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Swallowing difficulties in the elderly: caregiving needs and responsibilities for elderly residing in care homes

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UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
SPEECH PATHOLOGY AND AUDIOLOGY

Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

A Research Study Presented to

The Department of Speech Pathology and Audiology

School of Human and Community Development

Faculty of Humanities

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In Complete Fulfilment of the Requirements for the Degree Master of Arts in Speech Pathology by Dissertation

By

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Under the Supervision of

Dr Jaishika Seedat

15 February 2023

Declaration

I hereby declare that this thesis is my own unaided work and that the assistance obtained has been only in the form of professional guidance and supervision. It is submitted for the degree Master of Arts in Speech Pathology to the Faculty of Humanities, Department of Speech Pathology and Audiology at the University of Witwatersrand, Johannesburg. It has not been previously submitted for any other degree or examination to any other university.



Saleha Y Lakhi

15 February 2023

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Aasiya Lakhi: My older, wiser sister. Thank you for being there every step of the way in every way that I could need or want. Always my sister, forever my friend.

Suleman and Amina Lakhi: My uncle and aunt, thank you for your continuous support and for encouraging me to be better.

Mohammed and Maryam Lakhi: My siblings, thank you for being the calm in the chaos.

Angelica Iacovitti: A good friend is a connection to life- a tie to the past, a road to the future, the key to sanity in a totally insane world. Thank you being a good friend.

To my friends and family: I treasure you all for your kind words and encouragement.

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Abstract

Introduction: The prevalence of swallowing difficulties in the elderly appears to be significantly high within care homes, but there is a dearth of information regarding caregiving needs within this context, especially from a South African perspective. South Africa's burden of disease, the growing elderly population, and a growing focus on optimising elderly care confirm the need for research within this area.
Rationale: There is a paucity of literature on the perspectives of caregivers working with elderly individuals in residential care facilities relating to their experiences, responsibilities, facilitators and challenges to service provision and providing optimal care to their residents, specifically at mealtime and pill-swallowing routines. Since speech-language pathologists are essential in evaluating and managing swallowing difficulties, they are in an optimal position to provide support to caregivers to encourage the best level of care in residents with swallowing impairments, should it be required. This research served to fill in the gaps in the literature regarding services to the elderly population residing in care homes and explored the needs that may be present in this context from the view of the caregiver.
Methodology: The aims of this study were to: 1) To describe the experiences and practices of caregivers with elderly residents during mealtimes at care homes, 2)To describe the difficulties experienced by residents of the care home during mealtimes and pill-swallowing routines, as viewed by the caregiver and 3)To describe caregivers' perspectives on training and support needs for mealtimes and pill-swallowing routines with caregivers. To explore these aims, a qualitative study was conducted with data collection consisting of three phases namely observations, focus groups, and interviews. Observations were conducted over a period of two weeks at two research sites in Gauteng followed by two focus groups, one at each site. Thereafter, interviews were held with seventeen participants who were selected through purposive sampling.
Data Analysis: Data was analysed inductively using Braun and Clarke's Thematic Analysis Procedure. Interviews were transcribed and then coded using Microsoft Excel and five primary themes were derived from analysis of the interviews and focus groups. Observations were recorded through field notes.
Results: Five themes emerged from the study: a) Barriers and facilitators to mealtime experience, b)Management strategies utilised during mealtimes, c) Description of the difficulties observed by caregivers, d) Caregivers' involvement in medicine administration, and e) Perspectives on training and support needs. Caregivers experienced various facilitators and barriers including resident characteristics such as resident temperaments and comorbid condition, caregiver characteristics such as years of experience. Caregivers observed a range of difficulties in residents during mealtimes and pill-swallowing routines and various management techniques tailored to individual residents were utilised to facilitate efficiency during mealtimes. It is not within the scope of practice for caregivers who aren't professional nurses to administer medicines however these caregivers were involved in pill-swallowing routines with residents. Caregivers shared their perspectives on training needs and identified topics requiring further training such as, management of non-compliant residents and the effects of various medical diagnoses on swallowing in the care home context.
Implications: Findings from this study suggests that further research is required investigating the possible role of caregivers who aren't qualified to administer pills but may still be involved in pill-swallowing routines in the care home settings. This study identified a range of barriers to mealtimes and pill-swallowing routines as perceived by caregivers which would need to be addressed through training, workshops, and the formulation of policies by relevant stakeholders.

Keywords: caregiver, swallowing, elderly, care homes, mealtimes, pill-swallowing

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List of Terms

Elderly –The World Health Organisation (WHO) regards an individual aged 60 years or more to be an older person, and this is the definition that will be used in the proposed study (Rudge, 2020; United Nations Development Programme (UNDP), 2016; UNSCEB, 2017).

Caregiver – The definition of caregiver utilised in the proposed study will be the one provided by Fee and colleagues (2020), which defines caregivers as care assistants who provide routine personal care, support, and assistance with activities of daily living to patients and residents in a variety of healthcare settings, in this case, a care home. Caregivers assist individuals with personal, physical mobility and therapeutic care needs, and generally under the direct supervision of a health professional or associate professional. This term will thus include any individual employed at the two selected sites involved in the routine care of the elderly residents, including nursing assistants, healthcare assistants and agency care workers.

Care Home – A building used primarily for the purpose of providing accommodation and 24-hour service to elderly individuals and includes: nursing homes. Residential care facilities, retirement homes, aged-care facilities, frail care centres, and old-age homes (South African Human Rights Commission, 2015).

Dysphagia - Any interruption in swallowing that occurs because of structural or functional changes in the oral cavity, pharynx, larynx, or oesophagus (Patino-Hernandez et al., 2016). It refers to any reported difficulty in swallowing saliva, food, liquid, or medicines.

Presbyphagia - Ageing-related changes in the swallowing mechanism of an otherwise healthy older adult, i.e. an old but healthy swallow (McCoy & Desai, 2018).

Pill-induced Dysphagia - Difficulty swallowing pills orally due to the physical characteristics of the pill itself (Fusco et al., 2016).

Pill – Medicinal drugs which are taken orally. This includes various categories of medication such as vitamins or analgesics and can consist of prescription or non-prescription medicines and over-the-counter medicine.

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Abbreviations

WHO – World Health Organisation

HIV – Human Immuno-deficiency virus

AIDS – Autoimmune Deficiency Syndrome

COVID-19 – Coronavirus Disease

USA – United States of America

UK – United Kingdom

UNDP – United Nations Development Programme

ADL – Activities of Daily Living

NGO – Non-Governmental Organisation

SAQA – South African Qualifications Authority

TBI – Traumatic Brain Injury

SDG – Sustainable Development Goals

RDP – Reconstruction and Development Programme

1. Introduction

There is growing evidence indicating a high prevalence of swallowing difficulties in the elderly population residing in care homes (Chen et al., 2020; Engh & Speyer, 2021; Jukic Peladic et al., 2019; Park et al., 2013; Streicher et al., 2018). There are multiple studies on dysphagia screening and assessment, the consequences of swallowing difficulties, indicators of swallowing difficulties, interventions to prevent swallowing difficulties, and management of swallowing difficulties within the care home setting (Chen et al., 2020; Engh & Speyer, 2021; Jukic Peladic et al., 2019; Park et al., 2013; Streicher et al., 2018a; Zeng et al., 2019). However, there is a paucity of studies considering the caregivers' perspectives when providing care to elderly residents in care homes who may present with difficulties swallowing food and/or medication (Chen et al., 2021). The increasing prevalence of swallowing difficulties with advancing age (Cichero, 2018), an increasing elderly population (Scherbov & Sanderson, 2020; World Health Organisation (WHO), 2019), South Africa's quadruple burden of disease (Hofman & Madhi, 2020), and an increasing number of elderly individuals relocating to care homes (Chen et al., 2021; Ramocha et al., 2017; Zeng et al., 2019) prompts the need for further research into care for the elderly.

Forough et al. (2018) state that there is variance in the reported prevalence of swallowing difficulties globally in the elderly care home population on account of the usage of different assessment and screening tools, the study of diverse populations in the care home setting, and the definition used for swallowing difficulties. Prevalence ranged from 7% to 70% within the care home population in various international studies in Norway, Australia and other countries (Engh & Speyer, 2021; Forough, Wong, et al., 2018a; Streicher et al., 2018a). The prevalence of swallowing difficulties in the elderly South African population may be even higher due to the quadruple burden of disease, which comprises four epidemics of which three are associated

with increased risk of swallowing difficulties and vulnerability to dysphagia and relevant to the context of this research. These three epidemics are HIV, AIDS, and tuberculosis, non-communicable diseases, and violence and injuries. The changing demographic shift with an increasing number of elderly individuals only compounds this problem and implies a potentially high prevalence of elderly individuals presenting with swallowing difficulties. The ageing population has also prompted a shift from traditional care within the family to care within residential care facilities as the burden of care has increased, and the needs of the elderly individuals in activities of daily living are greater than what can be provided by family caregivers at home (Zeng et al., 2019). There is a total of over 1000 care homes, both registered and unregistered in South Africa, responsible for providing 24-hour, long-term, holistic care for elderly individuals, and caregivers employed within these care homes are often accountable for mealtimes and the administration of pills to these elderly residents (Cowper et al., 2020). However, there are limited to studies addressing the care home setting and the perspectives of caregivers and even less so regarding managing elderly residents presenting with a range of swallowing difficulties, such as presbyphagia, dysphagia, and pill-induced dysphagia all of which may be present within the elderly population.

Studies on caregivers have conventionally been focused on caregiver practices within acute and sub-acute care settings in the evaluation and management of dysphagia or presenting swallowing difficulties, caregiver burden within private homes, third-party disabilities, and, more recently, on the impact of the Severe Acute Respiratory Syndrome Coronavirus Pandemic of 2019 (COVID-19) in care homes (Chen et al., 2021; Engh & Speyer, 2021; Forough, Wong, et al., 2018a; Mastroianni & Forgerini, 2018; Mohammadi et al., 2015; Pownall et al., 2019; Streicher et al., 2018). Although a few studies have considered the view of elderly residents and caregivers' perspectives during pill administration, much of this research has been

generated from well-developed, high-income countries. The results from these studies are not necessarily generalisable to the South African context. However, considering South Africa's adoption of many international policies aimed at optimising care and improving the quality of life for the elderly, there is a great need for research in this area (Solanki et al., 2021).

Hence, this study aimed to fill in gaps in the knowledge base regarding caregiving needs for the elderly residing in care homes and identify potential needs within this setting. The current study also served to assist care homes in identifying potential factors which may hinder optimal care or contrarily be facilitating optimal care for elderly residents. This study was also aimed at identifying possible challenges that caregivers may be experiencing in this setting which can then be addressed. This study aimed to obtain the caregiver's perspectives regarding swallowing difficulties experienced by residents at care homes during mealtimes and taking of medication, their experiences with these residents, their practices in managing these residents, and their perspectives on training needs to optimise care for these residents. Through obtaining this information, this study intended to serve as an initial step in assisting speech-language therapists and other relevant professional in devising reference guidelines and planning programmes for addressing care for elderly residents in care homes who may have difficulties swallowing food and medication.

For the current study, a working definition of care homes refers to any building used primarily to provide accommodation and 24-hour service to elderly individuals. The term care home included nursing homes, residential care facilities, retirement homes, frail care centres, aged care facilities, and old age homes (South African Human Rights Commission, 2015). The term caregiver referred to all individuals employed within the care home who were involved in the routine care of elderly residents, including assisting in the completion of activities of daily

living, specifically mealtimes and pill-swallowing routines. These included trained nursing staff, healthcare assistants, nursing aides, volunteer care workers, agency care workers, volunteer staff, and informal care workers (Fee et al., 2020). The focus of this study was on caregivers providing care to elderly residents of the care home. Elderly was defined as persons over 60 years.

2. Literature Review

2.1 Swallowing

Swallowing refers to a continuous process comprising reflexive and volitional components, from the placement of food into the mouth to manipulation of the food and its' passage through the pharyngeal cavity and oesophagus to the stomach (Mankekar & Chavan, 2015). It requires careful coordination of the muscular and neurological systems, including various cranial nerves and several cortical areas collectively known as the "cortical swallowing network" (Mankekar & Chavan, 2015). Swallowing is often divided into three phases, each comprising different food management behaviours – oral, pharyngeal, and oesophageal phases. Despite its categorisation into distinct categories, swallowing is, in fact, a swift, dynamic, and integrated process with the potential overlap between all the different phases (Pongpipatpaiboon et al., 2017).

The ability to swallow is integral to the ingestion of food, liquids, and medication and serves a function in airway protection (Sasegbon & Hamdy, 2017). Swallowing holds a dual role in contributing to the pleasure of ingesting food and liquid and the utilitarian activity of ensuring adequate nutrition and hydration (Sasegbon & Hamdy, 2017). Any impairment in the swallowing process can thus negatively impact one's perceived quality of life (Sasegbon & Hamdy, 2017). In the elderly population, the potential effects of changes to the swallowing mechanism may be even more notable. This is because changes to the swallowing mechanism

may arise from multicausal factors like sarcopenia, other age-related changes, or changes resulting from the presence of comorbidities such as paresis or paralysis (Christmas & Rogus-pulia, 2019; Cichero, 2018; Hiramatsu et al., 2015).

2.2 Aetiologies of swallowing difficulties in the elderly

Effects of Ageing on the Swallow

Ageing results in several changes to the swallowing mechanism, many viewed as a standard culmination of ageing. Ageing affects both the oral and pharyngeal phases of the swallow. Nogueira and Reis (2013) assert that as people grow older, the cortical areas responsible for the swallowing process develop compensatory techniques as cortical activities within these areas are more limited, and an increased number of the cortical regions become involved in the swallowing process. Eibling and Coyle (2017) report that the most prominent physiological changes that occur because of ageing is reduced strength and the slowing of the swallowing process. Individuals beyond 60 years of age are reported to have a prolonged oral phase, reduced tongue pressure, and reduced efficiency in bolus manipulation and clearance (Nogueira & Reis, 2013). Elderly individuals reportedly swallow more often, generate more dry swallows and present with prolonged oral, pharyngeal, and oesophageal phases (Eibling & Coyle, 2017). Swallowing function can also be affected by changes to the gustatory and olfactory systems (Cichero, 2018). Olfactory changes could be associated with cognitive decline and may be a chief factor in perceived changes in taste and reduced appetite in the elderly population (Eibling & Coyle, 2017). Additionally, loss of dentition, the presence of poorly fitting dentures, the absence of dentures, and atrophy of the masticator muscles may influence bolus control and manipulation in the oral phase (Eibling & Coyle, 2017). The reduction in salivary function and resultant xerostomia, defined as an unusually dry mouth,

may also cause swallowing dysfunction (Fernandes et al., 2021). Xerostomia is often caused by medications prescribed to the elderly (Forough, Wong, et al., 2018a, 2018b).

Additionally, Carmel and Hummel (2013) state that as people reach 70 to 80 years of age, the larynx moves lower in the neck, and arthritic changes affect the cartilaginous structures, which decreases flexibility and strength of movements which subsequently results in oral and pharyngeal residue, and multiple swallows in attempts to clear this residue. Laryngeal changes associated with swallowing dysfunction include sensory and motor changes, including vocal cord bowing and atrophy (Eibling & Coyle, 2017). Additionally, with age, there are reductions in muscle mass and strength, dehydration of laryngeal mucosa, flaccidity of vocal cords, and loss of elasticity of laryngeal ligaments (Cichero, 2018). The suprahyoid and the thyrohyoid muscles interact to raise the larynx, but age-related changes may result in reduced strength, coordination, stability, and endurance of the swallowing mechanism in the elderly (Hiramatsu et al., 2015). Therefore, elderly individuals may require more time during meals and present with fatigability during longer meal durations (Hiramatsu et al., 2015). Fatiguing laryngeal muscles and multiple swallows are associated with an increased prevalence of aspiration and pneumonia in the elderly population (Hiramatsu et al., 2015).

The changes mentioned above, along with the progressive loss of muscle mass and strength, contribute to generalised weakness and loss of functional reserve (Eibling & Coyle, 2017). Sarcopenia, or the progressive loss of muscle, is associated with general decline, loss of mobility, and reduced functional independence (Azzolino et al., 2019; Patino-Hernandez et al., 2016). It impacts swallowing function through its effect on the muscles utilised in swallowing. In the elderly individual, sarcopenia can aggravate swallowing disorders (Azzolino et al., 2019; Patino-Hernandez et al., 2016).

Therefore, not only are there anatomical and functional alterations but also various changes in the cortical and peripheral functions in swallowing because of ageing. In the general elderly population, these changes are gradual and insidious and are referred to as presbyphagia (McCoy & Desai, 2018). However, age-related changes may sometimes indicate a decrease in swallowing functions, heightening vulnerability to dysphagia and airway complications (Malandraki & Robbins, 2013).

Presence of Comorbidities and South Africa's Quadruple Burden of Disease

In addition to age-related changes which may leave elderly individuals more vulnerable to swallowing difficulties, co-existing medical conditions and chronic illnesses may also result in swallowing impairments among the elderly population (Abu-Ghanem et al., 2020; Eibling & Coyle, 2017). Neurological disorders such as stroke, dementia and Parkinson's disease, head and neck cancer, and oesophageal cancers are associated with an increased risk of dysphagia (Engh & Speyer, 2021). Dementia is correlated with an increased risk of dysphagia and aspiration pneumonia due to its impact on swallowing function (Takahashi et al., 2019). Dysphagia refers to disruptions in the swallowing process that may result from structural or functional changes to the swallowing mechanism and result in inefficient and unsafe swallowing (Patino-Hernandez et al., 2016). Moreover, depression, cognitive dysfunction, and psychoactive medications may also impact swallowing function in the elderly. Hence, in the elderly population, presbyphagia may be accompanied by dysphagia.

