstruction free
	1.1.7 Door thresholds aligned with floor
	1.1.8 Proper lighting
	1.1.9 Furniture arranged to facilitate mobility
	1.1.10 Non-slip floors
	1.1.11 Railings in passages on both sides
	1.1.12 Overhead lights
1.2 Bedrooms provide total comfort to residents.	1.2.1 Sufficient bedrooms for the number of residents; Rooms could be for a single resident, two residents or four to a room providing the required space of 17 square feet per resident.
	1.2.2 Hospital beds for frail care provided
	1.2.3 Good spacing of 1.5 to 2m between beds
	1.2.4 Bedside rails
	1.2.5 Bedside light accessible
	1.2.6 Emergency alert system accessible from bed
	1.2.7 Controlled temperature system
	1.2.8 Floor lights
	1.2.9 Accessible individual cupboard for clothes, clearly labelled with resident's name
	1.2.10 Screens/ curtains found between beds to provide privacy

	1.2.11 Ventilation
	1.2.12 Towel rails
1.3 Bathrooms and showers provide safe access to bath or shower	1.3.1 Easy access into bathroom
	1.3.2 Able to safely transfer in/out of tub or shower
	1.3.3 Floor lights available
	1.3.4 Grab bars available and secure
	1.3.5 Non-slip floorings in bath or shower
	1.3.6 Shower adaptable with shower chair, walk in shower
	1.3.7 Container / Bin for proper disposal of soiled incontinence pads/ napkins
	1.3.8 Bathtub is positioned in the centre of the bathroom to allow nurses/ carers to assist the resident on both sides of the bath, also to allow space on both sides of the bath for the use of a hoist
	1.3.9 Easy access for a Hoist
	1.3.10 Easy access to wheelchairs
	1.3.11 Emergency alert system accessible
	1.3.12 Towel rails
1.4 Toilets are safe and accessible	1.4.1 Residents' toilets clearly marked
	1.4.2 Clearly marked toilets for males and females
	1.4.3 Grab bars available and secure
	1.4.4 Overhead lighting
	1.4.5 Staff toilets marked
	1.4.6 Container / Bin for proper disposal of soiled incontinence pads
1.5 Kitchen facilities for preparation of meals for the number of residents	1.5.1 Storage space for food for present number of residents
	1.5.2 Stoves available for the size of the home
	1.5.3 Utensils
	1.5.4 Utensils within reach
	1.5.5 Freezer
	1.5.6 Cold storage room
	1.5.7 Crockery
	1.5.8 Water jugs and tumblers
	1.5.9 Cooking equipment
	1.5.10 Protective clothing for the cooks
	1.5.11 Cupboard for stainless steel items
	1.5.12 Cupboard for glassware
1.6 Linen bank provide bedding and night clothes for the number of residents	1.6.1 Linen
	1.6.2 Blankets
	1.6.3 Pillows
	1.6.4 Pillow covers
	1.6.5 Night clothes
	1.6.6 Dressing gowns
	1.6.7 Washrags
	1.6.8 Towels
1.7 Dining room provides facilities for residents to have their meals.	1.7.1 Dining tables
	1.7.2 Chairs
	1.7.3 Limited number of wheel chair friendly tables
	1.7.4 Emergency alert system accessible

	1.7.5 Table cloths and serviettes
1.8 Supportive facilities to sustain and support day to day services 1.8.1 Substandard: Sluice room capable to	1.8.1.1 Clean dirty equipment for elimination such as urinal bottles and bed pans
	1.8.1.2 Keep clean equipment for elimination
	1.8.1.3 Containers for sharps
	1.8.1.4 Containers for surgical wastes
	1.8.1.5 Dirt bin
	1.8.1.6 Rinse soiled bed linen
1.8.2 Substandard: Dressing room	1.8.2.1 Sterilizer
	1.8.2.2 Locked cupboard for poison and non-poisonous substances
	1.8.2.3 Clearly cupboard marked/labelled poison or non-poisonous
	1.8.2.4 Locked cupboard for instruments and utensils
	1.8.2.5 Locked cupboard for medication stock
	1.8.2.6 Locked medication trolley
	1.8.2.7 Antiseptic solutions
	1.8.2.8 Hand washing equipment
	1.8.2.9 Drums with sterile equipment
	1.8.2.10 Dressings trolley
	1.8.2.11 Dustbin
1.8.3 Substandard: Nurses' station with	1.8.3.1 Desk
	1.8.3.2 Chairs
	1.8.3.3 Locked cupboards for keeping document
	1.8.3.4 Nurse-Patient call system
1.8.4 Sub-standard: Other supportive facilities	1.8.4.1 Secretary's office
	1.8.4.2 Rest rooms for staff
	1.8.4.3 Activity room for residents
	1.8.4.4 Laundry
1.9 Facility for residents with Alzheimer' s to ensure their safety and security	1.9.1 Spacious rooms available
	1.9.2 Windows have safety guards attached
	1.9.3 Windows with covering (No curtains)
	1.9.4 Beds with minimum linen
	1.9.5 Built in cupboards with locks
	1.9.6 No movable furniture
	1.9.7 Wash basins and baths have taps without a turn-on knob
	1.9.8 Well ventilated rooms with controlled temperature
	1.9.9 Rooms with locked doors
	1.9.10 Access to outdoor secure areas
	1.9.11 Handrails in the hallways and grab-bars in the bathrooms.
	1.9.12 Non-slip floors
	1.9.13 Minimized sharp colour contrasts in flooring, and borders and strong, busy patterns avoided
	1.9.14 Motion detectors in rooms of residents prone to falls.
	1.9.15 Exits that lead to unprotected areas monitored
	1.9.16 Exit doors not intended for resident use situated parallel to the hallway so they are less visible

Field 2: Clinical management

Standards	Criteria
2.1 Equipment for direct care available	2.1.1 Surgical instruments
	2.1.2 Hoist for heavy residents
	2.1.3 Wheel chairs
	2.1.4 Walking aids
	2.1.5 Raised toilet seat
	2.1.6 Commode
	2.1.7 Blood pressure apparatuses
	2.1.8 Thermometers
	2.1.9 Weighing scale
	2.1.10 Portable suction machine
	2.1.11 Oxygen cylinders with gauge filled with oxygen
2.2 Emergency tray available for emergency care	2.2.1 Laryngoscope
	2.2.2 Spatula
	2.2.3 Mouth gag
	2.2.4 Tongue forceps
	2.2.5 Ambubag
	2.2.6 Adrenaline
	2.2.7 Atropine
	2.2.8 Phenergan
	2.2.9 Needles of various sizes
	2.2.10 Syringes of various sizes
2.3 Equipment for indirect care available	2.3.1 Flashlights available
	2.3.2 Cleaning equipment
2.4 Disposable items for direct care available	2.4.1 Dressings
	2.4.2 Bandages
	2.4.3 Medication
	2.4.4 Catheters
	2.4.5 Urine bags
	2.4.6 Oxygen masks with various oxygen percentages 24, 28, 35 & 40
	2.4.7 Nasal catheter to administer oxygen
	2.4.8 Suction catheters
	2.4.9 Silicone tubing
	2.4.10 Napkins
	2.4.11 Soap
	2.4.12 Antiseptic solutions
	2.4.13 Skin care cream.

Field 3: Meals and water

Standards	Criteria
3.1 Residents provided with meals according to individual needs	3.1.1 Meals menu rotated between seasons
	3.1.2 Special meals provided
	3.1.3 Schedule for meal times
	3.1.4 Schedule for tea times

3.2 Water is available	3.2.1 Supply of hot and cold water for the number of residents
	3.2.2 Ionized water
3.3 water sources	3.3.1 Municipal water
	3.3.1.1 Check for bacteriological indicators of faecal contamination
	3.3.1.2 Free chlorine residual
	3.3.1.3 Check for pH
	3.3.1.4 Check for turbidity
	3.3.1.5 Check for conductivity/total dissolved solids
	3.3.2 Bore hole water
	3.3.2.1 Situated far away from sewage material
	3.3.2.2 Proper sanitary survey
	3.3.2.3 Water treatment
	3.3.2.4 Water purification method such as boiling, filtration
	3.3.2.5 Proper pre-settlement
	3.3.3 Wells
	3.3.3.1 Determination of the concentrations of inorganic constituent
	3.3.3.2 Measurement of pH
	3.3.3.3 Evaluation of temperature, colour, turbidity, odour and taste
	3.3.3.4 Bacteria analysis
	3.3.3.5 Measurement of specific electrical conductance.
	3.3.4 Rain water tanks
	3.3.4.1 Check for quality of pH
	3.3.4.2 Check for quality of turbidity