Medication effects on swallowing

A side effect of certain medications may be swallowing difficulties. Standard classes of medicine which can cause swallowing dysfunction include anti-psychotics, anti-depressants,

anti-convulsant, analgesics, and anxiolytics (Fusco et al., 2016). An increase in the elderly population has led to concerns regarding the increased risk of multimorbidity, and the use of many over-the-counter drugs renders these individuals more prone to polypharmacy and its side effects (Fernandes et al., 2021; Fusco et al., 2016). Polypharmacy, i.e., the use of more than five drugs daily, is ostensibly related to xerostomia and complaints during swallowing (Fernandes et al., 2021).

However, dysphagia and reported swallowing difficulties may not only occur as a side-effect of medication, but the physical characteristics of the pill being ingested may result in reported swallowing difficulties (Forough, Lau, et al., 2018). The oral route is the preferred method of drug administration as it is often reported to be more convenient, cost-effective, and less invasive for individuals (Forough, Lau, et al., 2018). Yet, some individuals may experience difficulty swallowing these pills and present with what is known as pill-swallowing problems or pill-induced dysphagia (Forough, Lau, et al., 2018). Pill-induced dysphagia may occur due to previously unpleasant or traumatic experiences, different perceptions towards pills compared to foods/liquids, pill phagophobia or fear of swallowing pills, and due to the physical characteristics of the pill itself, such as shape, size, texture, and taste (Forough, Lau, et al., 2018). This is different to swallowing impairments resulting in difficulty swallowing medication and also differs from swallowing dysfunction that arises as a side-effect of drugs.

2.3 Presbyphagia versus Dysphagia versus Pill-induced Dysphagia

Ageing-related changes in the swallowing mechanism of an otherwise healthy older adult are referred to as presbyphagia and imply an old but healthy swallow (McCoy & Desai, 2018; Namasivayam-MacDonald et al., 2019). In presbyphagia, the various neurological, physiological, and sensory changes that occur as a natural part of the dynamic ageing process

do not signify inherent impairment within this population but rather contribute to a diminished functional reserve which subsequently leaves the elderly individual more susceptible to dysphagia (Eibling & Coyle, 2017; McCoy & Desai, 2018). Contrarily, “dysphagia” refers to any interruption in deglutition that occurs because of structural or functional changes in the oral cavity, pharynx, larynx, or oesophagus (Patino-Hernandez et al., 2016).

The term dysphagia comprises difficulty in swallowing and impaired and potentially dangerous swallowing of saliva and all consistencies of food and liquid (Groher & Puntil-Sheltman, 2015). Dysphagia is a common condition affecting individuals across the lifespan and results from diverse aetiologies. In the geriatric population, i.e., individuals over the age of 80 years, the high prevalence of dysphagia and its severe consequences has led to dysphagia being considered a geriatric syndrome (Baijens et al., 2016). Baijiens and colleagues (2016) define geriatric syndromes as any clinical condition in the geriatric population that is multifactorial, associated with several comorbidities and adverse outcomes, treated by a multidimensional approach, and is highly prevalent in the declining years. When elderly individuals who present with frailty and reduced functional reserve attributed to age-related changes face additional stressors, namely medications, chronic illness, and comorbidities, they are more vulnerable to dysphagia (Azzolino et al., 2019; McCoy & Desai, 2018). Hence, an elderly individual may present with presbyphagia without dysphagia.

An elderly individual with presbyphagia may potentially present with difficulty swallowing pills orally due to the physical characteristics of the pill itself (Forough, Lau, et al., 2018). This is known as pill-induced dysphagia. For the current study, “pill” will refer to medicine taken orally. In the elderly population, where polypharmacy is prevalent due to multimorbidity and the aim of extending life expectancy, pill-induced dysphagia may be present even in healthy

elderly individuals that do not otherwise have any swallowing difficulty and this may be compounded by the effects of ageing on the swallow mechanism (Fernandes et al., 2021; Gillicuddy et al., 2016). In South Africa, this may be more significant due to the high prevalence of multimorbidity and non-communicable diseases such as hypertension and stroke, violence and injuries, and HIV/AIDS, which require multiple pills. There are suggestions in the literature that the number of prescribed medications increase with age (Gillicuddy et al., 2016).

Dysphagia, presbyphagia, pill-induced dysphagia or any swallowing impairment may result in several negative consequences for the elderly individual affecting day-to-day life and overall health and quality of life.

2.4 Prevalence of swallowing difficulties

As a symptom of many disease conditions, the prevalence of swallowing difficulties ranges according to the setting, the population studied, medical comorbidities, and the diagnostic tools used to identify dysphagia (Forough, Wong, et al., 2018b; Mastroianni & Forgerini, 2018). Individuals may be resistant to acknowledging symptoms due to embarrassment, have difficulties in communication due to comorbid conditions, or perceive it to be a typical consequence of old age (Cavallero et al., 2020). Furthermore, the prevalence may be affected by challenges in identifying normal presbyphagia and dysphagia. As the elderly accumulate increasing physiological changes with normal ageing, they develop self-learned compensatory strategies, often obscuring the insidious onset of dysphagia (Nogueira, 2015). Moreover, in the setting of comorbidities, clinically significant dysphagia is often not initially apparent (Ebersole et al., 2020).

Much of the literature on dysphagia, its' prevalence, and trends in the evaluation and management of dysphagia in the elderly population arise from developed, first-world countries such as the United States of America (USA) and the United Kingdom (UK). There is a dearth of literature arising from low- and middle-income countries and the five countries that have been declared emerging economies such as Brazil, Russia, India, China, and South Africa (Chen et al., 2021). Dysphagia in the overall population reportedly varies between 2% and 16%, 44% in acute care settings, and 15% of community-dwelling older adults in the US (Abdul Khader et al., 2018; Abu-Ghanem et al., 2020). Data from Japan and Italy suggest that 22% to 60% of elderly individuals present with dysphagia (Park et al., 2013). Literature indicates that these values are potentially even higher in care homes, with prevalence rates ranging from 25% to 70% of the care home population (Chen et al., 2021; Dziewas et al., 2017; Forough, Wong, et al., 2018a). This data supports the need for research within the care home population. The reportedly high prevalence of swallowing difficulties confirms the need to assess the situation within care homes and how these residents are being managed. It is known that elderly residents may be experiencing problems with swallowing, either presbyphagia, dysphagia, pill-induced dysphagia, or any swallowing difficulty, but there is a lack of information from the perspectives of caregivers and whether they feel they are adequately trained and prepared to engage with elderly residents who may present with these swallowing difficulties. Early identification is critical to optimising care and preventing aspiration pneumonia, dysphagia and frailty and mortality associated with these difficulties (Nogueira & Reis, 2013). These data signify a crucial need to explore the interventions provided to residents living in care facilities, as caregivers may be primarily responsible for their daily care, and the elderly residents may be more vulnerable to dysphagia and its numerous consequences.

2.5 Consequences of Dysphagia

Dysphagia is associated with many negative health outcomes, including malnutrition, dehydration, prolonged hospitalisation, and socio-psychological conditions (Forough, Wong, et al., 2018a). It significantly impacts the quality of life and places individuals at greater risk for aspiration pneumonia, increased hospitalisation, increased readmission, and eventual mortality (Dziewas et al., 2017; Forough, Wong, et al., 2018a; Namasivayam-MacDonald et al., 2019; Streicher et al., 2018a). Dysphagia poses a significant health threat not only to physical well-being but is also associated with psychological burden, depression, social isolation, and anxiety (Chen et al., 2021). Dysphagia is associated with malnutrition and reduced activities of daily living (ADL) in older persons receiving long-term care. Pneumonia, mainly aspiration pneumonia, is a common cause of death among older people (Abu-Ghanem et al., 2020; Dziewas et al., 2017). Dysphagia not only affects the eating and swallowing of foods but also affects oral medicinal intake. Besides increasing the risk of aspiration pneumonia and negatively impacting functionality and quality of life, swallowing difficulties may also compromise medication adherence (Fusco et al., 2016). The preferred medicine delivery method in the adult population continues to be the oral route of administration (Forough, Wong, et al., 2018a; Ninfa et al., 2021).

2.6 Administration of Medication

Administering medications to members of the elderly population with swallowing impairments is a complex task (Forough, Wong, et al., 2018a). Swallowing pills may be challenging for those who experience swallowing difficulty, i.e., dysphagia or presbyphagia, and this poses a challenge for healthcare professionals dispensing medication and those administering medicines to these individuals (Forough, Wong, et al., 2018a; Mastroianni & Forgerini, 2018). Professional nurses with the correct authorisation and qualifications as delineated by the

National Nursing Act are permitted to prescribe and dispense medication (Department of Health, 2011). However, the administration of medication within the care home setting to the residents is often the responsibility of the professional nurses and caregivers. Administering medication to individuals with swallowing difficulties requires more skills and knowledge than administering it to those individuals without swallowing difficulties (Wright et al., 2020). Research suggests that this may lead to more administration errors which can result in negative health consequences for the patient, including death and leave the nurse or caregiver medically liable for these administration errors (Forough, Wong, et al., 2018a). The process of swallowing requires visual recognition, cognitive awareness, sensorimotor responses, physiologic response, and motor planning and execution (Payne & Morley, 2018). Hence, as elderly individuals experience deficits in attention, initiation, orientation, recognition, executive function, and decision-making, the process of eating and swallowing food, liquids, and medication are affected (Payne & Morley, 2018). These difficulties are further exacerbated by the effects of ageing on the swallow mechanism, such as reduced strength of muscles of mastication and diminished laryngeal elevation, which impedes efficient airway protection and increases the risk of choking on pills and food and liquids (Cichero, 2018; Eibling & Coyle, 2017; Payne & Morley, 2018). Pharyngeal swallowing is also delayed in elderly individuals, and this may result in multiple swallows making the pill swallowing experience unpleasant (Wolf et al., 2021). This may increase the risk of aspiration pneumonia and promote a reluctance to swallow food, liquid, or medication (Fusco et al., 2016). Elderly individuals require protection and prevention through the identification and elimination of any risk factors which may contribute to inducing or aggravating dysphagia (Wolf et al., 2021). Consequently, there is a critical need to optimise pill administration practices in older individuals with swallowing difficulties (Fong et al., 2020; Forough, Wong, et al., 2018a). Furthermore, suppose healthcare professionals are to assist individuals with swallowing difficulties to achieve a safe

and efficient swallow and facilitate adherence to oral medications. In that case, it is essential to understand patient experiences and attitudes towards their difficulties but also obtain the professionals' perspectives on their needs, experiences, and challenges when working with these individuals with swallowing difficulties, irrespective of the nature or cause.

2.7 Dysphagia, Residential Care Facilities, and Caregiver Perspectives on Dysphagia Management

Historically, care homes were primarily used by elderly white individuals, and state-owned care facilities for other racial groups were minimal (Jacobs et al., 2020; Lloyd-Sherlock, 2019). There are reportedly 1 150 residential care facilities for the elderly and 1 000 privately owned long-term care facilities in South Africa (Cowper et al., 2020). Most are owned by faith-based and non-governmental organisations (NGOs) (Cowper et al., 2020; Lloyd-Sherlock, 2019). This has become increasingly relevant considering the increasing elderly population globally and in South Africa (Solanki et al., 2019; Statistics South Africa, 2014, 2019). Unfortunately, there are no statistics available on how many elderly individuals are residing at these long-care facilities. However, globally, there is an increase in elderly individuals requiring long-term care in facilities (Namasivayam-MacDonald et al., 2019; Park et al., 2013). The prevalence of swallowing difficulties in care homes ranges significantly from 13% to 70% (Chen et al., 2021; Engh & Speyer, 2021; Namasivayam-MacDonald et al., 2019; Nogueira & Reis, 2013). Chen and colleagues (2021) conducted a scoping review and found that despite the high proportion of individuals with swallowing difficulties, care homes rarely have adequate access to equipment or a good proportion of caregiver to resident ratio. Typically, in care homes, caregivers are responsible for mealtimes and the administration of medications (Fong et al., 2020). However, there is a consensus in the literature that improved training in the assessment and management of swallowing difficulties is required for both trained and untrained staff

(Pownall et al., 2019). This information is, however, from studies conducted in the UK, USA, Brazil, China, and Korea. There is little research other from low- and middle-income countries on the perspectives of the caregivers within care homes of their experiences when working with residents presenting with reported, observed, or diagnosed dysphagia. Research within this area is even more essential considering the increasing elderly population.

2.8 Caregivers Employed in Care Homes

A key element of long-term care homes for elderly individuals is a competent care team with specialised training and support (Mapira et al., 2019). The team of caregivers at care homes may include professional nursing staff, ancillary nurses, auxiliary nurses, healthcare assistants and care workers. An ancillary nurse and healthcare assistant in a care home will work under the authority and supervision of professional healthcare workers or nurses (Fee et al., 2020). An ancillary nurse must complete a course of at least one year to qualify as an ancillary nurse, including theoretical and practical components (South African Nursing Council, 1993). Alternatively, the South African Nursing Council has also accredited various institutions to offer short courses, including hospitals, universities, and specialised training centres. Caregivers working in care homes may thus have completed 6-month courses or longer courses to be able to provide care to others. The South African government website states that a certificate in home-based care training is required to be registered as a caregiver for older persons (South African Government, n.d.). There are a range of certificates and qualifications provided by the South African Qualifications Authority (SAQA) which permit individuals to serve as care workers and provide care to frail individuals including older individuals, and to provide this care in a range of settings including private homes, frail care centres and care homes. Although there are specified outcomes for each qualification, the duration of courses vary across accredited training institutions ranging from three months to a year based on the

specific qualifications. Training for caregivers is hence quite variable in the South African context.

Research by the Samson Institute for Ageing Research suggests that there is inconsistent training for caregivers, and this is resulting in variable quality of care for the elderly (Mapira et al., 2019). The roles of caregivers across different institutions also differ. Caregivers may find it challenging to develop and consolidate their position in care homes (Mapira et al., 2019). Whereas some caregivers may be viewed as "domestic carers" involved in providing companionship and assisting with activities of daily living, other institutions may offer more responsibility to caregivers, and they may be tasked with the administration of medication, monitoring of vitals, and reporting on the state of the residents and any changes to their condition (Mapira et al., 2019). Mapira and colleagues (2019) report that caregivers in private homes may be providing services more similar to that of nurses and that there is no clear scope of practice or legal parameters for caregivers in the South African context. The Samson Institute for Ageing Research, therefore, advocates for the standardisation of training and increasing support for caregivers (Mapira et al., 2019).

Furthermore, care for the elderly requires additional skills. However, caregivers reportedly lack access to training and support to develop these skills. This may lead to caregiver burden and cause stress to caregivers as elderly individuals in the care home setting have an increased mortality rate (Mapira et al., 2019). In the case of the current study, different caregivers with varying levels of training and varying qualifications may have different experiences during the provision of care to elderly residents. It is essential to understand what these experiences may be and how caregivers may be assisted so that care may be optimised and potential psychological difficulties that may arise from caregiving to elderly individuals and elderly

individuals with complex needs such as dementia and stroke can be addressed. Speech-language therapists are the primary professionals responsible for evaluation and management of swallowing impairments in care homes (Brooks et al., 2016). However, collaboration between caregiving staff and speech-language therapists is crucial in optimising healthcare. This is because caregivers involved in the round-the-clock care of the residents are the first to identify a problem which is then referred to other professionals. Furthermore, although speech-language therapists may provide the recommendations and therapeutic techniques, nurses and caregiving staff are the ones responsible for implementing these recommendations (Brooks et al., 2016). Hence, it is critical from a speech-language therapy to understand the experiences and practices of caregivers so that recommendations are tailored in a manner that supports caregivers as well so that care may be optimised. Furthermore, Policies may be put into place to address caregivers' needs in collaboration with all relevant stakeholders. This is especially important considering the increasing population of elderly individuals who are functionally dependent and who may require care homes (Mapira et al., 2019).

2.9 South Africa: A Flourishing Elderly population, Dysphagia, and the Burden of Disease

The 2020 mid-year population estimates found that 9.1% of the South African population was over the age of 60, which accounts for approximately 5.4 million individuals (Statistics South Africa, 2020). Following the global pattern, South Africa has also shown a significant increase in the elderly population in recent years (Statistics South Africa, 2020). The United Nations also projects that 1.4 billion individuals will be over the age of 60 by the year 2030 and predict that by 2050, one in six individuals will be over the age of 65 (United Nations Development Programme (UNDP), 2016). As mentioned earlier, various neurological conditions, e.g., traumatic brain injury (TBI) and the prevalence of chronic non-communicable diseases such

as stroke, Parkinson's disease, and head-and-neck cancers either serve as aetiological factors of- or are associated with the occurrence of dysphagia (Engh & Speyer, 2021; Groher & Puntil-Sheltman, 2015; Jukic Peladic et al., 2019). The demographic importance of the geriatric population has been recognised internationally, headed by United Nations' central transformative promise to "Leave no one behind" as part of the 2030 Agenda and the Sustainable Development Goals (SDG) (UNSCEB, 2017; World Health Organisation (WHO), 2019). The SDG frameworks' third goal addresses health and well-being across the lifespan. To address this goal, South Africa's National Reconstruction and Development Plan (RDP) has identified health goals for the country, which include increasing life expectancy to 70 years, significantly reducing non-communicable diseases, and addressing the need for quality healthcare for all. Considering the prevalence of dysphagia in the elderly and the paucity of information from South Africa regarding the evaluation and management of dysphagia within nursing homes, this research aims to consider the perspectives of caregivers employed at care homes on their experiences and practices with the elderly residents during mealtimes and pill administration.

3. Rationale

The current study served to utilise a qualitative research methodology to illustrate the experiences of caregivers within care homes during meals and in the administration of pills to elderly residents in care homes. There is a paucity of literature on the perspectives of caregivers working with elderly individuals in residential care facilities relating to their experiences, responsibilities, facilitators to service provision, and challenges experienced in fulfilling their duties and providing optimal care to their residents. Since speech-language pathologists are essential in evaluating and managing swallowing difficulties, they are in an optimal position to provide support to caregivers to encourage the best level of care in residents with swallowing

impairments, should it be required (Groher & Puntil-Sheltman, 2015). Given the lack of publications in this area, it remained unclear if caregivers in residential care facilities experience challenges in the care of individuals with swallowing impairments, specifically in mealtimes and medication administration. If affirmative, it is possible that this would affect decision-making regarding methods utilised during feeding and the management techniques recommended by the speech-language therapists in the event of difficulties with swallowing, e.g., utensils used, positioning, meal portions, frequency of meals for meal administration, and the administration of medication. Considering population ageing and the increasing burden of care, and the need for support, it was pertinent to consider long-term care facilities and consider ways in which they may be optimised to improve the quality of life of the residents and how speech-language therapists could contribute to optimising care through exploration of challenges relating to mealtimes. The initial step in doing so was to consider the perspectives of caregivers during mealtime and pill-swallowing routines. This study served to fill in the gaps in the literature regarding services to the geriatric population, specifically those residing in care homes and explored the needs that may be present in this context from the view of the caregiver.

The completed research distinguished between the practices of caregivers and the experiences of caregivers. “Experiences” here referred to how the caregivers perceive a situation, i.e., what is their personal take on the care they are providing. “Experience” thus included aspects such as whether they were experiencing any barriers to providing care during mealtimes, were they finding it challenging to complete these activities with residents, and what were their experience in aiding residents during mealtimes. “Practices” conversely referred to what caregivers were actually doing during mealtime and pill-swallowing activities with residents, i.e., routine actions that they were applying during these events. This included certain protocols

which they followed when a resident presented with swallowing difficulties. To summarise, experience referred to their perceptions while practices referred to their actions.

4. Methodology

This study aimed to explore the experiences and practices of caregivers within the care-home setting during two routine activities, meals and pill-swallowing, with elderly residents in the care homes through a qualitative research approach.

4.1 Research Questions

This research study was designed to answer two primary questions

1. What were the experiences of caregivers providing care for elderly residents at long-term care facilities during pill-swallowing and mealtime routines?
2. What were the caregivers' routine practices during mealtimes and pill-administration to elderly residents with swallowing difficulties?

4.2 Aims and Objectives

Three primary aims were formulated in an attempt to answer the research questions. These aims and objectives implemented in achieving these aims were:

1. Aim 1: To describe the experiences and practices of caregivers with elderly residents during mealtimes at care homes.
   1.1. To document the barriers and facilitators experienced by caregivers during mealtime and pill swallowing routines with elderly residents.
   1.2. To describe how caregivers manage and support the residents when they experience difficulty with either meals or when swallowing pills.
2. Aim 2: To describe the difficulties experienced by residents of the care home during mealtimes and pill-swallowing routines, as viewed by the caregiver.

2.1. To document the barriers residents experience during both mealtime and pill swallowing as reported by caregivers.

3. Aim 3: To describe caregivers' perspectives on training and support needs for mealtimes and pill-swallowing routines with caregivers.

3.1. To describe caregiving to the elderly in terms of training, confidence, and preparedness from the perspective of the caregiver.

4.3 Research Design

The study was conducted using a descriptive, qualitative research design and an inductive approach. This study comprised observations, interviews, and focus groups under the qualitative research design. A descriptive design was utilised as this design concerns itself with describing a phenomenon and its characteristics and was thus, used to describe the experiences and practices of caregivers during mealtime and pill-swallowing routines with elderly residents in care homes. The descriptive, qualitative situates the researcher in the real world and consists of interpretive, material practices that make the world visible (Creswell & Poth, 2016). This design allowed me to be situated and integrated in care homes among the elderly residents and the caregivers that were responsible for their care. Creswell and Creswell (2018) assert that a qualitative research design facilitates a view towards research which honours inductive reasoning, eliciting individual meanings and the importance of rendering the complexity of the topic under study.

Inductive reasoning begins with observation and allows the researcher to draw conclusions about people and events, and assist in the development of a theory as opposed to deductive reasoning, where a prediction is made based on an existing theory (Leedy & Ormrod, 2015). For the purposes of this study, the research aimed to understand the perspectives of caregivers

through inductive reasoning and did not assume that caregivers may have particular perspectives based on existing theories or frameworks.

The inherent characteristics of a qualitative research study are what made this design appropriate for this study. First, the research occurred in natural settings where I could observe participant behaviour. Second, I, as the researcher, served as the primary data collection instrument, and thirdly that the data that emerged from this study is descriptive (Creswell & Creswell, 2018). Furthermore, since qualitative research focuses on participants' experiences and perceptions, it allowed for the emergence of multiple realities. The research design relied on tacit knowledge and provided emergent, inductive data. This research design was also selected as it was an explorative study that aimed to better understand the research topic.

4.4 My Role as a Researcher

In qualitative research, the role of the researcher as the primary data collector entails identifying and reflecting on the values, assumptions, and biases that the researcher may hold (Creswell & Creswell, 2018). I am a speech-language and hearing therapist and thus, had prior knowledge of swallowing impairments and evaluation and management of these swallowing difficulties, which contributed to enhancing my understanding of specific practices and experiences that caregivers engaged in. This further assisted me in interacting with the participants in the study as it established a common interest. Due to experience with speech-language and hearing therapy, there were certain biases that I brought into the study with me, specifically in regards to how certain difficulties may be managed and what is best practice from the perspective of speech-language therapy. Although measures were employed to reduce researcher bias and ensure objectivity during every stage of the research process, which is discussed under

trustworthiness and rigour, my background as a speech-language and hearing therapist may still have influenced how collected data was viewed and interpreted.

4.5 Sampling

This study employed purposive, homogenous sampling. Sharma (2017) asserts that purposive sampling reflects a group of techniques that rely on the researcher's judgement to select research sites and participants as per the requirements of the study and this flexibility was one of the primary reasons for selecting a purposive sampling method. Additionally, purposive sampling serves to understand specific phenomena by selecting information-rich cases which may strengthen accounts and provide insight into the research problem (Leedy & Ormrod, 2015). With purposive sampling, participants will have had appropriate knowledge on the research topic thereby filtering out irrelevant responses and subsequently providing accurate and real-time results that are reflective of the participants' realities (Bhardwaj, 2019). Hence, the participants selected for this study were caregivers responsible for the continual care of elderly residents who would be able to provide details on their experiences during mealtime and pill-swallowing routines with these residents, and provide their perspectives on service provision and training needs within the care home setting geared towards optimising care.

Homogenous sampling was the specific purposive sampling technique utilised to obtain participants for this study. Homogenous sampling is a technique of purposive sampling used to describe a specific group, reduce variation, simplify the analysis, and facilitate group viewing (Bhardwaj, 2019; Sharma, 2017). Palinkas et al (2015) posit that utilising homogenous groups is advantageous for both the researcher and the participants. For participants, homogeneity facilitates discussion on shared interests and can serve to enhance participants' interests in sharing and comparing similarities as well as differences (Palinkas et

al., 2015). The participants in this study were, through homogenous sampling, afforded the opportunity to engage in discussions regarding their experiences, practices, and skills within their common workplace. For researchers, Palinkas et al., (2015) assert that homogeneity is beneficial because it is easier to elicit discussions and conversation when participants share an understanding and since the participants' discussions are the researchers' data, anything that serves to improve the participants' exchanges helps to meet the researchers' goals.

4.6 Research Sites

The study was conducted at two care homes in the Johannesburg region in Gauteng. I obtained permission from both sites to conduct observations at the two sites and participants for the study were also selected from these two sites. A basic description of the sites is provided however, names have not been disclosed to preserve anonymity at the request of the site managers.

Site 1

Site 1 is an independent, faith-based, non-profit organisation which provides round-the-clock institutional care for approximately 300 care-dependent individuals. The institution offers long-term nursing services by professional nursing staff and care workers, social work, and a range of spiritual welfare and community involvement programmes. The care home provides care to elderly individuals with general age-related frailty and individuals with traumatic brain injury (TBI), spinal injuries, and dementia. The site has a range of consulting medical doctors, and allied health professionals such as physiotherapists, occupational therapists and speech therapists.

Site 2

Site 2 is a care home based in Johannesburg that houses elderly individuals. The care home provides care to adults across the lifespan including the frail elderly, elderly individuals with medical conditions, and those who are care-dependent. Site 2 has a team of on-site medical doctors and allied healthcare professionals including a speech-therapist.

4.7 Participants

The participants for this study were caregivers employed at the aforementioned research sites. Caregivers in this study were those individuals employed within the care homes including, agency workers, volunteer workers, trained nursing staff, untrained caregivers, healthcare assistants, and nursing aides who were providing assistance to the elderly residents with assistance during mealtimes and pill-swallowing routines. The inclusion and exclusion criteria utilised to recruit participants is provided in Table 1.

Table 1

Participant Inclusion and Exclusion Criteria

Inclusion	Exclusion	Reason
Agency workers	Residents	These individuals are responsible in the day-to-day care of residents. These individuals were thus, in a better position to experience feeding and pill-swallowing routines and share their experiences, practices, and perspectives.
Volunteer Workers regularly involved in mealtimes	Kitchen staff	
Nurses	Janitorial/ cleaning staff.	
Healthcare Assistants		
Care workers		
Caregivers employed at one of the two selected research sites	Caregivers employed at alternative sites	Caregivers from only the two research sites were selected as this allowed for site-specific information and also as these participants were the easiest to initiate contact with as they were already at the research sites.
Caregivers involved in the mealtime and pill-swallowing routines of the elderly residents (>60 years)	Caregivers involved in the routines of younger residents (<60 years)	This study concerned itself with the perspectives of caregivers involved in the care of elderly residents, and during two specific routines i.e. mealtimes and pill-swallowing. Therefore, caregivers not involved in the care of elderly individuals or those involved in the care but not in the two specific routines were excluded.

4.8 Sample Size

Through purposive, homogenous sampling at the two research sites, I recruited seventeen (17) participants who fit the selection criteria and were included in the study.

Interviews

Schreier (2018) identifies the recommended minimal range for interviews in qualitative research as approximately 20 to 30 participants. However, information-rich cases relevant to the research question are considered more important in qualitative research than the number of participants. Qualitative research utilised two factors during the selection of a sample size for a research study - adequacy and appropriateness (O'Reilly & Parker, 2012). These factors demand flexibility from the researcher in selecting an adequate sample size so that no further themes or information are expected to emerge from additional participants and data can be assumed to have reached saturation (O'Reilly & Parker, 2012). Therefore the notion of data saturation was utilised to consider the sample size for the interviews. Data saturation refers to the point in data collection when no new information is emerging and hence, information becomes redundant (Braun & Clarke, 2019). Hennink and Kaiser (2021) conducted a systematic review to identify studies which empirically assess saturation in which they provided guidance for identifying sample sizes. This guidance was used to select a method of assessing data saturation.

Data saturation was assessed for this study using the Stopping Criterion method suggested by Guest et al., (2020). This method utilises the code frequency count approach with the addition of a stopping criterion (Hennink & Kaiser, 2022). First, a base size of four initial interviews was utilised to identify novel codes and a run length of two interviews were used until no new codes were identified. No new codes were identified by the seventeenth interview, and thus it

was deemed that the data had reached saturation by this point. As data saturation was obtained, 17 was considered an adequate number of participants for this study, improving the rigour of this study.

Focus Groups

This research consisted of both semi-structured individual interviews and two focus groups. Schreier (2018) suggests that the sample size for focus groups should be between four to six participants within a group as this allows for higher engagement and thus, two focus groups were held, one at each research site, with 5 participants within each group. The small size of the focus group provided ample opportunity for each group member to participate and share their thoughts and opinions, thereby resulting in rich data.

4.9 Participant Descriptions

There were seventeen participants, all of whom were black South African females. Although information regarding the workforce in care homes for the elderly in South Africa is exiguous, Lloyd-Sherlock (2019) suggests that it is overwhelmingly female and African. From this, one could assume that the participant sample in this study would be an adequate representation of the current workforce in South Africa. Global literature on the workforce in long-term care facilities such as care homes for the elderly suggests that the workforce is predominantly female (OECD, 2020; Moon et al., 2019; Estabrooks et al., 2015). Majority of the participants were formal caregivers however, some were enrolled nurses, all of whom were involved in assisting the elderly with eating and pill-swallowing. Participants were adequately proficient in communicating in English and preferred to complete the interviews in English upon being asked, and therefore, interviews and focus groups were conducted in English A description of the participants is provided in Table 2.

Table 2

Descriptive Information of Participants Included in this Study

Participant	Site	Gender	Race	Nationality	Occupation	Years of Experience	Years Employed at Site
1	2	Female	Black African	South African	Nurse	20+ years	8
2	2	Female	Black African	South African	Caregiver	8 years	2
3	2	Female	Black African	South African	Caregiver	2 years	2
4	2	Female	Black African	South African	Nurse	6 years	6
5	1	Female	Black African	South African	Caregiver	10 years	10
6	1	Female	Black African	South African	Caregiver	6 years	6
7	1	Female	Black African	South African	Caregiver	5 years	2
8	1	Female	Black African	South African	Caregiver	9 years	1.5
9	1	Female	Black African	South African	Caregiver	15 years	10

10	1	Female	Black African	South African	Caregiver	4 years	4
11	1	Female	Black African	South African	Caregiver	8 years	8
12	2	Female	Black African	South African	Caregiver	7 years	7
13	1	Female	Black African	South African	Caregiver	25 years	7
14	2	Female	Black African	South African	Caregiver	16 years	16
15	2	Female	Black African	South African	Caregiver	13 years	5
16	2	Female	Black African	South African	Nurse	15 years	7
17	2	Female	Black African	South African	Caregiver	15 years	12

4.10 Data Collection Procedure

1. I first obtained ethical clearance from the University of Witwatersrand Human Research and Ethics Committee (Medical) . The ethical clearance certificate number for this study is M220411 (Appendix A). Thereafter, I requested permission from the managers of the two research sites for approval to conduct the study at their respective sites (Appendix B).
2. Once these had been obtained, I provided the managers with information sheets detailing the research process and the involvement of the caregivers. The managers

were requested to permit caregivers to participate in the interviews and focus groups during the course of their shift, at times which do not compromise on the care for the residents at the care homes.

3. Then, I conducted the pilot study for the semi-structured interviews with one caregiver.
4. I then shared information regarding the study with the site matrons who then transferred this information to the caregivers. I distributed a set of information sheets (Appendix C) which were given to caregivers and consent forms (Appendix D) for each phase of data collection, i.e. observations, focus groups, and interviews as well as consent forms for audio recording were also made available. The caregivers were provided time to read the information sheets and also discuss any queries or concerns with the researcher.
5. Once the caregivers and potential participants had provided consent, I then conducted a non-participant observation of the caregivers at the research sites using an observation schedule and making field notes (Appendix E). I did not actively participate in activities but merely observed the caregivers during mealtimes and pill-swallowing routines with the elderly residents. Observations of mealtimes and pill-swallowing routine were conducted over fourteen days, with seven days per site
6. Once observations were completed, focus groups were conducted using a focus group schedule (Appendix F). Although the initial plan had been to conduct interviews initially, difficulties in recruitment and a low response rate from caregivers prompted me to conduct a focus group first. Caregivers reported that they were hesitant to complete the interviews because they weren't sure what they would be asked and they did not feel comfortable being recorded and would prefer to participate in a group setting first. Therefore, I completed the focus groups first and did not record these instead, notes were taken manually.

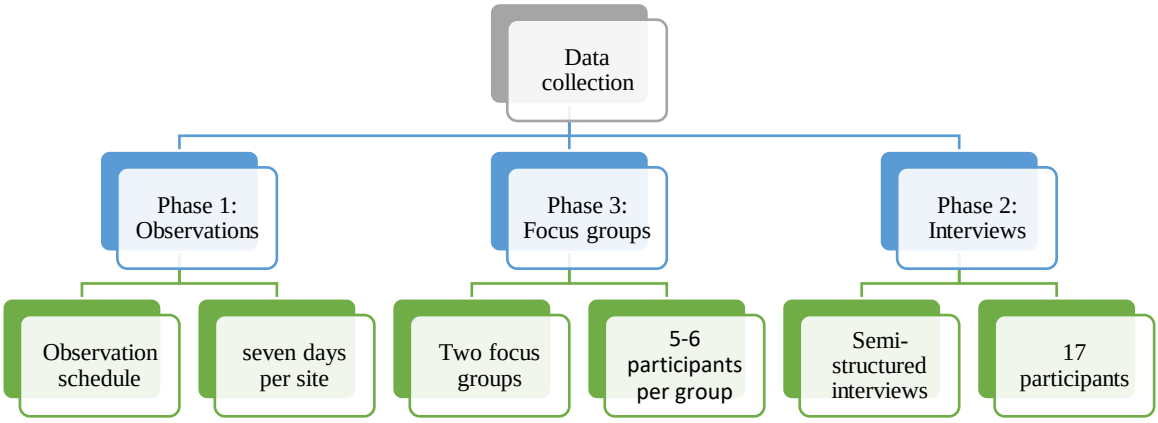
7. Once focus groups were complete, I discussed with those participants who had provided consent to participate in the interviews to arrange a time and location for the interview that would not interfere with their duties. Many of the participants preferred and chose to complete the interview immediately and the interviews were thus conducted in English using an interview schedule (Appendix G). These interviews were recorded using a voice recorder so that the I could grant undivided attention to the interviewee during the interview and so that I could constantly refer to an audio recording during transcription, thereby ensuring that crucial information was not missed during the interview.
8. I then analysed the raw data from the interviews and focus groups using inductive, data-drive analysis following the steps of Braun and Clarke's Thematic Analysis (Braun & Clarke, 2019). Data from the observations were summarised and reported on merely to corroborate findings from the interviews and focus groups.