Field 4: Residents' rights

Standards	**Criteria**
4.1 Residents' basic human rights of confidentiality, respect, privacy dignity and access to information are respected.	4.1.1 Residents' surveys
	4.1.2 Archive facility for residents' records
	4.1.3 Secure filing system of residents' information
	4.1.4 Safe recordkeeping facility
	4.1.5 Complaints / compliments register
	4.1.6 Consent forms available
	4.1.7 Locked facility for files of the residents

Field 5: Guiding documents for residents' care

Standards	**Criteria**
5.1 Standard operating procedures available to provide safe quality care to residents.	5.1.1 Standards operating procedures (SOP) manual
	5.1.2 Admission and discharge procedure
	5.1.3 Lifting patients
	5.1.4 Bathing/washing residents
	5.1.5 Keeping residents' files
	5.1.6 Wound care
	5.1.7 Urinary catheter care
	5.1.8 Feeding procedure

	5.1.9 Safe keeping of valuables
	5.1.10 Managing scabies
	5.1.11 Prevention of falls
	5.1.12 Hand hygiene
	5.1.13 Personal protective clothes
	5.1.14 Waste disposal
5.2 Policies available to provide guidance to activities in the home.	5.2.1 Admissions
	5.2.2 Living needs
	5.2.3 Safety and security of residents
	5.2.4 Resident satisfaction
	5.2.5 Prohibiting abuse of patients
	5.2.6 Information to residents & families
	5.2.7 Quality assurance
	5.2.8 Infection control and prevention
	5.2.9 Record keeping
	5.2.10 Environment hygiene
	5.2.11 Safe keeping of valuables
5.3 Specific indicators set to monitor and evaluate care provided to residents	5.3.1 Urinary tract infection (UTI)
	5.3.2 Bowel incontinence
	5.3.3 Home acquired pressure ulcers
	5.3.4 Scabies
	5.3.5 Depression
	5.3.6 Infection
	5.3.7 Falls
	5.3.8 Adverse events
	5.3.9 Residents' satisfaction surveys
5.4 Guidelines available to provide guidance to specific activities in the home	5.4.1 Guidelines manual
	5.4.2 Purchasing of medications, equipment and other requirements
	5.4.3 Managing geriatric patients
	5.4.4 Managing residents with Dementia or Alzheimer's disease
	5.4.5 Transfer of residents to a hospital
	5.4.6 Manage the death of a resident
	5.4.7 Ordering food

Field 6: Safety and security

Standards	**Criteria**
6.1 Requirements available for ensuring residents' protection and home environment which are free from danger and threats	6.1.1 Fire extinguishers
	6.1.2 Fire alarm system
	6.1.3 Smoke detectors
	6.1.4 Fire hose
	6.1.5 Doors leading to the outside are linked to an alarm system
	6.1.6 If there is a lift clearly marked not to be used when there is a fire
	6.1.7 Alarm system for break-ins or robberies
	6.1.8 Cameras in the passages of the building
	6.1.9 Surveillance system on the grounds
	6.1.10 Security guards at entry gates

	6.1.11 Emergency exists clearly marked
	6.1.12 Signage clearly marked
	6.1.13 Storage for hazardous chemicals
	6.1.14 Safe storage for electrical equipment
6.2 Communication support systems available to allow communication with staff	6.2.1 Telephone system, resident call system, electronic communication such as emails
	6.2.2 Call system accessible to patients in all rooms namely bathrooms, toilets, dining room and at the bedside.
	6.2.3 Emergency response system available
6.3 Recreational activities available to allow socialization	6.3.1 Gardens
	6.3.2 Library
	6.3.3 A variety of recreational activities

Field 7: Human resources

Standards	**Criteria**
7.1 Staff available for the various activities in the home.	7.1.1 General manager
	7.1.2 Geriatric trained professional nurse (s)
	7.1.3 Professional nurse
	7.1.4 Non-professional nurses
	7.1.5 Care givers
	7.1.6 Cleaners
	7.1.7 Cooks
	7.1.8 General maintenance workers
	7.1.9 Security at the gates
	7.1.10 Administrative staff
	7.1.11 Accountant
	7.1.12 Secretary
	7.1.13 House keepers
7.2 Human Resource policies available to ensure efficient and effective management of human resources.	7.2.1 Training and Development
	7.2.2 Leave
	7.2.3 Grievance
	7.2.4 Recognition of Long Service
	7.2.5 Recruitment and selection
	7.2.6 Wellness
	7.2.7 Disciplinary
	7.2.8 Job descriptions
	7.2.9 Performance appraisal/ work agreements

ANNEXURE 2: AUDIT INSTRUMENT

For official use

Zones

A	B	C	D	E	F

Study title: Development and validation of healthcare standards and that contribute to the care of residents in homes for the elderly in Tanzania

Purpose of the audit instrument:

The instrument is used for auditing structure standards in the homes for the elderly based on Donabedian health quality framework to ensure the structure standards, which should be in place to provide safe quality residents care

Field 1: Infrastructure

Basic physical structures and facilities for the homes enabling efficient and effective functioning of the home.

Standards	Criteria	Compliant (1)	Non-compliant (0)	N/A	Comments for NA
1.1 Doorways, passages and staircases provide safe access to residents.	1.1.1 Footlights to both sides of stairs				
	1.1.2 End of stairs is clearly marked (top and bottom)				
	1.1.3 Stairs are free from damage				
	1.1.4 Handrails on both sides of stairs				
	1.1.5 Doorways wide enough for passage of residents, wheel chair and hoist				
	1.1.6 Doorways are obstruction free				
	1.1.7 Door thresholds aligned with floor				
	1.1.8 Proper lighting				

	1.1.9 Furniture arranged to facilitate mobility				
	1.1.10 Non-slip floors				
	1.1.11 Railings in passages on both sides				
	1.1.12 Overhead lights				
1.2 Bedrooms provide total comfort to residents.	1.2.1 Bed rooms for the number of residents				
	1.2.2 Hospital beds for frail care provided				
	1.2.3 Spacing between beds				
	1.2.4 Bedside rails				
	1.2.5 Bedside light accessible				
	1.2.6 Emergency alert system accessible from bed				
	1.2.7 Controlled temperature system				
	1.2.8 Floor lights				
	1.2.9 Bedside cupboard				
	1.2.10 Screens/ curtains found between beds to provide privacy				
	1.2.11 Ventilation				
	1.2.12 Towel rails				
	1.2.13 Cupboard for residents' clothes				
1.3 Bathrooms and showers provide safe access to bath or shower	1.3.1 Easy access into bathroom				
	1.3.2 Able to safely transfer in/out of tub or shower				
	1.3.3 Floor lights available				
	1.3.4 Grab bars available and secure				
	1.3.5 Non-slip floorings in bath or shower				
	1.3.6 Shower adaptable with shower chair, walk in shower				
	1.3.7 Container / Bin for proper disposal of soiled incontinence pads/ napkins				
	1.3.8 Bath is positioned in the centre of the bathroom				
	1.3.9 Easy access for a Hoist				
	1.3.10 Easy access to wheelchairs				

	1.3.11 Emergency alert system accessible				
	1.3.12 Towel rails				
1.4 Toilets are safe and accessible	1.4.1 Residents' toilets clearly marked				
	1.4.2 Clearly marked toilets for males and females				
	1.4.3 Grab bars available and secure				
	1.4.4 Overhead lighting				
	1.4.5 Staff toilets marked				
	1.4.6 Container / Bin for proper disposal of soiled incontinence pads				
1.5 Kitchen facilities for preparation of meals for the number of residents	1.5.1 Storage space for food for present number of residents				
	1.5.2 Stoves available for the size of the home				
	1.5.3 Utensils				
	1.5.4 Utensils within reach				
	1.5.5 Freezer				
	1.5.6 Cold storage room				
	1.5.7 Crockery				
	1.5.8 Water jugs and tumblers				
	1.5.9 Cooking equipment				
	1.5.10 Protective clothing for the cooks				
	1.5.11 Cupboard for stainless steel items				
	1.5.12 Cupboard for glassware				
1.6 Linen bank provide bedding and night clothes for the number of residents	1.6.1 Linen				
	1.6.2 Blankets				
	1.6.3 Pillows				
	1.6.4 Pillow covers				
	1.6.5 Night clothes				
	1.6.6 Dressing gowns				
	1.6.7 Washrags				
	1.6.8 Towels				
1.7 Dining room provides	1.7.1 Dining tables				
	1.7.2 Chairs				

facilities for residents to have their meals.	1.7.3 Limited number of wheel chair friendly tables				
	1.7.4 Emergency alert system accessible				
	1.7.5 Table cloths and serviettes				
1.8 Supportive facilities to sustain and support day to day services 1.8.1 Substandard: Sluice room capable to	1.8.1.1 Clean dirty equipment for elimination such as urinal bottles and bed pans				
	1.8.1.2 Keep clean equipment for elimination				
	1.8.1.3 Containers for sharps				
	1.8.1.4 Containers for surgical wastes				
	1.8.1.5 Dirt bin				
	1.8.1.6 Rinse soiled bed linen				
1.8.2 Substandard: Dressing room	1.8.2.1 Sterilizer				
	1.8.2.2 Locked cupboard for poison and non-poisonous substances				
	1.8.2.3 Clearly cupboard marked/labelled poison or non-poisonous				
	1.8.2.4 Locked cupboard for instruments and utensils				
	1.8.2.5 Locked cupboard for medication stock				
	1.8.2.6 Locked medication trolley				
	1.8.2.7 Antiseptic solutions				
	1.8.2.8 Hand washing equipment				
	1.8.2.9 Drums with sterile equipment				
	1.8.2.10 Dressings trolley				
	1.8.2.11 Dustbin				
1.8.3 Substandard: Nurses' station with	1.8.3.1 Desk				
	1.8.3.2 Chairs				
	1.8.3.3 Locked cupboards for keeping documents				
	1.8.3.4 Nurse-Patient call system				