4.11 Research Tools

This study utilised three methods of data collection in three successive phases namely: observations, interviews, and focus groups. An overview of the phases of data collection is illustrated in Figure 1.

Figure 1

A Description of the Phases of Data Collection



Observations

Phase 1 consisted of observations which were utilised to gain an improved understanding of the research environment in which the participants interacted. Additionally, Creswell and Poth (2016) note that the first-hand experience obtained through observations acknowledges inductive logic and the possibility of eliciting information which may not be brought up by the participants during interviews and focus groups. This study employed a direct, non-participant observation technique where the researcher actively observed the study participants during mealtimes and pill-swallowing routines with elderly residents but from an outsider's perspective and with minimal direct interaction with the participants of the study. Ciesielska et al., (2017) explain that this type of observation distinctly delineates and clarifies the identity of the observer as a researcher thus, permitting the researcher to be immersed within the research context while still holding an outsider's position and perspective. The researcher

aimed to minimise interference as much as possible so that caregivers within the research sites were able to conduct themselves as naturally as possible. Although the researcher strived to remain nondescript, the researcher was still a part of the participant's context with a research position and the simple presence of the research may have influenced the participants under observation (Ciesielska et al., 2017).

The researcher utilised a self-developed observation schedule in accordance with the research questions and the aims and objectives of the research (Appendix E). This was to focus the observations on specific areas relevant to the research as it would have been difficult to observe everything. The areas which were included in the observation schedule are explained in Table 3.

Table 3

Description of Observation Schedule

Areas of Observation	**Details of Areas Under Observation**	**Reason for Inclusion of Areas**
Site Observations	- Physical descriptions of feeding area	Slaughter et al., (2020) assert that difficulties in swallowing and eating are moderated by the mealtime environment. These include features such as similarity to personal homes, functionality of the dining environment, reduction of clutter, and sufficient lighting and contrast

		(Chaudhary et al., 2017; Slaughter et al., 2020)..
Feeding and pill-swallowing routines	- Participant engagement with residents during the routines - Duration of meals/pill-swallowing - Assistance provided by participants to residents e.g. positioning changes, assistive devices, dysphagia management techniques, oral hygiene	A British guideline on the management of swallowing difficulties in care homes suggests that all healthcare staff including caregivers should have theoretical as well as practical competence in the feeding safety routines whenever swallowing difficulties are observed or predicted (Royal College of Speech and Language Therapy, 2014).
Caregiver-resident Interactions	- Caregiver- resident dynamics - Conversational tones - Topics of conversation during mealtimes - Reinforcement/encouragement or discouragement	Caregiver- resident interactions were observed to obtain an indication of whether caregivers were efficiently identifying potential signs of swallowing difficulties during mealtime and pill-swallowing routines. Furthermore, Shune and colleagues (2019) found that social interactions are viewed as central to successful mealtime routines in a care home.

Focus Groups

Phase 2 consisted of focus groups with the participants. Interviews and focus groups are complementary and focus groups are a research technique that allowed for the collection of qualitative data through group discussions. Gundumogula (2021) asserts that the value of focus groups lies in their ability to promote spontaneous interactions between participants which subsequently facilitates the generation of richer and more profound data than what can be obtained from individual interviews. Focus groups can encourage participation from those study participants who may be more reserved, or less articulate or confident in a one-to-one situation (Gundumogula, 2021). Focus groups were thus used to obtain information on caregivers' practices and experiences in the care home setting and why certain practices may be effectuated. Literature suggests that focus group participants may however, lack the naturalness of participant observation and the depth of individual interviews(Morgan, 2022). Therefore, focus groups, interviews, and observation was utilised for data triangulation and to validate the information received during the interview and hence, improve the trustworthiness of the study.

The researcher conducted two focus groups, one at each research site with 5 participants at each site. Schreier (2018) states that a sample size of between four to six participants is adequate for a focus group. A self-developed focus group schedule was utilised (Appendix F). I noted participant responses throughout the focus groups manually as participants were initially hesitant to be recorded using a voice recorder. The areas included in the focus group are described in Table 4.

Table 4

Description of Focus Group Schedule

Areas Included in Focus Group Schedule	Reason for Inclusion of this Area
1. Experiences during mealtimes and pill-swallowing routines with residents	Understanding the experiences of caregivers during mealtimes and pill-swallowing routines is important as it will provide an indication of caregivers' confidence and expertise in providing care during these events; and may also provide an indication of whether the caregivers are experiencing any difficulties during these events.
2. Facilitators and Challenges to providing care for elderly residents during mealtimes and pill- swallowing routines	This would help in identifying whether there were any factors that were fostering or impeding care for the elderly residents during mealtimes and pill-swallowing routines. This information could guide future research in generating solutions to potential challenges and identifying methods in reducing challenges. Alternatively, identifying potential facilitators to care of residents during mealtimes could assist the formation of guidelines which could be used by other care homes to optimise care.
3. Caregiver practices during mealtimes and pill-swallowing routines with residents	This question could provide information on whether there are similarities or differences in practices and why these may be occurring. Additionally, this area could also provide an indication of the reasoning behind certain practices and whether these practices are optimal practice in the care of residents during mealtimes and pill- swallowing routines. This

	information could be used to determine guidelines in future research or address possible negative practices.
4. Training received and additional training needs in the care home to provide care during mealtimes and pill-swallowing routines.	This could provide an indication on the experience and confidence of caregivers in providing care to the residents during meals and during the pill-swallowing routines. The caregivers may also provide information on whether they feel they require additional training, and if so, in which topics would they like additional training. This could inform the organisation of workshops by relevant professionals which can aid caregivers in providing optimal care.

Semi-Structured, Individual Interviews

Phase 3 consisted of individual, semi-structured interviews with seventeen participants at the two research sites. Interviews are considered to be an effective method of data collection to gather qualitative, open-ended information to explore participants' views (Dejonckheere & Vaughn, 2019). (Dejonckheere & Vaughn, 2019). Interviews were therefore conducted to explore caregiver's perspectives on mealtime and pill-swallowing routines with elderly residents at the care homes where they were employed.

Structured interviews are fully controlled by the researcher, reducing flexibility and naturalness for the participants (Adhabi & Anozie, 2017; Schreier, 2018; Stuckey, 2013). The interview environment in a structured interview is often very tense and can cause participants unease, and they may give baseless responses due to the rigidity of the interview structure (Stuckey, 2013). Structured interviews have a set of guidelines that the researcher must clearly observe

(Schreier, 2018; Stuckey, 2013). The rigidity of this type of interview made structured interviews unsuitable for this research study.

Therefore, I conducted the semi-structured interview as semi-structured interviews provide improved flexibility and are considered to be more practical (Kakilla, 2021). Deterding and Walters (2018) assert that semi-structured interviews increase the probability of generating new ideas and also facilitate data analysis as it provides richer context and allows the researcher more time to develop and elaborate concepts. With semi-structured interviews, there is a risk for data loss (Kakilla, 2021) which was mitigated by conducting the interviews face-to-face and through audio-recording and subsequent transcription of the interviews. Additionally, the prior knowledge I had, as a speech therapist facilitated flexibility during the interviews as the participants and I had a good understanding of the research topic. Additionally, a study by Nguyen (2015) found that participants may provide limited responses due to different cultural values between the researcher and the participant. Thus, I remained cognizant of African culture and the relationship between myself and the participants during interviews and focus groups as a means of establishing trust and encouraging participation. This included being considerate of potential reluctance to participate due to perceived assumptions which participants may believe I held regarding their race or personal characteristics and also perhaps due to fear of the perceived legal or job-related consequences which may arise from participation. The interviewing style was more collaborative to mitigate perceived power imbalance and participants were informed of their right to confidentiality and their right to withdraw without ill consequence from the researcher or from their employers. Fears and concerns were addressed with empathy and I reflected continuously between interviews to monitor any potential bias which may have transferred through the course of the interviews and focus groups.

A self-developed interview schedule was utilised with base questions which served as a guide covering the specific areas that needed to be covered in accordance with the research questions and aims of this research study (Appendix G). The general areas remained the same even after conducting the focus groups first and I tailored further probing questions according to participants' responses to the guiding questions using a collaborative interviewing style which also served to de-emphasise power relations between the researcher and the participants. The interviews were conducted at the research sites in areas where privacy was maintained and distractions were minimal. The interviews were conducted in English, at a time chosen by the participant but during work hours. The reason for conducting the interviews in English was that many of the participants chose to complete the interviews in English, but also at an immediate time and not a pre-arranged time and a translator was not available on hand during those specific times. The interviews were recorded using a voice recorder and then transcribed for analysis.

4.12 Pilot Study

The researcher conducted a pilot study with one caregiver to finalise the interview questions. Pilot studies are advantageous in optimising the study by providing an opportunity for the researcher to obtain familiarity with the interview schedule, refine the interview questions, gain practice in interviewing, and strengthen the interview protocol by identifying flaws and limitations (Majid et al., 2017). For the purposes of this research, the pilot study was conducted to assess the functionality of the designed interview; and to attempt to enhance the overall quality of this research (Malmqvist et al., 2019). The pilot study was conducted for the semi-structured interviews only as each focus group has a variable dynamic and environment and therefore would have been too difficult a task.

I carried out the pilot study with one caregiver employed at and involved in the feeding and pill-swallowing routines of elderly residents at a care home. The caregiver was provided with a study information sheet and a consent form which the caregiver signed. The pilot study was conducted in a manner which replicated the way in which the interview had been designed to be implemented. This was done in order to assess the utility of the interview schedule. After the interview was conducted, the participant was asked to give feedback to the researcher regarding the researcher's conduct as an interviewer, the quality of the questions asked, whether there were additional questions that the researcher should ask or add to the interview schedule and whether certain questions needed to be rephrased to facilitate comprehension and the flow of conversation (Malmqvist et al., 2019). This feedback was then acknowledged and incorporated into the interview design and the researcher used the experience from the pilot study to adapt conduct during the interview in an attempt to establish and enhance rapport and improve active participation by the participants. The participant of the pilot study was not included in the final research.

4.13 Data Analysis

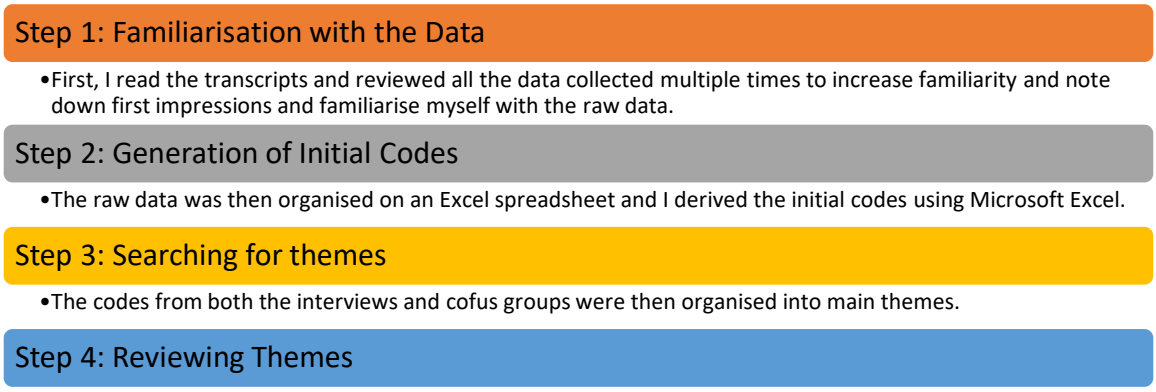
Data was analysed using an inductive approach. The inductive analysis approach utilises multiple detailed readings of the collected raw data to derive concepts and themes (Azungah, 2018). In inductive analysis, the researcher is required to go through the data line-by-line and assign codes as they are identified to the raw data (Azungah, 2018). It is a reflexive process that requires constant engagement between the raw data and existing literature to derive meaning. It is different to deductive analysis, where findings are influenced by preconceived expectations based on models of theories (Azungah, 2018; Kiger & Varpio, 2020). Instead, results through inductive analysis arise directly from the raw data. Therefore, no theoretical

framework was used to during data analysis as analysis was data-driven. The inductive analysis was used to analyse raw data obtained in this study as it is more flexible, allows for the inclusion of context, and does not require the use of an existing theory (Kiger & Varpio, 2020).

The data from the observations was noted and compiled into categories and data from the interviews and focus groups was analysed using thematic analysis outlined in Braun and Clarke's six-step reflexive thematic analysis procedure. Thematic analysis is reported to provide flexibility in interpretation and is accessible to those with little experience in qualitative research (Braun et al., 2019). Furthermore, thematic analysis is advantageous as it facilitates the summarising of important data characteristics from which one may derive similarities (Braun & Clarke, 2021a, 2021b). The thematic analysis included the steps outlined in Figure 2.

Figure 2

Description of Thematic Analysis Procedure



4.13 Trustworthiness

Trustworthiness serves to provide tools which can be used to illustrate the worthiness of a qualitative research study (Nowell et al., 2017). To ensure trustworthiness, the researcher considered four criteria viz. 1) credibility, 2) transferability, 3) dependability, and 4) confirmability.

Credibility

Credibility refers to whether the topic under study has been accurately described and whether the study accurately represents the participants' reality (Maher et al., 2018). The following steps were taken to ensure credibility:

Triangulation of Data. Data will be obtained in 3 ways: observations, individual interviews, and focus groups. Leedy and Ormrod (2015) suggest that data triangulation increases the credibility of a research project and allows for a coherent justification of themes.

Member checks. The researcher requested participants to review the data obtained in interviews and focus groups and the researcher's interpretation of the data and provide an opportunity for participants to clarify the information (Leedy & Ormrod, 2015).

Prolonged engagement. The researcher conducted observations for one week at each site to ensure reliable and valid data. Creswell (2018) notes that the more experience the researcher has with the research setting, the more precise the information obtained will be.

Transferability

Transferability refers to the generalisability of the data (Nowell et al., 2017). Two strategies were utilised to increase transferability namely, a) thick descriptions, b) purposeful sampling

Thick Description. A thick description refers to providing a complete and purposeful account of the research design, procedures, and context to allow readers of the research to derive their own opinions on generalisability (Leedy & Ormrod, 2015). In this report, I present a detailed account of each step within the research process from data collection to analysis.

Purposeful Sampling. In this study, I used purposive sampling to ensure that the research and the participants are a representation of the research design, questions and aims, and its limitations. Participants in this study were caregivers who were involved in the care for

elderly individuals in long-term care homes and were employed at one of the two sites selected for this research.

Dependability

The term dependability in qualitative research acknowledges that the contexts of studies are constantly evolving; however, the research project still requires a replicable design infrastructure (Nowell et al., 2017). To increase dependability, I kept an audit trail.

Audit trail. An audit trail serves to provide evidence of the decisions made by the researcher through the research process to address methodological or theoretical issues in the study (Nowell et al., 2017). I kept a record of raw data, observation notes, a reflexive journal, and all transcripts to facilitate the creation of a transparent audit trail.

Confirmability

Confirmability refers to establishing that the interpretation of the research is derived from the raw data (Maher et al., 2018; Nowell et al., 2017). Confirmability was achieved by establishing the other three components of trustworthiness, i.e., credibility, transferability, and dependability.

4.14 Ethical Considerations

Ethical considerations are an essential component of qualitative research, and the well-being of all participants is a priority (Creswell & Creswell, 2018; Peter, 2015; Sanjari et al., 2014). I was responsible for protecting the participants' integrity, agency, and privacy. Ethical issues which were considered for this study are addressed below.

Non-maleficence

Non-maleficence refers to protecting participants from possible harms of the study and establishing well-being for the participants. I considered informed consent, participants' privacy, anonymity, and confidentiality to ensure that no harm comes to the participants.

Informed consent and Autonomy

Participants were provided with information sheets regarding the study. The information sheet outlined all information relating to the research. It clearly stated the purpose of the study, the research procedure, the role of the participants, the possible implications of the research, and how the research will be utilised and disseminated. This served to provide participants with an opportunity to consider what they are willing and unwilling to do. Participants, i.e., the caregivers, and the managers at the research sites, were also provided with the opportunity to ask questions for clarification and were clearly informed that they held the right to withdraw from the research at any time. To prevent coercion, the researcher did not directly approach any caregiver about the study. Further, while the matron at the site introduced the study to the caregivers, they were not directly involved in inviting caregivers to participate in the study. The matron was informed about the study and the information letters and consent forms were distributed among caregivers. However, caregivers were not required to return consent forms to the matron, rather caregivers were then able to contact me directly to return the consent forms or to discuss any queries.. The participants hereafter signed consent forms which I stored in a locked cupboard for record-keeping purposes. Separate consent forms were provided for observations, interviews, focus groups, and audio recordings of the interviews and focus group.

Additionally, the observation component meant that residents within the care homes were indirectly observed during the duration of observation by virtue of their presence at the time

and venue of observations. The residents were informed that research will be taking place. However, they were assured that they were not the focus of the observation and that no identifying information pertaining to the residents was noted or shared with others.

Considering that participants were accessed through a "gatekeeper", in this case, the managers of the research sites, the role of institutional vulnerability was a concern. Institutional vulnerability refers to participants who are subjected to a formal authority and may be directly or indirectly coerced into making a particular decision regarding the research (Gordon, 2020). To accommodate for this, the site managers were not actively involved in the recruitment of participants for this study. Participants were given between two to four weeks to consider their participation and also discuss concerns and queries about the research. Each participant returned signed consent forms which they had signed at their convenience and without scrutiny indicating their agreement to participate in this study. Additionally, the raw data from the participants were not be provided to the site managers in its raw form. In this manner, participants were kept safe from possible negative repercussions for the information shared.

The interviews and focus groups were arranged at a time that is suitable for the caregivers, either before or after work or during work. I paid special attention to quieter times during the observation so that interviews and focus groups could be conducted during these quieter times.

Anonymity

Identifying information, such as the two sites' names and addresses, are not included in the final report, although they were recorded during the data collection process. However, any raw data, including transcripts and recordings or documents such as field notes that I made during the observations which may have had identifying information, remained private and only

accessible to the researcher and the research supervisor. While the participants were assured that anonymity for the interview will be maintained, I could not guarantee anonymity in the focus groups and this was communicated to the participants in the information sheets and verbally before the focus groups. However, as noted, quotes from the focus groups were de-identified, and participants were assured of this.

Any paper trails and recordings were stored in a locked cupboard that was only accessible to the researcher, and codes were utilised to provide further protection in cases where identifying information was required. If any additional parties require access to raw data for any reason, they will be required to obtain permission from the ethics committee and the researcher. Computerised data, including transcriptions, or raw data that was stored in the computer, was stored in a password-protected laptop and a password- protected encrypted folder. Additionally, the data was backed-up to a hard drive that is only accessible to the researcher and stored in a locked cupboard to which only the researcher has access.

Considering the nature of the data collection procedure, i.e., interviews and focus groups, it was not possible for the participants to remain anonymous to the researcher and the use of focus groups as a data collection procedure meant that participants included in the focus groups did not have anonymity with each other. This lack of anonymity in focus groups was noted in the information letter which participants were provided at the beginning of this study, and was also verbally communicated to the caregivers.

Confidentiality

Confidentiality refers to the protection of participants to ensure that individual identities are not publicly divulged and not directly linked to the information provided (Nowell et al., 2017).

Regarding the focus groups, participants' responses were not completely confidential as other members of the focus group will be aware of what is being said and the identity of the participant as well. This point was made explicitly clear to participants in the focus group. However, I advised focus group participants to keep all information obtained within the focus group confidential and resist sharing or discussing information with individuals outside of the focus group. I also provided a separate consent sheet for participation in the focus groups.

Justice

Justice refers to fairness in the distribution of benefits and risks (Aluwihare-Samaranayake, 2012). I ensured that justice was maintained through an honest representation of the findings that fulfil the requirements for a trustworthy and credible study and by acknowledging possible research bias that may have been present during the data collection, data analysis, and reporting procedures. I ensured that accurate information is collected which accurately reflects what the caregiver is trying to convey by using member checking. To ensure that researcher bias was reduced or eliminated, I constantly monitored and reflected on possible biases during data collection and analysis so that these could be addressed. The research supervisor also examined the analysis and interpretation to prevent research bias. Additionally, I recorded field notes during observation and this facilitated the filtering out of irrelevant information and allowed for increased accuracy in the information provided.

4.15 Distress Protocol

Researching a sensitive topic that may result in the stigmatisation of participants or can induce or result in the deterioration of stress requires a distress protocol. Caregiver burden and burnout are prevalent concerns in the care of frail elderly or individuals with disabilities. A distress protocol aims to minimise potential risks through the development of various strategies. A

distress protocol was utilised in this study if the caregivers serving as participants in the study experienced distress regarding their experiences and practices in caring for the elderly residents at mealtimes and pill swallowing. The distress protocol (Appendix H) was formulated using the guidelines by Draucker and colleagues (2009). The caregivers involved in the research were provided access to a registered counsellor.

5. Results

Raw data from the interviews and focus groups were analysed using Braun and Clarke's Reflexive Thematic Analysis (Braun & Clarke, 2021b). Observational data was not analysed but rather, the researcher aimed to note the observational data with minimal bias by reporting each area of observation objectively. The observational data was used to support the information obtained from the interviews and focus groups. The researcher first described the data obtained through observations and then thematically describes the data derived through the interviews and focus groups.

5.1 Observations

Observations were conducted sequentially to allow for continuity and good integration within the research sites. Similarities and differences were noted across the two different research sites. Observations have been described through categorisation into the different observational areas as outlined in the observation schedule and further categorised by the two research sites.

Mealtime Physical Environments

At site 1, all the rooms were organised in a similar way in the multiple wards. Most residents would be brought to the kitchen and dining area for meals. Plastic tables and chairs were placed in the dining area where a group of four could sit comfortably around the table. The dining areas were white, tiled areas with windows in the rooms. There was also a television set in the dining area.

Some residents were unable to be in the dining area due to reduced level of consciousness and restricted mobility. In these cases, residents were completely dependent on their caregivers for all activities of daily living including mealtime and pill-swallowing routines. These residents

were fed by the caregivers in their allocated rooms. Each room had approximately two to four beds with a resident in each bed. Cameras were installed in each room and communicative signs such as those demarcating residents with diabetes or special considerations and care instructions were fixed to the walls near the respective resident.

At site 2, the rooms were much larger with approximately 8 residents per room and large windows on one end of the room. There were also smaller, more private rooms suited to one resident per room. Each room was outfitted with hospital beds and a cupboard for the residents' personal items. Some residents had individual television sets by their beds. Residents were able to keep personal souvenirs such as photographs or trinkets on a table by their bedside. As in site 1, each resident's bed was clearly labelled and any special considerations for these residents were noted and fixed to the walls above the residents' beds.

At site 2, there was a dining area as well as a lounge/waiting area although residents were not taken there for meals daily. Residents would typically eat in their rooms, on their beds. Residents would also eat together in a general dining area on some days of the week, often after an activity for which they were already present in the dining area. Smaller tables would be joined together and residents who were alert and mobile would sit around this now-large, singular table and enjoy a meal. This dining area was in the centre of a large foyer of the care home.

Interaction of Caregivers with the Residents

At site 1, there was less interaction with the residents during mealtimes. Many of the residents, though old and frail were able to consume meals independently. Since residents were mostly independent, residents were able to first wash their hands although caregivers didn't instruct

the residents to do so; and thereafter the residents would eat their meals at their table. The kitchen staff would bring the food and two caregivers would remain in the dining area to assist as needed. Occasionally, there would be interaction between caregivers and residents but more as checking in on residents than any informal conversations. Residents would sit quietly or alternatively interact with the other residents during meals while caregivers would observe and monitor them.

For residents that were fed in the rooms, most of those residents were fully dependent on care home staff and were often fed with the PEG. In these instances, there was minimal to no verbal interaction between caregivers and staff and it transpired as a solemn completion of the mealtime routine.

At site 2, there was significantly more interaction between caregivers and staff. Caregivers would often joke around with independent residents while bringing them their food and hold short discussions with residents if residents were more talkative. For residents who needed to be assisted or fed, most caregivers would arouse the resident and orientate them to mealtimes. This constant alerting of the resident would occur for some of the residents that had lower consciousness levels. As in site 1, the interactions were mostly activity-dependent i.e., in relation to feeding, although there was joking around with some of the residents who were more alert. Caregivers would also comment with praise during feeding i.e., “good job”.

In the group dining session, which was mostly during lunch and dinner, caregivers interacted more freely. The residents were together, so caregivers interacted in a more relaxed manner with the residents by joking around or providing some suggestions. It also served as a

communicative opportunity for residents so caregivers would often interact with residents by responding to their statements or getting involved in their conversations with residents.

Feeding Safety Routines

At both sites, residents were seated upright either in their beds, chairs, or mobility aids. Neither site employed handwashing explicitly, although caregivers would wash their hands before assisting those residents who could not feed independently. Gloves were not used at either site during feeding; however, most residents were fed with spoons. At site 2, caregivers would place aprons on the residents before meals. Caregivers did not brush residents' teeth at each mealtime; however, teeth-brushing was reportedly done twice a day.

Feeding Routine

At site 1, as mentioned above, residents would typically feed independently in the main dining area. The kitchen staff would bring the food and caregivers would monitor the residents during meals and provide assistance where required.

At site 2, caregivers assisting residents with meals in their bed would place an apron on the resident, explain the mealtime and then begin feeding residents with the spoon. This was mostly soft food for the residents being assisted. Typically, two caregivers were responsible for assisting with feeding in each room. Each caregiver would feed the residents in sequence, depending on the assistance the resident needed i.e. if the resident required head support as well as support with meals, the caregiver would assist that single resident. However, if the residents had less difficulty, then it was possible for the caregiver to feed two residents simultaneously, alternating between the two residents. In the meals conducted in the dining area, more caregivers would be present, and they would assist were required, to pass certain

foods or condiments and assist with eating as necessary. At site 2, on one occasion, a semi-conscious resident was left to drink juice via syringe independently which the caregiver assisted another resident and this could potentially be unsafe. The caregiver, did however monitor the resident periodically during this time.

Pill-swallowing Routines

It is not within the general care workers' scope of practice to administer medications. Only the nurse may administer medications and this was noted during observations However, participants were involved in observing medicinal intake and care workers were also involved where medicines were crushed and mixed into meal items as they were then responsible for feeding the resident. For residents who were independent, at site 2, all prescribed pills were placed in a cup in view of the resident and the resident was left to take the pill independently. In one instance, a resident dropped a pill to the floor however this was not noticed by any of the staff. Additionally, some of the residents were provided medicines in a crushed form. All prescribed pills, up to five, were crushed together in a small mortar and pestle which was then mixed into, sometimes a spoon of yoghurt or mousse, and at other times in a whole portion of food and the caregiver would then feed it to the residents. This modified form of providing medication crushed and mixed into food was observed at both sites. Although caregivers including nurses involved in the process of administration usually monitored residents, there were instances when residents were left unmonitored. During one such instance, a resident had dropped a pill on the floor but this was not observed by any of the staff. However, at site 1, most residents were independently taking their medication.

Management Strategies During Mealtimes and Pill-swallowing Routines

The difficulties observed among caregivers was mostly that residents would cough or choke during feeds, or they wouldn't be alert enough to consume meals. Caregivers at both sites, would pat residents at the back when they choked or adjust head and/or seating position.

At site 1, most residents were fairly independent during mealtimes and as such, during the period of observations, caregivers were not employing any direct management strategies with particular residents to manage signs of aspiration, coughing, or any difficulties during the mealtime process such as improper positioning etc. However, caregivers were always present to monitor the residents and ensure that residents are not experiencing any difficulty with swallowing and with the process of eating including bringing food to their mouth. However, at site 2, caregivers would often use orientation and verbal encouragement to ensure that residents remained alert during meals. Caregivers would also pat the cheek to arouse the residents and continuously speak to residents either with praise or by calling their names to draw their attention. If a resident was not very conscious, caregivers would give residents some time and thereafter go back to them and attempt feeding them again. Caregivers would not rush and spent at least 30 minutes with each resident attempting to encourage residents to eat when they did not comply or were not awake enough to complete the meal. If a resident was choking, often the first thing a caregiver would do is pat the resident on their back if it was reachable or wait for them to finish coughing or provide a sip of water between boluses. In the case where a resident had trouble with bolus manipulation and presented with oral spillage, the caregiver supported the resident's head with a pillow and then attempted to feed the resident with this placement. When this did not work, the resident was fed with a syringe. Caregivers were very patient during the mealtimes with those residents who required more assistance. If they could not succeed in feeding the residents the soft food, they would then provide e'PAP (e'PAP is a

particular brand of porridge comprising nutrients required for a healthy body in a highly absorbable form), as an alternative diet.

5.2 Interviews & Focus Groups

Across the data collection process, five primary themes emerged from the individual interviews and focus groups. These themes were reviewed and refined as I became more acquainted with the collected data and emerging codes and themes as per the data analysis protocol. A brief overview of the themes are provided followed by a comprehensive description of the findings.

As the caregivers' experiences during mealtimes with residents were mostly dependent on various barriers and facilitators to successful mealtimes, this theme – barriers and facilitators to successful mealtimes – will be presented first. The data revealed that participants' experiences were often influenced by residents' health and abilities, caregiver training and years of experience, availability of resources, support from other staff, familiarity with the staff, and the caregivers' outlook towards their job and towards the residents in the care homes.

Participants provided an array of difficulties that they observed during mealtimes that also related to how they perceived the overall experience during mealtimes, and this led to the second theme – description of difficulties observed during mealtimes. The participants identified the difficulties that they believed that the residents experienced during mealtimes such as swallowing difficulties, and issues relating to residents' behaviour, potentially because of their age, diagnoses, and overall well-being.

In an effort to mitigate some of the barriers to successful mealtime routines and to improve their experiences, participants mentioned certain management strategies which they employed

and are presented as the third theme – Management strategies. Participants implemented different strategies that directly addressed the residents' swallowing difficulties and residents' behaviours; but also discussed the use of strategies that were utilised to improve the overall mealtime process such as communication, knowledge creation, and continuous observation and assessment.

In association to mealtimes, participants also addressed their involvement in the administration of medication. Although not in their scope of practice to directly dispense and administer medication, participants revealed that they are involved through observations of residents to ensure medicinal intake, assisting residents with oral intake as required, and in administering medication in a modified form in meals, during mealtimes. This theme – caregiver involvement in medicine administration- is presented as theme four in the results.

Considering the emergence of various influential factors during mealtimes and medicine administration and the consequences of these on participants' experiences, participants also reflected on their current training and identified areas in which they would appreciate further training and identified additional support needs to facilitate their experiences at the care homes. This has been presented as theme five. Interestingly, many of the participants reported that they have been adequately trained and do not require any further support or training. A tabulated overview of the themes is provided in Table 5.

Table 5

Overview of Themes Identified Through Thematic Analysis

Aims	Objectives	Themes

Aim 1: To describe the experiences and practices of caregivers with elderly residents during mealtimes at care homes.	To document the barriers and facilitators experienced by caregivers during mealtime and pill swallowing routines with elderly residents.	Barriers and Facilitators to Mealtime Experiences of Caregivers
	To describe how caregivers manage and support the residents when they experience difficulty with either meals or when swallowing pills.	Management Strategies
Aim 2: To describe the difficulties experienced by residents of the care home during mealtimes and pill-swallowing routines, as viewed by the caregiver.	To document the barriers residents experience during both mealtime and pill-swallowing as reported by caregivers.	Description of difficulties observed during mealtimes Caregiver Involvement in Medicine Administration
Aim 3: To describe caregivers' perspectives on	To describe caregiving to the elderly in terms of	Training and Support

training and support needs for mealtimes and pill-swallowing routines with caregivers.	training, confidence, and preparedness from the perspective of the caregiver.	

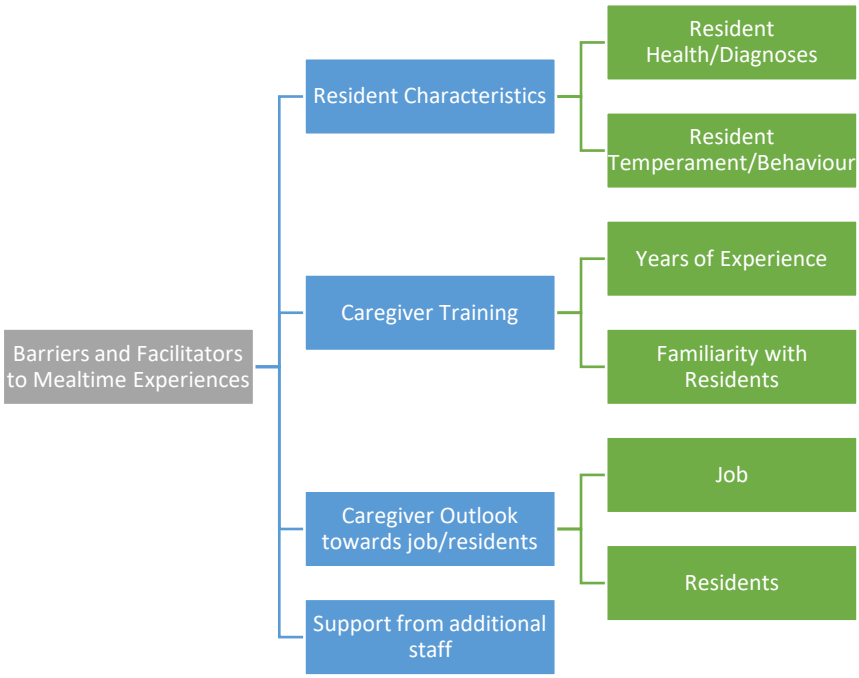
Theme 1: Barriers and Facilitators to Mealtime Experiences

Aim 1: To describe the experiences and practices of caregivers with elderly residents during mealtimes at care homes. Objective 1: To document the barriers and facilitators experienced by caregivers during mealtime and pill swallowing routines with elderly residents.