1.8.4 Sub-standard: Other supportive facilities	1.8.4.1 Secretary's office				
	1.8.4.2 Rest rooms for staff				
	1.8.4.3 Activity room for residents				
	1.8.4.4 Laundry				
1.9 Facility for residents with Alzheimer' s to ensure their safety and security	1.9.1 Spacious rooms available				
	1.9.2 Windows have safety guards attached				
	1.9.3 Windows with covering (No curtains)				
	1.9.4 Beds with minimum linen				
	1.9.5 Built in cupboards with locks				
	1.9.6 No movable furniture				
	1.9.7 Wash basins and baths have taps without a turn-on knob				
	1.9.8 Well ventilated rooms with controlled temperature				
	1.9.9 Rooms with locked doors				
	1.9.10 Access to outdoor secure areas				
	1.9.11 Handrails in the hallways and grab-bars in the bathrooms.				
	1.9.12 Non-slip floors				
	1.9.13 Minimized sharp colour contrasts in flooring, and borders and strong, busy patterns avoided				
	1.9.14 Motion detectors in rooms of residents prone to falls.				
	1.9.15 Exits that lead to unprotected areas monitored				
	1.9.16 Exit doors not intended for resident use situated parallel to the hallway so they are less visible				

Field 2: Clinical management

Standards	Criteria	Compliant (1)	Non-compliant (0)	N/A	Comments for NA
2.1 Equipment for direct care available	2.1.1 Surgical instruments				
	2.1.2 Hoist for heavy residents				
	2.1.3 Wheel chairs				
	2.1.4 Walking aids				
	2.1.5 Raised toilet seat				
	2.1.6 Commode				
	2.1.7 Blood pressure apparatuses				
	2.1.8 Thermometers				
	2.1.9 Weighing scale				
	2.1.10 Portable suction machine				
	2.1.11 Oxygen cylinders with gauge filled with oxygen				
2.2 Emergency tray available for emergency care	2.2.1 Laryngoscope				
	2.2.2 Spatula				
	2.2.3 Mouth gag				
	2.2.4 Tongue forceps				
	2.2.5 Ambubag				
	2.2.6 Adrenaline				
	2.2.7 Atropine				
	2.2.8 Phenergan				
	2.2.9 Needles of various sizes				
	2.2.10 Syringes of various sizes				
2.3 Equipment for indirect care available	2.3.1 Flashlights available				
	2.3.2 Cleaning equipment				
2.4 Disposable items for direct care available	2.4.1 Dressings				
	2.4.2 Bandages				
	2.4.3 Medication				
	2.4.4 Catheters				
	2.4.5 Urine bags				

	2.4.6 Oxygen masks with various oxygen percentages 24, 28, 35 & 40				
	2.4.7 Nasal catheter to administer oxygen				
	2.4.8 Suction catheters				
	2.4.9 Silicone tubing				
	2.4.10 Napkins				
	2.4.11 Soap				
	2.4.12 Antiseptic solutions				
	2.4.13 Skin care cream.				

Field 3: Meals and water

Standards	**Criteria**	**Compliant (1)**	**Non-compliant (0)**	**N/A**	**Comments for NA**
3.1 Residents provided with meals according to individual needs	3.1.1 Meals menu rotated between seasons				
	3.1.2 Special meals provided				
	3.1.3 Schedule for meal times				
	3.1.4 Schedule for tea times				
3.2 Water is available	3.2.1 Supply of hot and cold water for the number of residents				
	3.2.2 Ionized water				
3.3 water sources	3.3.1 Municipal water				
	3.3.1.1 Check for bacteriological indicators of faecal contamination				
	3.3.1.2 Free chlorine residual				
	3.3.1.3 Check for pH				
	3.3.1.4 Check for turbidity				
	3.3.1.5 Check for conductivity/total dissolved solids				
	3.3.2 Bore hole water				

	3.3.2.1 Situated far away from sewage material				
	3.3.2.2 Proper sanitary survey				
	3.3.2.3 Water treatment				
	3.3.2.4 Water purification method such as boiling, filtration				
	3.3.2.5 Proper pre-settlement				
	3.3.3 Wells				
	3.3.3.1 Determination of the concentrations of inorganic constituent				
	3.3.2.2 Measurement of pH				
	3.3.3.3 Evaluation of temperature, colour, turbidity, odour and taste				
	3.3.3.4 Bacteria analysis				
	3.3.3.5 Measurement of specific electrical conductance.				
	3.3.4 Rain water tanks				
	3.3.4.2 Check for quality of pH				
	3.3.4.2 Check for quality of turbidity				

Field 4: Residents' rights

Standards	**Criteria**	**Compliant (1)**	**Non-compliant (0)**	**N/A**	**Comments for NA**
4.1 Residents' basic human rights of confidentiality, respect, privacy dignity and access to information are respected.	4.1.1 Residents' surveys				
	4.1.2 Archive facility for residents' records				
	4.1.3 Secure filing system of residents' information				
	4.1.4 Safe recordkeeping facility				
	4.1.5 Complaints / compliments register				
	4.1.6 Consent forms available				
	4.1.7 Locked facility for files of the residents				

Field 5: Guiding documents for residents' care

Standards	Criteria	Compliant (1)	Non-compliant (0)	N/A	Comments for NA
5.1 Standard operating procedures available to provide safe quality care to residents.	5.1.1 Standards operating procedures (SOP) manual				
	5.1.2 Admission and discharge procedure				
	5.1.3 Lifting patients				
	5.1.4 Bathing/washing residents				
	5.1.5 Keeping residents' files				
	5.1.6 Wound care				
	5.1.7 Urinary catheter care				
	5.1.8 Feeding procedure				
	5.1.9 Safe keeping of valuables				
	5.1.10 Managing scabies				
	5.1.11 Prevention of falls				
	5.1.12 Hand hygiene				
	5.1.13 Personal protective clothes				
	5.1.14 Waste disposal				
5.2 Policies available to provide guidance to activities in the home.	5.2.1 Admissions				
	5.2.2 Living needs				
	5.2.3 Safety and security of residents				
	5.2.4 Resident satisfaction				
	5.2.5 Prohibiting abuse of patients				
	5.2.6 Information to residents & families				
	5.2.7 Quality assurance				
	5.2.8 Infection control and prevention				
	5.2.9 Record keeping				
	5.2.10 Environment hygiene				
	5.2.11 Safe keeping of valuables				
5.3 Specific indicators set to monitor and evaluate care	5.3.1 Urinary tract infection (UTI)				
	5.3.2 Bowel incontinence				
	5.3.3 Home acquired pressure ulcers				
	5.3.4 Scabies				
	5.3.5 Depression				

provided to residents	5.3.6 Infection				
	5.3.7 Falls				
	5.3.8 Adverse events				
	5.3.9 Residents' satisfaction surveys				
5.4 Guidelines available to provide guidance to specific activities in the home	5.4.1 Guidelines manual				
	5.4.2 Purchasing of medications, equipment and other requirements				
	5.4.3 Managing geriatric patients				
	5.4.4 Managing residents with Dementia or Alzheimer's disease				
	5.4.5 Transfer of residents to a hospital				
	5.4.6 Manage the death of a resident				
	5.4.7 Ordering food				

Field 6: Safety and security

Standards	**Criteria**	**Compliant (1)**	**Non-compliant (0)**	**N/A**	**Comments for NA**
6.1 Requirements available for ensuring residents' protection and home environment which are free from danger and threats	6.1.1 Fire extinguishers				
	6.1.2 Fire alarm system				
	6.1.3 Smoke detectors				
	6.1.4 Fire hose				
	6.1.5 Doors leading to the outside are linked to an alarm system				
	6.1.6 If there is a lift clearly marked not to be used when there is a fire				
	6.1.7 Alarm system for break-ins or robberies				
	6.1.8 Cameras in the passages of the building				
	6.1.9 Surveillance system on the grounds				
	6.1.10 Security guards at entry gates				
	6.1.11 Emergency exists clearly marked				
	6.1.12 Signage clearly marked				