All participants reported having certain, though varied, degrees of difficulty during mealtimes with residents at the care homes at which they were employed. Nine of the seventeen (53%) participants reported that mealtimes were difficult, while two of the seventeen participants (12%) reported that they did not perceive mealtimes to be difficult, and the remaining six of the seventeen participants (35%) reported that mealtimes varied between easy and difficult. Across the interviews and focus groups, when participants mentioned the degree of difficulty that they perceived during mealtimes, it was typically centred around certain factors which served as either barriers or facilitators to their perception of the mealtime experience with the residents. Barriers and Facilitators which emerged from the data included a) Resident Characteristics, b) Caregiver training c) caregiver outlook towards their job and towards the residents, and d) Support from the additional staff at the care homes. An overview of the barriers and facilitators to mealtime experiences for the caregivers are provided in Figure 3.

Figure 3

Barriers and Facilitators to Mealtime and Pill-swallowing Identified



Resident Characteristics. The findings suggest that the condition of residents as well as their temperament and behaviour affect how caregivers perceive mealtimes with the residents.

Residents Health/Diagnoses. Within the care home setting, especially within the context of this research, residents within the care home are primarily elderly residents over the age of 60 who are dependent on caregivers for much of their day-to-day needs. Additionally, not only are these residents' frail, but many of them also have medical diagnoses including Alzheimer's disease, Dementia, Parkinson's disease, Huntington's disease, diabetes, and hypertension. These diagnoses and the sequelae of these diagnoses such as dysphagia or swallowing impairments directly influenced how easy or difficult the participants viewed mealtimes. The entire mealtime process was perceived to be easier with those residents who were more independent and conversely more difficult with those residents who, because of

their age and/or medical conditions were more dependent on their caregiver for mealtimes. Participants particularly mentioned that the residents' comprehension abilities and their understanding of their surroundings and the happenings around them influenced mealtimes. Residents who were more alert and coherent were easier to assist in feeding.

Participants mentioned that mealtimes are difficult only with these residents that are unable to feed independently.

"In terms of these difficult residents, like it's not easy at all." (Participant 3)

"It's very difficult working with people who will not do anything." (Participant 12)

Other participants reported that the ease or difficulty they experienced varied depending on the resident and their presentation during mealtimes.

"So, it actually depends on the individual. These residents are actually not the same. You'll find that there are those that as much as they are so frail, there are those that whenever you feed them, they can still understand the spoon as much as they do have dementia. They do understand. So, it actually depends on the individual." (Participant 4)

"You understand but they can't understand because of the illnesses they have, that contributes to them being old." (Participant 16)

Participants also mentioned residents with swallowing difficulties.

"Sometimes it's difficult maybe because of problems with swallowing." (Participant13)

"It is difficult. Some patients have difficulty in swallowing" (Participant 1)

"They can't swallow. They just keep food in the mouth." (Focus group, participant 1c)

These findings suggest that residents' medical conditions and the consequences of these medical conditions on residents' overall health and capabilities influence the workload of caregivers and the demands placed on caregivers who provided the care to these residents. Increased demand on caregivers during mealtimes with residents correlated with them perceiving the experience to be more difficult. Furthermore, the behaviour and temperament of residents also influenced participants' experiences.

Resident Behaviour/Temperament. Participants reported that mealtimes were often a challenge with residents who were aggressive and often reluctant to eat. It should be noted that participants referred to residents being unwilling to eat and subsequently responding negatively during mealtimes rather than it being the matter of residents not eating as a result of swallowing difficulties or difficulties in the eating process i.e., during bolus manipulation. While participants acknowledged that some residents had swallowing difficulties, they emphasized that some did not want to eat. Caregivers were often observed attempting to verbally encourage residents to eat, especially in site two.

Participants reported that residents could be rude or aggressive during mealtimes with one participant noting that their behaviour may arise as a result of a lack of understanding.

"Some patients can be rude." (Participant 6)

"Sometimes they're aggressive. They don't understand or if we are working, then they become aggressive." (Participant 10)

"Some of them when you give them food, they shout at you. Some of them don't want to open their mouth. When you force them, some they shout at you, spit/throw food at you." (Participant 15)

“Sometimes residents don't want to eat, then they hit or swear at you. It is difficult.” (Focus group, participant 1D)

These findings suggest that participants were affected by the residents’ responses towards them at mealtimes, even if their behaviour was a consequence of a reluctance to eat or other external factors and not necessarily due to the participants themselves.

Caregiver Training. Many of the caregivers reported that as they gradually gained more experience and became more familiar with the care home setting and the residents within the setting, the process of caring for the residents became less challenging. Two factors played into this theme. One, that as they gained more experience, participants were more aware of how to deal with the challenges that occurred during mealtimes, and secondly that their experiences improved once they understood the residents better.

Years of Experience. Participants revealed that initially, they did find the process more challenging however over their years of experience, they had adapted to the setting and were now more equipped to manage difficult situations during feeding time.

“It's better now than before because when I'm starting, I was feeling like oh man, no she doesn’t eat. What can I do. I was just leaving because she doesn’t want to eat. I was just going but now I try my best to feed her.” (Participant 11)

“When you are experiences, it’s not difficult. It's difficult when you are coming to work for the first time, it's very difficult.” (Participant 12)

“The feeding is okay. It was difficult before, but now it's fine because I like it.” (Focus Group, Participant 2d)

Interestingly, one participant noted that despite the many years of experience, mealtimes were still challenging at times.

“Even after that, even after having so much experience, it's still tough” (Participant 15)

Familiarity with Residents. Some participants reported that over their many years of experience, they had established relationships with the residents and knew the residents and their preferences and the best strategies to manage these residents. This in turn, assisted them during mealtimes and made the process easier as they could tailor their approach to the individual resident and thus ensure successful mealtimes. During observations, caregivers would often speak to residents by their name and adapt their conversational tone and style to adjust to the specific resident.

“It's challenging when we don't know the patient.” (Participant 8)

“Feeding time, I'm enjoying because now I'm used to them.” (Participant 5)

“I speak to them, tell them that it's time to eat. Tell them jokes.” (Focus group, participant 1d)

“Ya. If they don't want to eat, I tell them just eat one spoon, just another one.” (Focus group, participant 1b)

These findings suggest that increased experience in assisting with mealtimes with residents and increased familiarity with residents improve caregivers’ experiences of mealtimes and that caregivers are able to provide improved care to residents that they are more familiar with.

Caregiver Outlook. Participant’s perceptions and outlook towards their job, and to a lesser extent their residents emerged as a prominent category in participants’ responses.

Outlook Towards Job. One participant noted that one selects their occupation based on passion; hence, the participant does not get easily frustrated. In fact, the participant asserted that one cannot expect one's job to be easy and it was the challenges that made the job interesting. "When you go for a job, it's for something you like. So, it doesn't get frustrating. You cannot just go, and you know those who can't expect something easier from a job. The difficulties are the ones that are making the job even more interesting. You can't say it's traumatizing or what." (Participant 1)

Participants reported that they enjoyed working with elderly individuals and one even mentioned that they viewed the resident as a second child. "My experience here is good, I take them as my second child." (Participant 8)

"I like to take care of old people. I like old people because always make you smile, and I feel shame when I see them, so I like to help them." (Participant 2)

Another participant reported that they had no choice but to tolerate residents' behaviour since it was their job. "Some patients can be rude, but we tolerate them. No choice." (Participant 6)

"It's difficult but because it is our job, you know?" (Participant 11)

Another participant reported that they believed that they had been selected by God to care for these elderly residents who could not take care of themselves, and this solidified their will to carry on despite the challenges they faced. "I said "No, god gave me strength and said no, these people need me. That's why God chose me." (Participant 5).

These findings suggest that participants hold many different views regarding their job. While some believe that it is their calling, others assert that be it easy or difficult, they had to continue regardless of their views on the matter as it was their job.

Support from Staff. Participants reported that they can rely on other caregivers to assist during mealtimes if they are facing any challenges. Participants acknowledged that different caregivers have different approaches, and some residents may be more accepting or understanding of another caregiver, in which case they are able to call on that caregiver to assist. Additionally, some participants also mentioned that there are nurses that provide training or assistance when the caregivers are experiencing difficulty. Some participants agreed that they were able to manage due to adequate staff, but others noted that mealtimes were prolonged as there weren't enough staff available to assist in feeding. "And then if it is difficult, maybe we are not the same, even us. So we just leave it and call the other one. (Participant 8)

"Maybe if it's the first time, another nurse can show you okay this is how to feed this one, this one must feed like this. Then we help each other. " (Participant 7)

"Maybe if patient don't want to eat with me, then she understands the other one better. So we help." (Focus group, participant 2d)

Theme 2: Management Strategies

Aim 1: To describe the experiences and practices of caregivers with elderly residents during mealtimes at care homes.

Objective 2: To describe how caregivers manage and support the residents when they experience difficulty with either meal or when swallowing pills.

Participants mentioned a range of management strategies that have been divided into categories. All the participants employed different strategies to ensure that residents had successful mealtimes.

Swallowing Difficulties. To manage various swallowing difficulties that participants identified in the residents, participants mentioned diet modifications, modifications to the taste and texture of the food, modifications to positioning, and changes to the method of feeding. These modifications were also noted during observations.

Modifications to diet included providing residents with alternative diets such as Ensure or porridge in place of the prepared meals. The porridge and Ensure were provided to residents who were reluctant to eat the meal provided. Many participants reported that was a well-body diet. Residents who could not tolerate a modified diet completed feeds non-orally via feeding tubes and this decision was reported to be made in consultation with the medical doctor. Caregivers did not mention consultations with the speech therapist however, speech therapists were observed to be involved in the treatment of swallowing difficulties during mealtimes with the residents, particularly at site two.

Modifications to the texture of food constituted providing residents with soft food which was the most commonly used strategy. Participants revealed that for those who experienced difficulty with chewing or swallowing were provided with soft foods. If the participant could manage, they were provided with chopped food which wasn't blended or pureed but just cut into smaller portions so that residents could chew and swallow more easily. These reports were also confirmed through observations where caregivers often modified the foods either by making smaller bites, or by feeding pureed foods which were provided by the kitchen.

“Make sure it's soft food we're giving them. And um there is something like EPAP that is nutrition, but we normally give them if somebody doesn't want to eat so it can boost them. Then it can give them energy even if they're losing weight.” (Participant 1)

“At the same time, taking into consideration their teeth status because mostly they don't have teeth. Some use dentures, but they don't use their dentures easily so it's much easier if they eat something that is going to be soft to make it easier for them to swallow because they can't chew properly.” (Participant 4)

“At the same time, giving them fruits and supplements, if they don't want to eat.” (Participant 4)

“If they can't swallow or chew, we tell the kitchen to make soft food so it is easier.” (Focus group, participant 2e)

Regarding taste, one participant revealed that residents were given bland food.

“If they're choking, it must be something that is easier to swallow. Let's say soft and bland-ish diet so it's easier to swallow.” (Participant 1)

Many participants also reported that residents had an aversion to drinking water. Participants revealed that residents would drink other beverages but would respond negatively to water. To counter this, participants reported that they would request the kitchen staff to maintain a stock of “*Oros* juice” which would then be mixed into the water to add flavour to the water.

“There's one resident who cries when they see water, so we have to make sure they hydrated so we communicate to the kitchen staff to keep Oros juice every day at least do dilute with the water and eat and for them to have that taste.” (Participant 4)

“They really don't like drinking water. *[Others agree]* (Focus group 1)

Food would be given to the residents via spoon. Participants reported that they would not fill the spoons fully but give small portions at a time. Additionally, if the resident was being provided Ensure or porridge, it would be given through a large syringe. The observations revealed that some residents were indeed assisted with feeding using a spoon, although it was a standard spoon in a standard size for all residents. The spoon was filled based on caregivers' knowledge of what would be appropriate for a specific resident. Additionally, although some participants reported that they do not feed via a syringe, observations revealed that though not often, liquids or thin purees would sometimes be given via a syringe, if the caregiver viewed it to be easier for a resident to manage.

"I feed with the spoon unless they use a PEG. We don't feed with syringe." (Participant 7)

"You mustn't be in a hurry with them and introduce in small quantities." (Participant 1)

Participants reported that most residents would be seated in an upright position, either by placing the resident in a chair or by lifting their beds to the required position. This would be the position used for feeding. However, in some cases, the participants would still be fed lying down and this was in situations where the resident had extremely limited mobility. Participants reported that in this case, residents were primarily fed through the tube. Observations revealed that caregivers would attempt to seat the resident upright or in Fowler's position during feeds. Residents who were required neck support to hold their head up was assisted with the use of a pillow or from support by the caregivers.

Resident Behaviour. Participants also revealed strategies that they utilised to manage the behaviour of residents specifically, their resistance during mealtimes. Participants stated that they would approach the resident calmly and be gentle and patient with the residents during mealtimes. They asserted that if the caregiver approached them calmly, then they would be

calm as well and would be more responsive to the situation. Additionally, they reported they would follow the residents' lead when it came to feeding. They would also attempt to consider residents' preferences regarding food/drinks and then attempt to utilize these preferences to ensure adequate oral intake. Communication was key when managing the behaviour of residents. This also tied into the views participants held regarding their job.

"It's only being patient. We have to be patient." (Participant 2)

"If they don't eat, we just leave them to be calm, otherwise they can throw something. I must be patient. I must be very patient." (Participant 15)

Observation/monitoring/assessment. Participants mentioned that they would continuously monitor and observe the residents during mealtimes for any signs of difficulty. They would regularly monitor that participants were swallowing the bolus after each bite and provided instructions to the residents to swallow when required. From observations, it was noted that this monitoring would be more prominent with residents who were less alert and with some degree of difficulty during meals and was not necessarily done with every resident.

"Just make sure that they swallow, even when you know patients can swallow, say open their mouth and check so you can refer to the sisters that they can prepare soft diets for them." (Participant 8)

"We check to see if they are okay while they eat." (Participant 14)

If a participant presented with signs of aspiration, they reported that they would record residents' vital signs and report to a senior thereafter. In the case of residents experiencing difficulty with bolus manipulation or swallowing, participants reported that they would first assess the oral cavity for any sores and thereafter report to the senior staff for further consultations regarding management.

“Maybe they eat, then they bring the food out. We notice this when someone is doing that, we check if she has a sore throat or just can't swallow.” (Participant 14)

“If he's coughing, I wait for him to finish and feed, and then after feeding, I report it to the sister. We report it and we check all vital signs if they're choking or coughing.” (Participant 7)

Communication. Communication was a thread that was common across all participants. Communication with both residents and senior staff was a prominent factor that emerged from the participant's responses. Participants reported that their approach towards residents was crucial as residents responded in accordance with the caregivers’ attitude towards them. Many participants noted that the resident would be more understanding if they went to the resident with a calm demeanour. Additionally, residents mentioned that they had to be patient with the resident and establish a certain degree of rapport. Many residents reported that at mealtimes, they would first approach a resident calmly and orientate the resident. If the resident did not want to eat, they would try and tell jokes or attempt to pacify the residents by encouraging them to eat a little at a time. At site 1, communication was not as prevalent between residents and caregivers during mealtimes however, at site 2 most participants were observed to be routinely communicating with residents with encouraging words and instructions. Caregivers at site two routinely conversed with residents during mealtimes even with those residents who were not completely alert.

“Some of the patients don't want you to scream. you scream then they scream and they want you be calm.” (Participant 9)

“Like talking to the patient until her mind comes back. You talk to her first, say "I'm X, I'm here to feed you, I'm here to give you medicine blah blah blah" so I think she will understand. When you go there and make "boo", she will confuse more because she doesn't know what you're doing” (Participant 2)

"If the person doesn't want to eat, we put the food aside and then go back until you beg patient to eat." (Participant 5)

"So, we call in our sister in charge, check if I'm not feeding right or if I'm right and the person got that problem." (Participant 11)

"Communicate with rehab therapy whereby we also have a speech therapist who comes and assess. And then we also communicate with the doctor who also makes recommendations and we take it from there." (Participant 4)

Knowledge Creation. Each participant utilised strategies that they felt comfortable with as they gained more experience and became more familiar with residents. Some participants mentioned they would trial different strategies until one worked with the specific resident they were dealing with. Participants also reported that they often developed their own strategies based on their years of experience.

"I just come up with strategies. Like okay, I know this patient. I know how she is. Say, she doesn't like this food. Like she likes nice things, I prefer to give the residents, like the everything, the kind of food she likes. You know that in that way, it just gets easier." (Participant 3)

"There has to be a balance, so we try to find a way" (Participant 4)

Theme 3: Description of Difficulties Experienced During Mealtimes with Residents

Aim 2: To describe the difficulties experienced by residents of the care home during mealtimes and pill-swallowing routines, as viewed by the caregiver.

Objective: To document the barriers residents experience during both mealtime and pill-swallowing as reported by caregivers.

Participants mentioned various factors which they perceived as influencing their experience during mealtimes. Part of their responses was centred around the difficulties experienced by the residents during mealtimes including swallowing-related difficulties, difficulties during meals resulting from residents' behaviour, and the consequences of these difficulties.

Swallowing-related difficulties. Participants reported that although some residents were independent, many of the residents presented with a range of swallowing difficulties because of age and frailty, and also due to existing comorbidities including hypertension, diabetes, Alzheimer's disease and dementia, Huntington's' disease and Parkinson's disease to name a few.