	6.1.13 Storage for hazardous chemicals				
	6.1.14 Safe storage for electrical equipment				
6.2 Communication support systems available to allow communication with staff	6.2.1 Telephone system, resident call system, electronic communication such as emails				
	6.2.2 Call system accessible to patients in all rooms namely bathrooms, toilets, dining room and at the bedside.				
	6.2.3 Emergency response system available				
6.3 Recreational activities available to allow socialization	6.3.1 Gardens				
	6.3.2 Library				
	6.3.3 A variety of recreational activities				

Field 7: Human resources

Standards	Criteria	Compliant (1)	Non-compliant (0)	N/A	Comments for NA
7.1 Staff available for the various activities in the home.	7.1.1 General manager				
	7.1.2 Geriatric trained professional nurse(s)				
	7.1.3 Professional nurse				
	7.1.4 Non-professional nurses				
	7.1.5 Care givers				
	7.1.6 Cleaners				
	7.1.7 Cooks				
	7.1.8 General maintenance workers				
	7.1.9 Security at the gates				
	7.1.10 Administrative staff				
	7.1.11 Accountant				
	7.1.12 Secretary				
	7.1.13 House keepers				

7.2 Human Resource policies available to ensure efficient and effective management of human resources.	7.2.1 Training and Development				
	7.2.2 Leave				
	7.2.3 Grievance				
	7.2.4 Recognition of Long Service				
	7.2.5 Recruitment and selection				
	7.2.6 Wellness				
	7.2.7 Disciplinary				
	7.2.8 Job descriptions				
	7.2.9 Performance appraisal/ work agreements				

ANNEXURE 3: LIKERT QUESTIONNAIRE FOR STAFF

For official use

Zones

A	B	C	D	E	F

Number

Title of study: Development and validation of healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania.

Researcher: Victor Mathias

The purpose of this study is to develop and validate healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania; the standards of care for residents which will focus on providing safe quality residents' care.

Introduction

My name is Victor Mathias, a student at Stellenbosch University. I am currently conducting research on standards of care in the homes for elderly in Tanzania. The title of my research is "Development and validation of healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania". You have been selected as a participant to participate in this research, and to complete voluntarily a questionnaire about the standards of care in the home. The information you provide will assist me to develop the validated healthcare standards and criteria for homes for the elderly in Tanzania. The result of this study will be used for academic purposes only and the information provided will be treated strictly confidential. Therefore, do not write your name anywhere on this questionnaire. All ethical clearance requirements have been obtained including signing the informed consent before you participate in this study.

Note:

- There is no time limit to complete the questions.
- Please tell the researcher if you need help to complete the questionnaire or if you are uncertain about any of the questions.

- If a certain standard and or criteria are found not applicable (NA) in any home, the researcher will have to provide a comment to explain such non applicability, for example in case a certain home is not providing a care which comply with such standard
- Use the pen provided to indicate your choice by making a tick in the applicable box. For example if I agree that there is safety in the homes for the elderly, I will tick under agree as follows;

  Example: The environment for the homes for the elderly is safe for the residents

Strongly agree	Agree	Disagree	Strongly disagree

A. Demographic information – tell me about yourself

1. Institution status

Public	Private

2. Your age (years)

3. Gender

Female	Male

4. Staff

General manager	
Geriatric trained professional nurse	
Professional registered nurse	
Non-professional nurse	
Care giver	

5. Your working experience in homes for the elderly;

<1 year	≥1 year - <4 years	≥4 years - <7 years	≥7 years - <10 years	≥10 years

6. Your working experience at the current home for the elderly.

<1 year	≥1 years - <4 years	≥4 years - <7 years	≥7 years - <10 years	≥10 years

B. Standards of care – tell me about your work in this home for the elderly

Infrastructure

7. (i) Does the following meet the needs for the number of residents of the home?

	Strongly agree	Agree	Disagree	Strongly disagree
Equipment for therapy				
Toilets				
Bathrooms/showers				
Dining room				
Recreation room				
Kitchen				
Bed rooms				
Store for non-use items				
Free space				
Linen bank				

(ii) If you disagree with any of the above in question 7, explain why

…….....

.....……

8. Does the home have the following supportive infrastructures to meet the requirements of the home?

	Yes (1)	No (0)	N/A	Comments for NA
Sluice room				
Dressing room				
Nurses' station				
Secretary's office				
Rest rooms for staff				
Activity room for residents				
Laundry				

Clinical management

9. Does the home have the following equipment to meet the needs for the number of residents of the home?

	Yes (1)	No (0)	N/A	Comments for NA
Surgical instruments				
Hoist for heavy residents.				
Wheel chairs				
Walking aids				
Commode				
Raised toilet seat				
Blood pressure apparatuses				
Thermometers				
Weighing scale				
Portable suction machine				
Oxygen cylinders with gauge filled with oxygen				
Flashlights available				
Cleaning equipment				

10. Does the home have an emergency tray with the following items to meet the needs for the number of residents of the home?

	Yes (1)	No (0)	N/A	Comments for NA
Laryngoscope				
Spatula				
Mouth gag				
Tongue forceps				
Ambubag				
Adrenaline				
Atropine				
Phenergan				
Needles of various sizes				
Syringes of various sizes				

11. Does the home have the following to meet the needs for the number of residents of the home?

Dressings	Always	Most times	Sometimes	Never
Bandages				
Medication				
Catheters				
Urine bags				
Oxygen masks				
Nasal catheter to administer oxygen				
Suction catheters				
Silicone tubing				
Napkins				
Soap				
Antiseptic solutions				
Skin care cream.				

If you have indicated sometimes or never in question 11 above, give reasons

……

……

Clinical monitoring

12. Does the home have a register for the monitoring of the following health indicators?

	Yes (1)	No (0)	N/A	Comments for NA
Urinary tract infection (UTI)				
Bowel incontinence				
Home acquired pressure ulcers				
Scabies				
Depression				
Infection				
Falls				
Adverse events				
Residents satisfaction surveys				

Staff /Human resources

13. (i) Does the home have the required staff to deliver care according to the number of residents?

Always	Most times	Sometimes	Never

(ii) If you have indicated sometimes or never in question 13 above, give reasons why.

……

……

14. Does the home have the following human resource related policies?

	Yes (1)	No (0)	N/A	Comments for NA
Training and Development				
Leave				
Grievance				
Recognition of long Service				
Recruitment and selection				
Wellness				
Disciplinary				

Food/ meals

15. Does the home have the following to meet the residents' needs for meals?

	Yes (1)	No (0)	N/A	Comments for NA
Enough meals				
Special meals if required				
Meals menu rotated between seasons				
Schedule for meal times				
Schedule for tea times				

Water

16. Does the home have provisions of water in terms of

	Yes (1)	No (0)	N/A	Comments for NA
Supply of hot and cold water for the number of residents				
Ionized				

Procedures

17. Does the home have a standards operating procedure (SOP) manual containing the following SOP's?

	Yes (1)	No (0)	N/A	Comments for NA
Admission and discharge procedure				
Lifting patients				
Bathing/washing residents				
Keeping residents' files				
Wound care				
Urinary catheter care				
Feeding procedure				
Safe keeping of valuables				
Managing scabies				
Prevention of falls				
Hand hygiene				
Personal protective clothes				

Guidelines

18. Does the home have a guideline manual with the following guidelines?

	Yes (1)	No (0)	N/A	Comments for NA
Purchasing of medications, equipment and other requirements				
Managing geriatric patients				
Managing residents with Dementia or Alzheimer's disease				
Transfer residents to a hospital				
Manage the death of a resident				
Ordering food				

Policies

19. Does the home have the following policies?

	Yes (1)	No (0)	N/A	Comments for NA
Admission				
Living				
Safety and security of residents				
Resident satisfaction				
Prohibiting abuse of patients				
Information to residents & families				
Quality assurance				
Infection control and prevention				
Record keeping				
Environment hygiene				
Safe keeping of valuables				

Recreational activities

20. Does the home have the following for recreation to meet the needs for the number of residents of the home?

	Yes (1)	No (0)	N/A	Comments for NA
Gardens				
Library				
A variety of recreational activities				

Safety and security

21. Does the home have the following items for residents' safety and security?

	Yes (1)	No (0)	N/A	Comments for NA
Fire extinguishers				
Fire alarm system				
Smoke detectors				
Fire hose				
Doors leading to the outside are linked to an alarm system				
If there is a lift clearly marked not to be used when there is a fire				
Alarm system for break-ins or robberies				
Cameras in the passages of the building				
Surveillance system on the grounds				
Security guards at entry gates				
Emergency exists clearly marked				
Storage for hazardous chemicals				
Safe storage for electrical equipment				

22. Does the home have a secured facility for residents suffering from Alzheimer's diseases?

Yes (1)	No (0)	N/A	Comments for NA

Communication

23. Does the home have the following equipment for communication to meet the needs for the number of residents of the home?

	Yes (1)	No (0)	N/A	Comments for NA
Telephone system, resident call system, electronic communication such as emails				
Call system accessible to patients in all rooms namely bathrooms, toilets, dining room and at the bedside.				
Emergency response system available				

Residents' rights

24. Does the home respect the basic rights of the residents in terms of the following items?

	Yes (1)	No (0)	N/A	Comments for NA
Residents surveys are conducted				
Archive facility for residents' records				
Secure filing system of resident's information				
Safe recordkeeping facility				
Complaints register				
Consent forms available				
Locked facility for files of the residents				

Open question

25. What would you consider to be your three most important concerns working in the elderly care context?

1. ……
2. ……
3. ……

ANNEXURE 4: DELPHI QUESTIONNAIRE FOR ROUND ONE

Title: **Development and validation of healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania**

1 Introduction

The researcher is a PHD student at Stellenbosch University, a citizen and resident of Tanzania, the country where the study is conducted.

2 Background to the study

The title of the study is “Development and validation of healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania”. The study is being conducted in three phases; the first and the second phase have been completed. The methodology as applied in each phase is briefly described.

Phase 1 described the situational analysis of the homes for the elderly in Tanzania. A quantitative research approach with an exploratory descriptive research design was applied. The researcher completed an audit of all the homes for the elderly using an audit instrument. The staff working in the homes validated the audited data through completion of the Likert questionnaire based on the items of the audit instrument.

Phase 2: During the second phase, the drafted standards and associated criteria were developed based on the findings of phase one and the relevant literature aligned with objective (ii). The researcher, supervisor and co-supervisor, biostatistician and experts from organizations (Tanzania Older People's Platform (TOP) and Saidia Wazee Karagwe-SAWAKA) involved with policies, rights and consultation of matters of the elderly in Tanzania were involved in developing the standards and criteria. Development of the standards followed five stages of the COHSASA model namely: normative, empirical, consensus, publishing and implementation (Whittaker & Mazwai, 2016:42-45).

Phase 3: In this phase, the developed drafted standards and criteria are validated applying the Delphi technique, which is applied quantitatively. This phase is aligned with objective (iii).

2.1 The objectives set for the study included:

i. To determine whether any healthcare standards are applied to ensure safe, quality care for residents in homes for the elderly in Tanzania.
ii. To develop and validate quality healthcare standards to provide safe, quality care to residents in homes for the elderly in Tanzania, based on the results of objective (i).
iii. To develop validated measuring criteria to measure the validated healthcare standards for safe, quality care for residents in homes for the elderly in Tanzania.

2.2 Brief overview of the results

Phase 1: The researcher audited all, n=32(100%) homes for the elderly currently found in the country, and all qualified staff working in these homes (N=65, 100%) completed a Likert questionnaire. The audit instrument was structured according to fields, standards and criteria. Seven fields were included in the audit instrument together with 25 standards that were developed aligned to the specific fields. In addition, 234 criteria were developed according to the specific standards. The results obtained in phase one show that neither the researcher nor the participants identified any home compliant with the all standards.

Phase 2: During development of the standards, the questionnaire that was sent to the organizations mentioned in this paragraph included the standards and the associated criteria, which were used to do the situational analysis in the homes for the elderly in the country. The results showed that out of 25 standards and 234 (100%) associated criteria, that were sent to the organizations, 230 (98%) of criteria were agreed by the experts from these organizations. Only 4 (2%) criteria underwent some discussions between the researcher and the experts before they were also accepted.

Phase 3: This is the final phase (Phase 3) of the study, which is to validate the developed standards and the associated criteria by applying Delphi technique.

3 Invitation to participate in the study

Against this background and due to your expertise in health care, you are invited to participate in a Delphi process to validate the draft set of healthcare standards and the associated criteria that contribute to the care of residents in homes for the elderly in Tanzania.

By agreeing to participate, it will be regarded as giving informed consent based on the explanation given about the study.

This research study obtained ethics approval from:

- Stellenbosch University (S19/02/048)
- Tanzania National Institute for Medical Research (NIMR/HQ/R.8a/Vol. IX/3191)

The permission to conduct a study was obtained from:

- Tanzania Ministry of Health, Community Development, Gender, Elderly and Children (FA.117/259/24/47)
- Managers of the all homes for the elderly in Tanzania.

Participating in this study is voluntary, but you may also decline from participating in the study. However, should you decide to participate; it will be important for you to participate in all the rounds until a consensus have been reached among the participants. No payment or reward will be granted for your participation.

The purpose of this questionnaire is to request your participation in a process to validate the draft set of healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania by applying the Delphi Technique. Delphi technique is an organised progression technique which involves experts and allows a sequence of survey rounds of the required standards and criteria for homes for the elderly in Tanzania until consensus among experts will be reached (Njuangang et al., 2017:737-754). The validation process will continue until consensus about the standards between the participants are reached. Due to a possible lengthy process, the researcher will appreciate it if the turnaround time could be five (5) days after receiving the questionnaire. Your support in this regard will indeed be appreciated.

You may contact me or my supervisors for any clarity at the telephone numbers or email addresses as listed below:

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PhD student SU 22397019 (Stellenbosch University): Cell: +255 (0)688640449
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Co-supervisor: Dr Mariana van der Heever: Cell: +27 21 938 9295: email: mmvdheever@sun.ac.za

4. Instructions to Delphi validation participants

- The questionnaire consists of 14 pages and will take approximately 1 hour to complete.
- Please insert a cross (X) under your choice: either 'I support the draft standard and criteria' or 'I support the draft standard and criteria with modification' or 'I do not support the draft standard and criteria'. Please provide your suggested modifications or alternative standards in the space provided.
- **Example:**

  Field: Meals and water

Draft Standards	Draft Criteria	I support the draft standard and criteria	I support the draft standard and criteria with modification	I do not support the draft standard and criteria	Comment (Suggested modifications or alternative standards)
Residents provided with meals according to individual needs	Meals menu rotated between seasons				
	Special meals provided				
Water is available	Supply of hot and cold water for the number of residents				
	Ionized water				

The proposed questionnaire: Developed draft standards and criteria for validation

Section A: Demographic profile of Delphi participants

1. Indicate your professional category

1.	Gerontology nurse	
2.	Occupational therapist	
3.	Social worker	
4.	Community health worker	
5.	Nursing Administrator	
6.	Nursing home/homes for the elderly Nurse	
7.	Academia and Research	
8.	Psychiatrist	
9.	Medical Doctor	
10.	Pharmacist	
11.	Registered Nurse	
12.	Other (please specify)	

2. Indicate your highest academic qualification

1.	Advanced diploma	
2.	Bachelor	
3.	Masters	
4.	Doctorate	

4. This question may have a multi response answer. Indicate your participation in each area of the following.

1.	Teaching care of the elderly	
2.	Clinical practice in homes for the elderly	
3.	Management of homes for the elderly	
4.	Supervision of homes for the elderly	
5.	Participating in preparing guidelines for elderly	
6.	Participating in policymaking for the elderly	
7.	Writing healthcare standards for the elderly	
8.	Other	

Section B: Draft standards and criteria

Field 1: Infrastructure

Basic physical structures and facilities for the homes enabling efficient and effective functioning of the home.

Draft Standards	Draft Criteria	I support the draft standard and criteria	I support the draft standard and criteria with modification	I do not support the draft standard and criteria	Comment (Suggested modifications or alternative standards)
1.1 Doorways, passages and staircases provide safe access to residents.	1.1.1 Footlights to both sides of stairs				
	1.1.2 End of stairs is clearly marked (top and bottom)				
	1.1.3 Stairs are free from damage				
	1.1.4 Handrails on both sides of stairs				
	1.1.5 Doorways wide enough for passage of residents, wheel chair and hoist				
	1.1.6 Doorways are obstruction free				
	1.1.7 Door thresholds aligned with floor				
	1.1.8 Proper lighting				
	1.1.9 Furniture arranged to facilitate mobility				
	1.1.10 Non-slip floors				
	1.1.11 Railings in passages on both sides				
	1.1.12 Overhead lights				
1.2 Bedrooms provide total comfort to residents.	1.2.1 Bed rooms for the number of residents				
	1.2.2 Hospital beds for frail care provided				
	1.2.3 Spacing between beds				
	1.2.4 Bedside rails				