Participants mentioned that some residents had trouble with bolus manipulation. They reported that participants presented with difficulties chewing food due to inadequate dentition. While some residents were reported to have dentures, participants reported that many of the residents did not have dentures. "They can't chew because some don't have teeth, only some have dentures." (Participant 11)

Another significant difficulty that participants reported was that residents were more prone to choking and aspiration, possibly due to their old age. Participants reported that although symptoms of choking and aspiration e.g., coughing was not constant, there were occasions where it did occur.

"And then some, they are choking when they're taking liquids." (Participant 2)

"Here are frail care patients and hence, they are at risk of choking and aspiration." (Participant 4)

"Some are choking." (Participant 8, Participant 9).

“This side, frail care, they don't choke a lot but they do sometimes, some of them do.” (Participant 10).

“Some are choking but it's not every time.” (Participant 12)

Some participants also reported that residents were able to chew but were then unable to swallow the food. They would allegedly just hold the bolus in their mouth. This could be due to sensory issues or a delayed swallow trigger resulting from old age.

“Sometimes they can chew but not swallow. They just have it in the mouth.” (Participant 8)

“They don't want to swallow, they chew and keep their food around the mouth and then they just leave it.” (Participant 9)

“Sometimes they don't want to swallow. So they chew, and then don't swallow.” (Participant 12).

Some participants also mentioned that residents would sometimes vomit after mealtimes, although this didn’t occur often. In relation to this, participants reported that residents would sometimes spit their food out instead. It is unclear whether residents would spit out their food as a form of resistance or due to oral mobility issues or some other issues as many of the residents in the care homes were residents with cognitive impairments. Nonetheless, participants did mention resident-related difficulties as well.

“The other ones they don't want to eat. Others I'll put the food in the mouth and they take the food out. Like sometimes, they just spit it out.” (Participant 3).

“Others they can eat at the same time they cough, or vomit after.” (Participant 5)

Resident-related difficulties. Many participants stated that residents did not want to eat. Residents would not open their mouths during meals or would respond with anger and

aggression at mealtimes. This would subsequently make mealtimes more difficult for participants. Some participants reported in these situations, participants would hold themselves responsible and respond either by adopting strategies to solve the presenting issues or viewing it as something they needed to tolerate.

“Some patients can be rude, but we tolerate them. No choice.” (Participant 6)

“Sometimes I find it difficult to handle the old people. Sometimes they're aggressive. They don’t understand or if we are working, then they become aggressive.” (Participant 10)

Two participants also mentioned the consequences of these difficulties that because of these difficulties residents present with weight loss which affects their overall health, and these difficulties result in prolonged mealtimes. Participants reported that to manage the difficulties they experienced during mealtimes, they utilised various management strategies.

“ They take long to finish the food because it's not easy for them to swallow.” (Participant 9)

“Then it can give them energy even because they're losing weight. We have to give them e’PAP.” (Participant 1)

Theme 4: Caregiver Involvement in Medicine Administration

Aim 2: To describe the difficulties experienced by residents of the care home during mealtimes and pill-swallowing routines, as viewed by the caregiver.

Objective: To document the barriers residents experience during both mealtime and pill-swallowing as reported by caregivers.

Participants also revealed information regarding their involvement in the administration of medication to residents at the care homes. Most participant, specifically, those who were not qualified to administer medicines, noted that although they do not prescribe or dispense

medications, they often observe the residents to ensure that the residents have taken their medication.

“I don't give medication, but I do observe them taking their medicine.” (Participant 2)

“Our staff nurse gives them the medicine. We watch them. Help patient if it is needed we observe them.” (Participant 3)

“Some we have to watch them.” (Participant 9)

“I watch them taking medication. It's not too difficult because most others are taking the pills themselves.” (Participant 12)

“I observe them taking medication. But I don’t give them. I just make sure they take it.” (Participant 15)

Participants have noted that some residents may be reluctant to take medications as they do not perceive themselves as having any illness or difficulties or may conceal the truth about whether they’ve taken their medication. Participants, in their role as caregivers, aid residents who are experiencing difficulty with medicinal intake such as placing the pills in the resident’s mouths or observing and monitoring that residents have indeed taken their medicines. Participants at site 1 were observed to be less involved in assisting with pills as many residents were able to complete this task independently and this was also reported in the interviews. A few participants also mentioned that there is a significant range in the number of medicines residents are taking with some residents prescribed one tablet and others having up to 15 tablets per day with some residents not having any medicines at all. In cases where residents had been prescribed more than one pill, participants stated that they would often monitor the residents to ensure the resident had taken all the pills and not thrown them aside.

“Only one resident is not taking medication. Others have 1 medication, others have 5, some have nine. It differs. Depending on their condition.” (Participant 1)

“Everyone has different medication. It differs on doctor's script. Some have one, some have five, some have 12. There's some taking 15 pills in the morning.” (Participant 5)

Participants, revealed that for those residents who did not want to drink their medication or those that were unable to drink their medication normally due to swallowing impairments or owing to medical diagnoses, the nurse would crush the pills, all the pills for a particular resident, with a mortar and pestle. This modified medication would then be given to the resident in this modified form after being mixed into a food item such as apple mousse, yoghurt, or porridge. There was some variation in how the crushed medicine was incorporated into the food. Some participants would add the crushed medicines to a single spoon of the selected food items, while others would incorporate it into the entire portion of food and then try and ensure that the resident consumed all the food.

“So sometimes they crush the medication and mix it with Danone or yoghurt so the medication will taste sweet, better.” (Participant 3)

“As much as we do mix medicine with something, it does have that bitter taste at times. Unfortunately that is the only way that we have at the moment but we actually tr to make it a little bit more just to disguise the taster just to make it easier for them to swallow at the same time.” (Participant 4)

“We have difficulty so we just crush the medications so that because others don't even want to see the medication so we hide. We crush the medication and put it in a soft porridge then it's easy for us that time. We crush the medication and put it in a soft porridge then it's easy for us that time.” (Participant 5)

The findings from this theme are particularly interesting because they revealed that residents were being provided medication in a modified form and although it is not within the scope of

practice for caregivers to dispense medication and thus, they couldn't be expected to know, concerns arise as modification of medication does influence the efficacy of medicines and nurses included in this study reported that they modified medications to make pill-swallowing routines easier.

Theme 5: Training and Support Needs

Aim 3: To describe caregivers' perspectives on training and support needs for mealtimes and pill-swallowing routines with caregivers.

Objective: To describe caregiving to the elderly in terms of training, confidence, and preparedness from the perspective of the caregiver

Interestingly many participants (Eight of the seventeen) reported that they had adequate training and did not require more training. Except for the two professional nurses who obtained their qualifications through four years of training, caregivers included in this study only obtained six to nine months of formal training at accredited institutions. Participants reported that they had learnt through on-the-job training provided by senior colleagues and/or through programmes provided at their site of employment. Participants also reported completing additional courses as per their perceived needs on a personal basis,

Some participants reported that even though they feel they have been adequately trained, they would be open to any training provided.

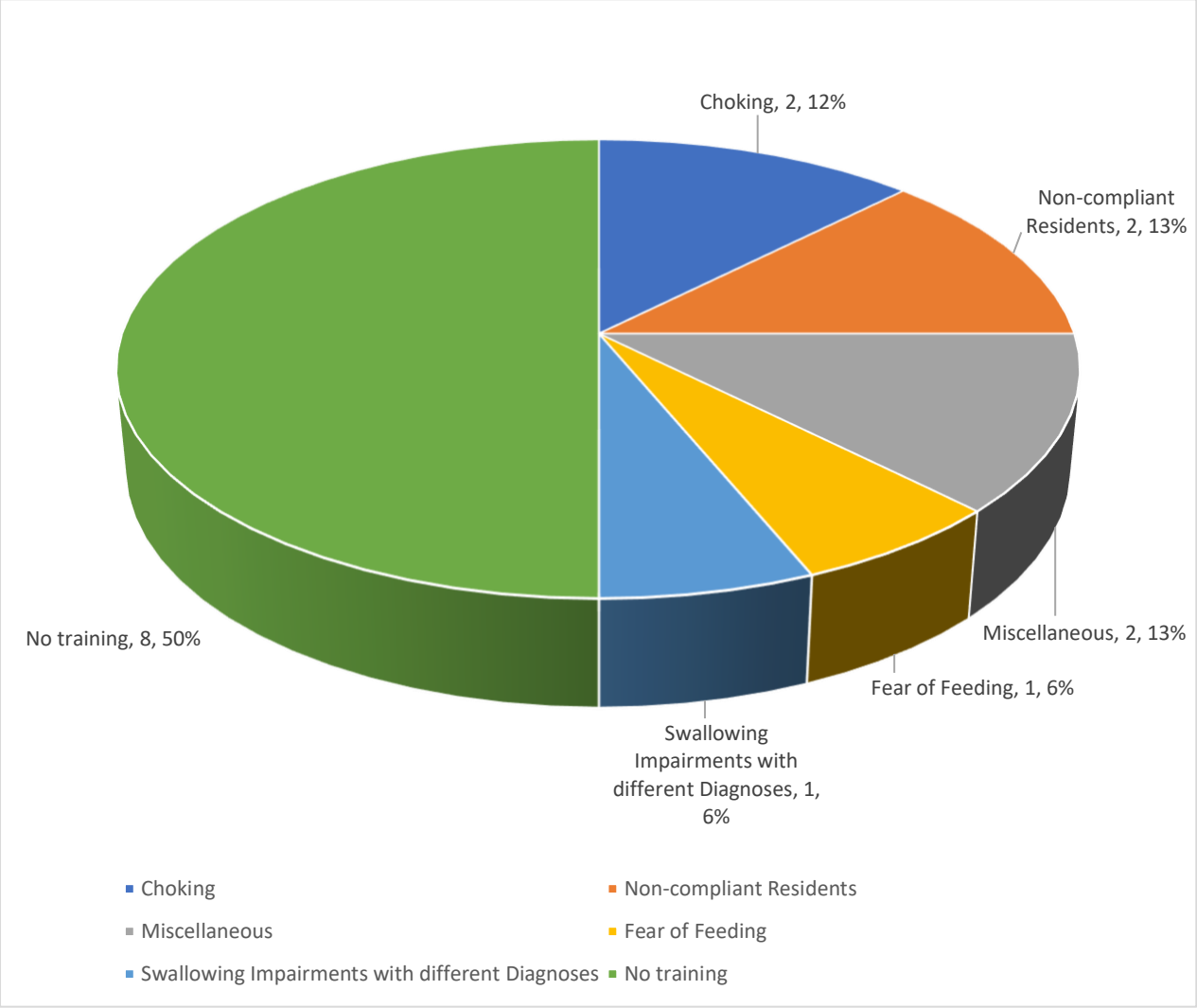
"No, but if there's some training that can encourage me, I am happy to do it." (Participant 9)

"Nothing, but I'll attend any training provided so I can be better." (Participant 11)

From the participants that stated they would like training, topics that emerged included training regarding choking and managing residents who are non-compliant during mealtimes. Additional topics identified by participants included training on overcoming anxiety and fear related to mealtimes and additional support in evaluation of swallowing impairments by other healthcare professionals. Figure 4 illustrates the various topics which participants reported they would prefer further training on.

Figure 4

Perspectives on Training Needs



6. Discussion

The aims of this study were threefold: 1) To describe the experiences and practices of caregivers with elderly residents during mealtimes at care homes, 2) To describe the difficulties experienced by elderly residents in the care homes during mealtimes and pill-swallowing routines, from the perspective of the caregiver, and 3) To describe caregivers' perspectives on training and support needs for mealtime and pill-swallowing routines with elderly residents in care homes. This study found that many of the caregivers, from the ones who participated in this study, reported that while they did experience difficulties during mealtime and pill-swallowing routines with the elderly residents at the care homes, these difficulties were attenuated through experience and teamwork. Caregivers also reported a range of difficulties which they observed the elderly residents to be experiencing such as reduced compliance, choking, and aspiration and the various strategies and techniques they employed to manage these signs and improve care for the residents under their care. They reported that they did follow reporting protocols for various difficulties observed, but that techniques were tailored to the relevant residents who each had different medical diagnoses, temperaments, and different rapport with the caregivers. Caregivers also shared their perspectives on training and support needs which they felt might assist them in optimising care for the elderly residents. These findings are more extensively discussed in relation to the objectives of the research and placed within the context of existing literature below.

Aim 1: To describe the experiences and practices of caregivers with elderly residents during mealtimes at care homes.

The first aim of this research was to describe the experiences and practices of caregivers with elderly residents during mealtimes and pill-swallowing routines in care homes. To explore this aim, the researcher considered two objectives: 1) The barriers and facilitators experienced by

caregivers during these two daily routines, and 2) how caregivers manage and support elderly residents who are experiencing difficulties during the two specific daily routines. The findings of this study relating to the first aim are placed within the context of the literature and are discussed according to their objectives below.

Objective 1: The barriers and facilitators experienced by caregivers during mealtimes and pill-swallowing routines with elderly residents at the care homes.

This study found that caregivers experience varying degrees of difficulty and this variation is influenced by the characteristics of residents, caregiver training, caregiver outlook towards their job and towards the residents, and support from colleagues and senior staff at the care homes.

Resident Characteristics

Resident characteristics which affected the degree of difficulty experienced by caregivers included the health and medical diagnoses of the elderly residents, and the behaviour and temperaments of these residents. Liu et al. (2017) noted in their study that intrapersonal factors pertaining to resident characteristics include cognitive impairment, changes in taste and appetite, medical conditions and comorbidities, physical abilities, use of medicines, and psychological and behavioural symptoms. The caregivers reported that the residents they were responsible for, were older residents over the age of sixty years, many of whom were at least partly dependent on assistance from the caregiver for all activities of daily living including the swallowing of meals and pills as a result of general age-related frailty, general swallowing difficulty, and/or a range of medical conditions. Specific medical conditions reported by caregivers were Parkinson's disease, and dementia all of which are already known to affect swallowing function and cognitive function to varying degrees depending on a range of factors

including severity and are also associated with swallowing impairments, particularly through the progression of the disease (Aarsland, 2016; Cosgrove et al., 2015). Individuals with Alzheimer's disease and dementia may experience swallowing difficulties, the severity of which correlates to the degree of cognitive impairment (Rösler et al., 2015). Swallowing difficulties are often present in individuals with dementia and Alzheimer's disease although the manifestations of these differ depending on the type of dementia diagnosed and the severity of dementia although signs of dysphagia may be noted from the initial stages (Flynn et al., 2018; Seçil et al., 2016; Takizawa et al., 2016). Additional medical diagnoses such as diabetes and hypertension were also reported to be common among the residents. A study by Sayaca (2020) found that individuals with diabetes, specifically Diabetes Mellitus may experience swallowing difficulty as this type of diabetes is associated with a rapid decrease in muscle mass and strength which may restrict muscle coordination and increase the risk for aspiration pneumonia. The occurrence of swallowing difficulty may also lead to swallowing anxiety which refers to a phobia of swallowing food, liquid, or pills (Sayaca, 2020). Individuals may feel hungry but be resistant to activities involving swallowing due to fear of the signs and symptoms of swallowing difficulties and/or aspiration (Sayaca, 2020). Swallowing difficulties may be even more pronounced in elderly individuals with diabetes as in addition to a loss of muscle mass and strength as a result of diabetes, there are also physiological changes which occur as a result of ageing (Cichero, 2018; Mulheren et al., 2018). It is known that ageing affects both physical ability and physical appearance (Batsis & Villareal, 2018; Curtis et al., 2015). Sarcopenia, the age-related loss of muscle mass, strength, and function threatens independence during the later years. While the degree of deterioration is variable and dependent on a range of factors including developmental, endocrinal, and lifestyle factors, ageing results in some degree of naturally occurring reduction in muscle mass and strength across the body including in those anatomical structures involved in swallowing such as the

jaw and pharynx (Batsis & Villareal, 2018; Jardine et al., 2018). In addition to the physical effects of ageing on the body and on the swallowing mechanism, ageing is also associated with changes in cognitive abilities (Carvalho et al., 2014). Hess (2020) asserts that these changes are normative in advancing age however, reflect a decline in cognitive skills such as working memory, executive functioning, processing speed across activities, and episodic memory. Despite this prevalent cognitive decline, the effect on everyday functioning is still contested with some literature suggesting that individuals are still able to function in their everyday lives (Hess, 2014). However, this was more relevant to community-dwelling older adults and may not necessarily be applicable to elderly residents in a care home. Furthermore, levels of functioning may be indicative of a multitude of factors including that everyday routines may not require maximal performance levels and that psychological features such as individual personalities and personal motivation may influence the ability to function efficiently in everyday life (Hess, 2014). Hence, it is possible that even in the presence of two similarly aged elderly residents with identical or similar health profiles, both may present differently during mealtimes and pill-swallowing routines as a result of their psychological attributes such as mental fatigue, depression, loneliness, and overall motivation to complete these routines. As such, it is not unlikely that the swallowing risks present amongst the elderly population in care homes due to ageing itself may serve as a barrier to successful mealtimes and pill-swallowing routines and be further exacerbated by the presence of comorbid conditions. Ageing and the presence of medical conditions increase the overall level of dependence that a resident places on the caregiver consequently increasing the time that a caregiver would have to spend with the caregiver when providing assistance during meals and pill-swallowing thus increasing the workload and the demands placed on the caregivers.