	1.2.5 Bedside light accessible				
	1.2.6 Emergency alert system accessible from bed				
	1.2.7Controlled temperature system				
	1.2.8 Floor lights				
	1.2.9 Bedside cupboard				
	1.2.10 Screens/ curtains found between beds to provide privacy				
	1.2.11 Ventilation				
	1.2.12 Towel rails				
	1.2.13 Cupboard for residents' clothes				
1.3 Bathrooms and showers provide safe access to bath or shower	1.3.1 Easy access into bathroom				
	1.3.2 Able to safely transfer in/out of tub or shower				
	1.3.3 Floor lights available				
	1.3.4 Grab bars available and secure				
	1.3.5 Non-slip floorings in bath or shower				
	1.3.6 Shower adaptable with shower chair, walk in shower				
	1.3.7 Container / Bin for proper disposal of soiled incontinence pads/ napkins				
	1.3.8 Bath is positioned in the centre of the bathroom				
	1.3.9 Easy access for a Hoist				
	1.3.10 Easy access to wheelchairs				
	1.3.11 Emergency alert system accessible				
	1.3.12 Towel rails				
1.4 Toilets are safe and accessible	1.4.1 Residents' toilets clearly marked				
	1.4.2 Clearly marked toilets for males and females				
	1.4.3 Grab bars available and secure				
	1.4.4 Overhead lighting				

	1.4.5 Staff toilets marked				
	1.4.6 Container / Bin for proper disposal of soiled incontinence pads				
1.5 Kitchen facilities for preparation of meals for the number of residents	1.5.1 Storage space for food for present number of residents				
	1.5.2 Stoves available for the size of the home				
	1.5.3 Utensils				
	1.5.4 Utensils within reach				
	1.5.5 Freezer				
	1.5.6 Cold storage room				
	1.5.7 Crockery				
	1.5.8 Water jugs and tumblers				
	1.5.9 Cooking equipment				
	1.5.10 Protective clothing for the cooks				
	1.5.11 Cupboard for stainless steel items				
	1.5.12 Cupboard for glassware				
1.6 Linen bank provide bedding and night clothes for the number of residents	1.6.1 Linen				
	1.6.2 Blankets				
	1.6.3 Pillows				
	1.6.4 Pillow covers				
	1.6.5 Night clothes				
	1.6.6 Dressing gowns				
	1.6.7 Washrags				
	1.6.8 Towels				
1.7 Dining room provides facilities for residents to have their meals.	1.7.1 Dining tables				
	1.7.2 Chairs				
	1.7.3 Limited number of wheel chair friendly tables				
	1.7.4 Emergency alert system accessible				
	1.7.5 Table cloths and serviettes				

1.8 Supportive facilities to sustain and support day to day services 1.8.1 Substandard: Sluice room capable to	1.8.1.1 Clean dirty equipment for elimination such as urinal bottles and bed pans				
	1.8.2.2 Keep clean equipment for elimination				
	1.8.2.3 Containers for sharps				
	1.8.2.4 Containers for surgical wastes				
	1.8.2.5 Dirt bin				
	1.8.2.6 Rinse soiled bed linen				
1.8.2 Substandard: Dressing room	1.8.2.1 Sterilizer				
	1.8.2.2 Locked cupboard for poison and non-poisonous substances				
	1.8.2.3 Clearly cupboard marked/labelled poison or non-poisonous				
	1.8.2.4 Locked cupboard for instruments and utensils				
	1.8.2.5 Locked cupboard for medication stock				
	1.8.2.6 Locked medication trolley				
	1.8.2.7 Antiseptic solutions				
	1.8.2.8 Hand washing equipment				
	1.8.2.9 Drums with sterile equipment				
	1.8.2.10 Dressings trolley				
	1.8.2.11 Dustbin				
1.8.3 Substandard: Nurses' station with	1.8.3.1 Desk				
	1.8.3.2 Chairs				
	1.8.3.3 Locked cupboards for keeping documents				
	1.8.3.4 Nurse-Patient call system				

1.8.4 Sub-standard: Other supportive facilities	1.8.4.1 Secretary's office				
	1.8.4.2 Rest rooms for staff				
	1.8.4.3 Activity room for residents				
	1.8.4.4 Laundry				
1.9 Facility for residents with Alzheimer' s to ensure their safety and security	1.9.1 Spacious rooms available				
	1.9.2 Windows have safety guards attached				
	1.9.3 Windows with covering (No curtains)				
	1.9.4 Beds with minimum linen				
	1.9.5 Built in cupboards with locks				
	1.9.6 No movable furniture				
	1.9.7 Wash basins and baths have taps without a turn-on knob				
	1.9.8 Well ventilated rooms with controlled temperature				
	1.9.9 Rooms with locked doors				
	1.9.10 Access to outdoor secure areas				
	1.9.11 Handrails in the hallways and grab-bars in the bathrooms.				
	1.9.12 Non-slip floors				
	1.9.13 Minimized sharp colour contrasts in flooring, and borders and strong, busy patterns avoided				
	1.9.14 Motion detectors in rooms of residents prone to falls.				
	1.9.15 Exits that lead to unprotected areas monitored				
	1.9.16 Exit doors not intended for resident use situated parallel to the hallway so they are less visible				

Field 2: Clinical management

Draft Standards	Draft Criteria	I support the draft standard and criteria	I support the draft standard and criteria with modification	I do not support the draft standard and criteria	Comment (Suggested modifications or alternative standards)
2.1 Equipment for direct care available	2.1.1 Surgical instruments				
	2.1.2 Hoist for heavy residents				
	2.1.3 Wheel chairs				
	2.1.4 Walking aids				
	2.1.5 Raised toilet seat				
	2.1.6 Commode				
	2.1.7 Blood pressure apparatuses				
	2.1.8 Thermometers				
	2.1.9 Weighing scale				
	2.1.10 Portable suction machine				
	2.1.11 Oxygen cylinders with gauge filled with oxygen				
2.2 Emergency tray available for emergency care	2.2.1 Laryngoscope				
	2.2.2 Spatula				
	2.2.3 Mouth gag				
	2.2.4 Tongue forceps				
	2.2.5 Ambubag				
	2.2.6 Adrenaline				
	2.2.7 Atropine				
	2.2.8 Phenergan				
	2.2.9 Needles of various sizes				
	2.2.10 Syringes of various sizes				
2.3 Equipment for indirect care available	2.3.1 Flashlights available				
	2.3.2 Cleaning equipment				
2.4 Disposable items for direct care available	2.4.1 Dressings				
	2.4.2 Bandages				

	2.4.3 Medication				
	2.4.4 Catheters				
	2.4.5 Urine bags				
	2.4.6 Oxygen masks with various oxygen percentages 24, 28, 35 & 40				
	2.4.7 Nasal catheter to administer oxygen				
	2.4.8 Suction catheters				
	2.4.9 Silicone tubing				
	2.4.10 Napkins				
	2.4.11 Soap				
	2.4.12 Antiseptic solutions				
	2.4.13 Skin care cream.				

Field 3: Meals and water

Draft Standards	**Draft Criteria**	**I support the draft standard and criteria**	**I support the draft standard and criteria with modification**	**I do not support the draft standard and criteria**	**Comment (Suggested modifications or alternative standards)**
3.1 Residents provided with meals according to individual needs	3.1.1 Meals menu rotated between seasons				
	3.1.2 Special meals provided				
	3.1.3 Schedule for meal times				
	3.1.4 Schedule for tea times				
3.2 Water is available	3.2.1 Supply of hot and cold water for the number of residents				
	3.2.2 Ionized water				

3.3 water sources	3.3.1 Municipal water				
	3.3.1.1 Check for bacteriological indicators of faecal contamination				
	3.3.1.2 Free chlorine residual				
	3.3.1.3 Check for pH				
	3.3.1.4 Check for turbidity				
	3.3.1.5 Check for conductivity/total dissolved solids				
	3.3.2 Bore hole water				
	3.3.2.1 Situated far away from sewage material				
	3.3.2.2 Proper sanitary survey				
	3.3.2.3 Water treatment				
	3.3.2.4 Water purification method such as boiling, filtration				
	3.3.2.5 Proper pre-settlement				
	3.3.3 Wells				
	3.3.3.1 Determination of the concentrations of inorganic constituent				
	3.3.3.2 Measurement of pH				
	3.3.3.3 Evaluation of temperature, colour, turbidity, odour and taste				
	3.3.3.4 Bacteria analysis				
	3.3.3.5 Measurement of specific electrical conductance.				
	3.3.4 Rain water tanks				
	3.3.4.1 Check for quality of pH				
	3.3.4.2 Check for quality of turbidity				

Field 4: Residents' rights

Draft Standards	Draft Criteria	I support the draft standard and criteria	I support the draft standard and criteria with modification	I do not support the draft standard and criteria	Comment (Suggested modifications or alternative standards)
4.1 Residents' basic human rights of confidentiality, respect, privacy dignity and access to information are respected.	4.1.1 Residents' surveys				
	4.1.2 Archive facility for residents' records				
	4.1.3 Secure filing system of residents' information				
	4.1.4 Safe recordkeeping facility				
	4.1.5 Complaints / compliments register				
	4.1.6 Consent forms available				
	4.1.7 Locked facility for files of the residents				

Field 5: Guiding documents for residents' care

Draft Standards	Draft Criteria	I support the draft standard and criteria	I support the draft standard and criteria with modification	I do not support the draft standard and criteria	Comment (Suggested modifications or alternative standards)
5.1 Standard operating procedures available to provide safe quality care to residents.	5.1.1 Standards operating procedures (SOP) manual				
	5.1.2 Admission and discharge procedure				
	5.1.3 Lifting patients				
	5.1.4 Bathing/washing residents				
	5.1.5 Keeping residents' files				

	5.1.6 Wound care				
	5.1.7 Urinary catheter care				
	5.1.8 Feeding procedure				
	5.1.9 Safe keeping of valuables				
	5.1.10 Managing scabies				
	5.1.11 Prevention of falls				
	5.1.12 Hand hygiene				
	5.1.13 Personal protective clothes				
	5.1.14 Waste disposal				
5.2 Policies available to provide guidance to activities in the home.	5.2.1 Admissions				
	5.2.2 Living needs				
	5.2.3 Safety and security of residents				
	5.2.4 Resident satisfaction				
	5.2.5 Prohibiting abuse of patients				
	5.2.6 Information to residents & families				
	5.2.7 Quality assurance				
	5.2.8 Infection control and prevention				
	5.2.9 Record keeping				
	5.2.10 Environment hygiene				
	5.2.11 Safe keeping of valuables				
5.3 Specific indicators set to monitor and evaluate care provided to residents	5.3.1 Urinary tract infection (UTI)				
	5.3.2 Bowel incontinence				
	5.3.3 Home acquired pressure ulcers				
	5.3.4 Scabies				
	5.3.5 Depression				
	5.3.6 Infection				
	5.3.7 Falls				
	5.3.8 Adverse events				
	5.3.9 Residents' satisfaction surveys				
5.4 Guidelines available to provide guidance to specific activities in the home	5.4.1 Guidelines manual				
	5.4.2 Purchasing of medications, equipment and other requirements				
	5.4.3 Managing geriatric patients				

	5.4.4 Managing residents with Dementia or Alzheimer's disease				
	5.4.5 Transfer of residents to a hospital				
	5.4.6 Manage the death of a resident				
	5.4.7 Ordering food				

Field 6: Safety and security

Draft Standards	**Draft Criteria**	**I support the draft standard and criteria**	**I support the draft standard and criteria with modification**	**I do not support the draft standard and criteria**	**Comment (Suggested modifications or alternative standards)**
6.1 Requirements available for ensuring residents' protection and home environment which are free from danger and threats	6.1.1 Fire extinguishers				
	6.1.2 Fire alarm system				
	6.1.3 Smoke detectors				
	6.1.4 Fire hose				
	6.1.5 Doors leading to the outside are linked to an alarm system				
	6.1.6 If there is a lift clearly marked not to be used when there is a fire				
	6.1.7 Alarm system for break-ins or robberies				
	6.1.8 Cameras in the passages of the building				
	6.1.9 Surveillance system on the grounds				
	6.1.10 Security guards at entry gates				
	6.1.11 Emergency exists clearly marked				
	6.1.12 Signage clearly marked				
	6.1.13 Storage for hazardous chemicals				

	6.1.14 Safe storage for electrical equipment				
6.2 Communication support systems available to allow communication with staff	6.2.1 Telephone system, resident call system, electronic communication such as emails				
	6.2.2 Call system accessible to patients in all rooms namely bathrooms, toilets, dining room and at the bedside.				
	6.2.3 Emergency response system available				
6.3 Recreational activities available to allow socialization	6.3.1 Gardens				
	6.3.2 Library				
	6.3.3 A variety of recreational activities				

Field 7: Human resources

Draft Standards	**Draft Criteria**	**I support the draft standard and criteria**	**I support the draft standard and criteria with modification**	**I do not support the draft standard and criteria**	**Comment (Suggested modifications or alternative standards)**
7.1 Staff available for the various activities in the home.	7.1.1 General manager				
	7.1.2 Geriatric trained professional nurse (s)				
	7.1.3 Professional nurse				
	7.1.4 Non-professional nurses				
	7.1.5 Care givers				
	7.1.6 Cleaners				
	7.1.7 Cooks				
	7.1.8 General maintenance workers				
	7.1.9 Security at the gates				
	7.1.10 Administrative staff				

	7.1.11 Accountant				
	7.1.12 Secretary				
	7.1.13 House keepers				
7.2 Human Resource policies available to ensure efficient and effective management of human resources.	7.2.1 Training and Development				
	7.2.2 Leave				
	7.2.3 Grievance				
	7.2.4 Recognition of Long Service				
	7.2.5 Recruitment and selection				
	7.2.6 Wellness				
	7.2.7 Disciplinary				
	7.2.8 Job descriptions				
	7.2.9 Performance appraisal/ work agreements				

ANNEXURE 5: DELPHI QUESTIONNAIRE FOR ROUND TWO

Title: **Development and validation of healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania**

4 Introduction

As explained in round one of the Delphi questionnaire, the validation process will continue until a consensus level of ≥ 80% have been obtained between the participants about the standards and the associated criteria (Stewart et al., 2017:1-11).
After the completion of round one, four criteria of two standards, did not reach a consensus level of ≥ 80%. Amendments were recommended.

2. Continuation of the Delphi method, round two

The purpose of this questionnaire is to request your participation in round two of the validation process of the draft standards and criteria applying the Delphi method. Due to a possible lengthy process, the researcher will appreciate if the turnaround time could be three (3) days after receiving the questionnaire. Your support in this regard will indeed be appreciated.

You may contact me or my supervisors for any clarity at the telephone numbers or email addresses as listed below:
Victor Mathias
PhD student SU 22397019 (Stellenbosch University): Cell: +255 (0)688640449
Email: victor.mathias@aku.edu
Supervisor: Prof Ethelwynn L Stellenberg: Cell: +27 82 969 6574 email: elstel@sun.ac.za
Co-supervisor: Dr Mariana van der Heever: Cell: +27 21 938 9295: email: mmvdheever@sun.ac.za

3. Instructions to Delphi validation participants

- The questionnaire consists of two (2) pages. It will take approximately five (5) minutes to complete.
- Please insert a cross (X) under your choice: either 'I support the draft standard and criteria' or 'I support the draft standard and criteria with modification' or 'I do not support the draft standard and criteria'. Please provide your suggested modifications or alternative standards in the space provided.

The proposed questionnaire: Developed draft standards and criteria for validation

Section A: Demographic profile of Delphi participants

1. Indicate your professional category

1.	Gerontology nurse	
2.	Occupational therapist	
3.	Social worker	
4.	Community health worker	
5.	Nursing Administrator	
6.	Nursing home/homes for the elderly Nurse	
7.	Academia and Research	
8.	Psychiatrist	
9.	Medical Doctor	
10.	Pharmacist	
11.	Registered Nurse	
12.	Other (please specify)	

2. Indicate your highest academic qualification

1.	Advanced diploma	
2.	Bachelor	
3.	Masters	
4.	Doctorate	

3. This question may have a multi response answer. Indicate your participation in each area of the following.

1.	Teaching care of the elderly	
2.	Clinical practice in homes for the elderly	
3.	Management of homes for the elderly	
4.	Supervision of homes for the elderly	
5.	Participating in preparing guidelines for elderly	
6.	Participating in policymaking for the elderly	
7.	Writing healthcare standards for the elderly	
8.	Other (please specify)	

Section B: Draft standards and criteria

Field 1: Infrastructure

Basic physical structures and facilities for the homes enabling efficient and effective functioning of the home.

Draft Standards	Draft Criteria	I support the draft standard and criteria	I support the draft standard and criteria with modification	I do not support the draft standard and criteria	Comment (Suggested modifications or alternative standards)
1.1 Bedrooms provide total comfort to residents.	1.1.1 Sufficient bedrooms for the number of residents; rooms could be for a single resident, two residents or four to a room providing the required space of 17 square feet per resident.				
	1.1.2 Good spacing of 1.5 to 2m between beds				
	1.1.3 Accessible individual cupboard for clothes, clearly labelled with resident's name				
1.2 Bathrooms and showers provide safe access to bath or shower	1.2.1 Bathtub is positioned in the centre of the bathroom to allow nurses/ carers to assist the resident on both sides of the bath, also to allow space on both sides of the bath for the use of a hoist				

ANNEXURE 6: INFORMED CONSENT FORM

PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM

TITLE OF THE RESEARCH PROJECT: Development and validation of healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania.

REFERENCE NUMBER: S19/02/048 (PhD)

PRINCIPAL INVESTIGATOR: Victor Mathias

ADDRESS:
Stellenbosch University
P.O Box 241
Cape Town
8000
South Africa

CONTACT NUMBER: +255766400899

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the study researcher any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the **Health Research Ethics Committee at Stellenbosch University** and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.

What is this research study all about?

The study will be conducted in the homes for the elderly. The study participants will be all professional staff. The purpose of this study is to develop quality health standards for the

homes for the elderly in Tanzania; the standards of care for residents which will focus on providing safe quality residents.

Why have you been invited to participate?

You are important in this study and are thus requested to give your views which significantly will contribute to develop the required standards.

What will your responsibilities be?

You will be given a questionnaire with questions to answer which will probably take half an hour to one hour. The questions are based on the standards which a home for the elderly should constitute.

Will you benefit from taking part in this research?

There is no direct benefit of this study. However, the results of the study will help to get insight into the implementation of care according to the acceptable standards. It will help to improve future care to enhance quality of life of the residents.

Are there in risks involved in your taking part in this research?

There is no risk of this study.

Who will have access to your medical records?

The information provided by you will remain confidential. Only the researcher, supervisor and co-supervisor will have access to it. Your name will not be written anywhere, only code will be used to identify you.

What will happen in the unlikely event of some form injury occurring as a direct result of your taking part in this research study?

There is no any injury expected from your participation in the study

Will you be paid to take part in this study and are there any costs involved?

You will not be paid to take part in the study. There will be no costs involved for you, if you do take part.

Is there anything else that you should know or do?

- You can contact Mr. Victor Mathias at telephone +255766400899 if you have any further queries or encounter any problems.

- You can contact the Health Research Ethics Committee at 021-938 9207 if you have any concerns or complaints that have not been adequately addressed by your study doctor.
- You will receive a copy of this information and consent form for your own records.

Declaration by participant

By signing below, I ……..……. agree to take part in a research study entitled Development and validation of healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania.
I declare that:

- I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (place) .....…..…….. on (date) ……...……...

....

Signature of participant **Signature of witness**

Declaration by researcher

I (name) ……..…… declare that:

- I explained the information in this document to ……..
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use an interpreter.

Signed at (place) .....…..…….. on (date) ……...……...

....

Signature of investigator **Signature of witness**

Declaration by interpreter

I (name) ……..…… declare that:

- I assisted the researcher (name) …….. to explain the information in this document to (name of participant) ……..…….. using the language medium of……..
- We encouraged him/her to ask questions and took adequate time to answer them.
- I conveyed a factually correct version of what was related to me.
- I am satisfied that the participant fully understands the content of this informed consent document and has had all his/her question satisfactorily answered.

Signed at (place) .....…..…….. on (date) ……...……

....

Signature of interpreter **Signature of witness**

ANNEXURE 7: STELLENBOSCH UNIVERSITY, HREC ETHICS APPROVAL CERTIFICATE

Approval Notice

New Application

13/05/2019

Project ID: 8874

HREC Reference # S19/02/048 (PhD)

Title: DEVELOPMENT AND VALIDATION OF HEALTHCARE STANDARDS AND CRITERIA THAT CONTRIBUTE TO THE CARE OF RESIDENTS IN HOMES FOR THE ELDERLY IN TANZANIA

Dear Mr. Victor Mathias

We refer to your response to stipulations on your **New Application** received on 04/05/2019. Please be advised that your submission was reviewed and approved by members of **Health Research Ethics Committee** via **expedited** review procedures.

Please note the following information about your approved research protocol:

Protocol Approval Period: 03 April 2019 – 02 April 2020

Please remember to use your project ID (8874) on any documents or correspondence with the HREC concerning your research protocol.

Please note that the HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review

Translation of the informed consent document(s) to the language(s) applicable to your study participants should now be submitted to the HREC.

Please note you can submit your progress report through the online ethics application process, available at: Links Application Form Direct Link and the application should be submitted to the HREC before the year has expired. Please see Forms and Instructions on our HREC website (www.sun.ac.za/healthresearchethics) for guidance on how to submit a progress report.

The HREC will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility, permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Please consult the Western Cape Government website for access to the online Health Research Approval Process, see: https://www.westerncape.gov.za/general-publication/health-research-approval-process. Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.

For standard HREC forms and instructions, please visit: Forms and Instructions on our HREC website https://applyethics.sun.ac.za/ProjectView/Index/8874

If you have any questions or need further assistance, please contact the HREC office at 021 938 9677.

Yours sincerely,
Mrs. Melody Shana,
Coordinator,
HREC1

National Health Research Ethics Council (NHREC) Registration Number:

REC-130408-012 (HREC1)·REC-230208-010 (HREC2)

Federal Wide Assurance Number: 00001372
Office of Human Research Protections (OHRP) Institutional Review Board (IRB) Number:
IRB0005240 (HREC1)·IRB0005239 (HREC2)

The Health Research Ethics Committee (HREC) complies with the SA National Health Act No. 61 of 2003 as it pertains to health research. The HREC abides by the ethical
norms and principles for research, established by the World Medical Association (2013). Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects; the South African Department of Health (2006). Guidelines for Good Practice in the Conduct of Clinical Trials with Human Participants in South Africa (2nd edition);
as well as the Department of Health (2015). Ethics in Health Research: Principles, Processes and Structures (2nd edition).

The Health Research Ethics Committee reviews research involving human subjects conducted or supported by the Department of Health and Human Services, or other federal departments or agencies that apply the Federal Policy for the Protection of Human Subjects to such research (United States Code of Federal Regulations Title 45 Part 46); and/or clinical investigations regulated by the Food and Drug Administration (FDA) of the Department of Health and Human Services.

ANNEXURE 8: TANZANIA MINISTRY OF HEALTH PERMISSION LETTER

51

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF HEALTH, COMMUNITY DEVELOPMENT, GENDER, ELDERLY AND CHILDREN
COMMUNITY DEVELOPMENT

Tel No: 255-26-2963341/2963342/2963346
Fax No: 255-26-2963348
E-mail: ps@communitydevelopment.go.tz

Dodoma University, Faculty of
Social Sciences and Humanities,
Block No.11,
P.O. Box 573,
40478 DODOMA

In reply please quote:

Ref. No. FA.117/259/24/47

17th October, 2019

Academic Head,
School of Nursing & Midwifery,
The Aga Khan University,
DAR ES SALAAM.

Attn: Victor Mathias

RE: REQUEST PERMISION TO COLLECT DATA IN THE ELDERLY HOMES AMONG SIX GEOGRAPHICAL ZONES

Please Refer your request letter with the heading stated above of October 4th 2019.

I am pleased to inform you that the Ministry grants you permission to conduct the research as requested.

However, some of the stated zones have no elderly homes that are government owned. Therefore, I suggest that, you have to organize a meeting with the ministry so that technical officials will give you important guidance to make the process of data collection smooth.

Thank you for your cooperation.

Yours;

Dkt. Naftali B. Ng'ondi
For. PERMANENT SECRETARY

ANNEXURE 9: LANGUAGE EDITOR CERTIFICATE

Lona's Language Services

English/Afrikaans
Afrikaans/English

3 Beroma Crescent Beroma Bellville

Cell 0782648484
Email illona@toptutoring.co.za

* Translations * Editing * Proofreading
* Transcription of Historical Docs
* Transcription of Qualitative Research
* Preparation of Website Articles

TO WHOM IT MAY CONCERN

This letter serves to confirm that the undersigned

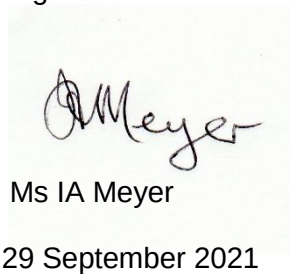
ILLONA ALTHAEA MEYER

has edited and proofread the **dissertation of Victor Mathias**

for language correctness and translated the Abstract into Afrikaans.

TITLE: DEVELOPMENT AND VALIDATION OF HEALTHCARE STANDARDS AND CRITERIA THAT CONTRIBUTE TO THE CARE OF RESIDENTS IN HOMES FOR THE ELDERLY IN TANZANIA

Signed



Ms IA Meyer

29 September 2021

ANNEXURE 10: TECHNICAL EDITOR CERTIFICATE

Lize.net
COMMUNICATION (Pty) Ltd
Company registration: 2019/050723/07

To whom it may concern

This letter serves as confirmation that I, Lize Vorster, performed the technical formatting of Victor Mathias's thesis entitled:

Development and validation of healthcare standards and criteria that contribute to the care of residents in homes for the elderly in Tanzania

Technical formatting entails complying with the Stellenbosch University's technical requirements for theses and dissertations, as presented in the Calendar Part 1 – General or where relevant, the requirements of the department.

Yours sincerely

Lize Vorster
Language Practitioner

The Tasting Room, Uitzicht Farm, Stellenbosch, 7600 * e-mail: lizevorster@gmail.com * cell: 082 856 8221