The second resident characteristic which caregivers reported to have an influence on the success and ease of mealtimes is the behaviour and temperament of residents i.e. the attitude of residents. Caregivers reported that even in the absence of swallowing difficulties, some residents displayed general reluctance to eat, drink or take their medicine and others reacted with hostility and aggression towards the caregivers. A similar finding was noted in a study conducted by Liu and colleagues (2018) on the barriers and facilitators to optimising eating performance however, their study focuses solely on cognitively impaired elderly individuals. Similar to this study, caregivers reported that residents would refuse to eat or swallow, pocket foods in their mouth, and also spit food out of their mouths (Liu et al., 2020). This behaviour of residents may be attributed to a multitude of factors. Residents may be displaying negative behaviours during meals and pill swallowing as a consequence of their medical conditions or swallowing impairments. For instance, individuals with Alzheimer's disease are reported to experience a loss of appetite and in the care home setting, a resident with Alzheimer's disease may display reluctance to eat or drink anything as a result of this. Similarly, swallowing anxiety may also contribute to a hostile attitude during meals in residents who may be experiencing difficulties in any of the phases of swallowing i.e. oral preparation, oral phase, pharyngeal phase, or oesophageal phases (Sayaca, 2020). They may fear the symptoms of aspiration and thus display a reluctance to eat. Importantly, it is possible that the food provided may be difficult to swallow or the resident may not like the appearance of the food and this may contribute to the residents' behaviour towards eating. Participants acknowledged that one way in which they tried to manage a resident's reluctance to eat was to try and provide them with something they enjoy. Particularly, with regards to swallowing pills, elderly individuals often have multiple pills which they may be required to swallow and their negative behaviour and temperament may be a result of the sheer number of pills that they are required to take and swallow (Forough, Wong, et al., 2018c; Patton et al., 2018). Additionally, the taste, texture,

and appearance of the pills may all contribute to how the residents perceive them and their willingness to swallow these pills (Forough, Lau, et al., 2018; Forough, Wong, et al., 2018c; Patton et al., 2018). Caregivers reported that residents at the two sites included in the sites can have anywhere between one pill per day to fifteen pills per day. Participants did report that one of the reasons they believe residents display a reluctance to take their medication is there are too many to take individually. Additionally, residents' temperaments may be a side-effect of the medication they've been prescribed. On the other hand, residents' behaviour and temperament may be a response to their perception of the caregivers' attitude towards them. Research suggests that positive social connections and good communication are beneficial in promoting successful mealtimes among residents in care homes (Shune & Linville, 2019). Communication is crucial in managing any impairments in swallowing, ensuring safety, personalised care and enhancing the quality of life for residents.

The finding that resident characteristics i.e. varied health profiles and the behaviour and attitudes of residents may influence caregivers' perception of mealtime and pill-swallowing routines with the elderly residents is important as this information suggests a need to consider more individualised meal plans for the elderly residents and also a need for more support for caregivers who perceive a greater burden of care for elderly residents with medical conditions and non-compliant residents. The findings suggest that by addressing these resident characteristics, the caregiver's experiences could be improved as well.

Caregiver Characteristics

This study found that increasing work experience with elderly residents in care homes, positive interpersonal relations with the staff and with the residents, and participants' outlook towards residents and their job correlated with improved perceptions of the mealtime and pill-provision

experience with the elderly residents in the care homes. These findings are congruent with existing literature on this topic.

Of great importance was the caregivers' perceived preparation and training for mealtimes. Many of the participants recruited in this study had been employed at their respective care homes for over five years. The majority of the participants also reported that although initially, they did find mealtimes with the residents difficult, through gaining experience and increased familiarity and personal connection with the residents, the entire mealtime had become less challenging. That is not to say, that there weren't challenges during mealtimes but rather that participants were able to manage these challenges better as they were more adequately prepared for them. These findings are consistent with those of Liu and colleagues (2018) who also found that participants advocated for caregiver preparation and training to facilitate effective practices during mealtimes. Interestingly many of the participants who were not nurses reported that the training they received to become a caregiver, which was less than a year, was adequate for working at the care homes. Some participants did however note that they learnt much of what they know through the hands-on experience and support from senior staff during the course of employment.

They noted that residents are different and mealtimes and pill-swallowing routines were more successful once the caregiver had gained familiarity and developed a personal connection with the resident. This is similar to a finding from the study by Liu and colleagues (2018) where they found that caregivers were able to patient-centred care by increasing familiarity with the resident, establishing rapport and an emotional connection, and being patient. By increasing their knowledge of the residents that they were tasked with assisting, caregivers were able to

manage the difficulties they experienced in a better, more effective way. Caregivers reported that they were able to adapt their management strategies to specific residents.

Research suggests that communication and interpersonal relations between the caregiver and resident are essential for an improved dining and swallowing experience for both the caregiver and the resident (Shune & Linville, 2019). Communication breakdowns may present an increased risk for adverse events and thus stands as a substantial health concern (Manias et al., 2016). Shune and Linville (2019) found that social interactions are highly valued amongst both caregivers and residents. Furthermore, interaction with residents may prove to empower the resident and promote autonomy and independence (Faraday et al., 2021). Although the study by Faraday and colleagues (2021) focused on elderly residents with dementia, it is possible that these findings could potentially be applied to all elderly residents and through improving the mealtime experience of the residents, the experiences of the caregivers could be improved.

Beyond the importance of the resident-caregiver relationship, the literature also suggests that good relationships between members of staff are just as crucial in facilitating a successful mealtime experience and successful adherence to pills by elderly residents (Faraday et al., 2021; Liu et al., 2020; Shune & Linville, 2019). Participants in this study reported that they felt comfortable requesting assistance from their colleagues in the event of any difficulties. Furthermore, participants reported that they had a clear chain of communication for instances where they observed any difficulties with swallowing, signs of aspiration, difficulties with medication or any adverse effects on the health of the residents. This is important as the quality of communication and relationships between colleagues has an impact on service provision . In contrast to the findings of the current study, a study conducted by Bennett and colleagues (2014) found communication among various healthcare professionals to be challenging in the

care home setting. The study found that limited interprofessional communication and a lack of clarity on the role of the different healthcare professionals and the various categories of care staff was a prominent issue (Bennett et al., 2014). While participants in the current study reported communication and collaboration between the various healthcare staff positively, they did also imply that they were not directly communicating with allied colleagues but rather, they would communicate their observations and concerns to the unit manager or a senior nurse who would then direct this message towards the doctor or relevant healthcare professional. This was also noted during observations. This finding may suggest that while cross-disciplinary communication and collaboration may be less efficient, discipline-specific communication and collaboration are sufficient and serves as a facilitator during mealtimes and pill administration for the caregivers.

The communication and the relationships of caregivers are motivated by the caregivers' outlook towards the job and towards the residents. The caregivers' outlook will influence how they approach mealtimes and pill-swallowing routines and the actions they will take in providing optimal care. Participants in this study varied in their outlook towards the job and towards the residents. Some participants viewed their job from a spiritual perspective where they believed that it was their calling in life and that they were strong enough to manage whatever situations they faced. Others reported that their job as a caregiver was their passion and all the effort and difficulties only served to make their experience more interesting. However, there were some participants who reported that they had no choice but to tolerate it as it was their job. Bennett and colleagues (2014) found that an individual's philosophy towards caring for the elderly residents greatly impacted service-provision. Liu and colleagues (2018) found that commitment towards the job is an important approach to supportive care

The findings from this study suggest that the caregivers' perceived experiences of mealtime and pill-swallowing routines with elderly residents are influenced by the characteristics of both the residents and the caregivers. The formulation of any mealtime and pill-swallowing management policies or plans would need to consider both these components to ensure that these routines are successful and also to ensure that best practices are implemented.

Objective 2: Description of Management and Support Provided to Residents Experiencing Difficulty with Swallowing of Meals or Pills

This study revealed that management of residents during meals and pill-swallowing routines addressed communication, knowledge creation, and strategies tailored to specific kinds of difficulties. Participants did not mention any specific protocol but rather they all utilised various techniques to generate a positive outcome.

Communication was an overarching theme across all difficulties which required support and management. Communication between residents and staff was considered critical to efficient swallowing of meals and pills. Participants reported that their own behaviour and approach towards the residents often influenced the response of the residents. Communication was an essential tool in addressing negative behaviour from residents, reluctance to eat, increasing alertness levels and optimising mealtimes, and encouraging social interactions. This finding aligns with existing literature. A systematic review on resident-carer interactions by Faraday and colleagues (2021) found five categories of carer-resident interactions namely a)social connection, b)tailored care, c) empowering the resident, d)responding to food refusal. These categories may be used to explain the management strategies employed by the caregivers in the current study.

Social connection refers to interactions which build on the relationships and which allow for the creation of a mealtime environment that is reflective of a typical social activity, with its aesthetic and social dimensions and the social interactions which create a pleasant social experience (Faraday et al., 2021). During the interviews and focus groups in this study, many participants did not directly provide any details regarding the environment created for the residents as a strategy in management. However, observations at both sites showed that relatively mobile residents were provided opportunities to consume meals at a table with fellow residents in a setting which allowed residents to engage in the social aspect of eating. A recently published review noted that shared mealtimes where residents and caregivers were able to eat together proved beneficial for both residents and staff as it served as a facilitator to enhanced communication between the staff and the residents (Heikkilä et al., 2022), This enhanced communication was associated with improved food intake, increased weight gain, increased autonomy, and reduced anxiety for the residents. Shared mealtimes allowed for staff to gain familiarity with the residents and obtain background information which could then be utilised to tailor management to residents' specific needs (Heikkilä et al., 2022).Liu et al. (2018) assert that the physical environment should have minimal stimulation and distractions. Furthermore, a supportive socio-cultural environment is said to serve as a positive setting for optimal mealtimes for both the resident and the caregiver (Palese et al., 2018).

Tailored care refers to interactions individualised for different individuals (Faraday et al., 2021). Participants in this study tailored their interactions with certain residents depending on the presentation of the resident. They were able to do this through trial-and-error but also through increased familiarity with the residents. Using the knowledge that participants had of specific residents, they reported that they were able to cater to the various residents' abilities and identities. The literature suggests that tailoring the assistance provided to individuals is

essential (Batchelor-Murphy et al., 2017; Palese et al., 2018). Batchelor-Murphy (2019) notes that caregivers should observe residents and determine their level of independence before providing assistance. Participants reported a range of swallowing difficulties which they observed in the residents and for which they were required to provide assistance. Foremost, was changing their own attitude and approach towards residents as this was viewed to influence the response of the residents towards the caregiver and towards their routines. A particularly prevalent strategy utilised for the management of swallowing difficulties in the elderly residents was that of displaying patience, giving the resident time to eat, and constant validation and communication with the residents to increase alertness during the mealtime routine. Liu et al. (2018) note that verbal cueing and prompting techniques as well as personalised care serves as a facilitator to optimising mealtime routines. Patience and giving the residents time during meals was a critical component of supportive care and was reflective of a more person-centred approach as opposed to a task-oriented approach. Participants reported that they would give the resident time to eat, and regard them with patience, slowly feeding them with intermittent breaks until their meal was completed where possible. The provision of breaks can serve to be a good strategy to account for the increased fatigability of residents due to the reduced strength of the ageing body and also act as an essential technique in improving oral intake and improving nutritional outcomes (Hiramatsu et al., 2015). Caregivers also provided various modifications such as modifications to taste and texture, instrumental modifications, positioning modifications, and changes to food liquid rate and amounts. Modifications to the diet included soft foods instead of solid foods and in some cases also alternative options such as nutritional supplements like Ensure and e'PAP. In line with dysphagia rehabilitation protocols, texture modifications are an appropriate and important strategy however, these need to be conducted in conjunction with postural adjustments and other strategies (Cichero, 2018; di Pede et al., 2016). Through observations of the two sites and through the interviews and

focus groups with participants, it was evident that this has been implemented. Residents were largely seated in “Fowler’s position” as reported by the caregiver, either in their beds or on chairs. Participants also reported that residents who experienced difficulty with chewing were provided soft foods, or foods in smaller portions, or minced food to reduce the risk for aspiration as needed per resident. Literature also suggests that texture modifications may reduce “chewing fatigue” and increase intake by frail, elderly residents (Cichero, 2018; di Pede et al., 2016). Cichero (2018) also asserts that although texture modification may reduce the risk of aspiration, it may reduce the nutritional value of the food thereby compounding the risk of malnutrition in the elderly who are already at an increased risk. Diet alternatives such as e’PAP may account for the nutritional loss caused by texture modifications however, it may look visually unappealing and the intake may decline as a result. This may also impact quality of life. Modifications to the bolus may be useful in addressing issues with bolus manipulation, chewing, and swallowing however, Jardine and colleagues (2018) assert that unnecessary modifications to the diet may promote malnutrition, reduced muscle mass, and psychological consequence. The investigations and discussions determining the selection of certain food modifications were not within the scope of this research however, it may be valuable to consider the reasoning behind certain choices and how care home staff may be able to balance the modifications required for safe and efficient swallowing against residents’ preferences, autonomy and improved quality of life. A taste modification which was reported to be used often is the modification of the taste of water. Participants reported that most residents were extremely resistant to drinking water but would drink water mixed with orange juice. It is likely that this may be due to natural decline in taste with advancing age (Batchelor-Murphy et al., 2019). With regards to pills, participants reported that residents were often hesitant to swallow their medicine and residents sometimes complained of the taste. To accommodate for this, residents would be given the medication with something sweet such as yoghurt or mousse.

Another type of modification that was observed and reported in this study is utensil modification. Participants reported that some residents were able to eat and drink independently while other required varying degrees of assistance. Many of these residents ate with a spoon, although some received their nutrition orally through a syringe. The participants reported that the syringe was usually utilised for liquids with residents who could not manage with a cup, and sometimes for very soft pureed food especially when the duration of the meal was prolonged. As per the observations conducted, residents with low consciousness levels were also fed with a syringe occasionally. In some instances, the resident was provided the syringe to use independently. This is not consisted with best practice as syringe-feeding is considered to be a potentially dangerous practice (Pierpoint & Pillay, 2020). Literature suggests that syringe-feeding poses a significant risk for aspiration as it could lead to premature spillage of the bolus into the pharynx, especially if the bolus size is not controlled or if the bolus is placed incorrectly in the mouth (Pierpoint & Pillay, 2020). Certain conditions such as dementia and arthritis in the elderly may prompt the need for adaptive equipment such as cups with built-in straws or spoons with bigger handles etc which may promote independence (Batchelor-Murphy et al., 2019). These were not reported to be available at the two sites, and often residents requiring these adaptative utensils would be hand-fed by the caregiver. A critical component of tailored care is observation. Participants in this study reported that they would routinely monitor and observe residents for any signs of swallowing difficulty or aspiration to manage the difficulties as soon as possible. This is critical in optimising mealtime experiences and reducing any swallowing-related anxiety (Bennett, 2014). However, Batchelor-Murphy (2019) reports that observations during mealtimes may be especially important to foster food intake. For instance, if a resident has increased food intake during breakfast than more food could be provided then, or alternatively observing a specific kind of food which the resident may be more willing to eat should be noted. Although, the food provided is not the

responsibility of the caregiver but rather the kitchen staff, it may still be a point which the kitchen staff and caregivers could collaborate on. The consideration of the residents' preferences may result in a better overall feeding experience for the caregiver as residents could display an increased willingness to eat. Residents may feel more empowered and this may reduce some of the hostility and reluctance to eat that was reported to be a barrier to successful mealtime experiences for the caregiver.

Empowering the resident refers to promoting independence and autonomy (Faraday et al., 2021). As reported by participants, those who could manage to eat, drink, and swallow their pills independently were able to do so and the caregivers provided other residents with assistance as required. As Batchelor-Murphy (2019) notes that it is crucial to observe the residents and only provide assistance as required with the ultimate goal being to promote independence without compromising safety and nutrition. With regards to empowerment, the provision of choice was considered critical to supporting residents with swallowing-related difficulties. However, the long-term care setting as well as certain medical conditions and/or swallowing impairments do not necessarily allow for choices in their food (Watkins et al., 2017; Watkinson-Powell et al., 2014). However, this study found that caregivers did try to accommodate where they could by requesting desserts etc. within the constraints of what was available and also by providing residents some time. This was done in order to address the refusal of food and reluctance to eat meals

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Typically, mealtimes at long-term care facilities such as care homes have been reported to be task-oriented i.e. the focus is on completing the meals as soon as possible and not person-oriented (Watkins et al., 2019). Within the care homes in the study, there seems to be a combination of the two. Caregivers are providing tailored support adhering to person-oriented

care as much as possible however, sometimes due to time pressures and the overall workload, caregivers tend to complete mealtimes in a task-oriented manner. This is evident for both meals and pill-swallowing routines, where residents were sometimes left to take their medicines themselves without direct observation from either a nurse or a caregiver.

Aim 2: Describe the Difficulties Experienced by Elderly Residents of the Care Home During Mealtimes and Pill-swallowing Routines from the Perspective of the Caregivers

The second aim of this study was to provide insight into the perception of caregivers regarding the difficulties residents may be experiencing during mealtimes and pill-swallowing routines. This study found that participants identified a range of difficulties which they believed the residents experience and these were multifactorial.

Objective 3 : Barriers Residents Experience During Mealtimes and Pill-Swallowing Routines as Reported by the Caregivers

One objective to explore this aim was to document the barriers residents may be experiencing through the reports of the caregivers. This study found that caregivers reported swallowing-related difficulties, difficulties arising from residents' behaviour, and the consequences of both of these. The older population is at significant risk of swallowing impairment due to the age-related changes to the swallowing mechanism and various comorbidities. The findings from this study may be particularly useful in determining a profile of the more prominent difficulties observed in the elderly care home population in South Africa, and also in identifying whether caregivers are able to effectively detect signs of impairment and swallowing difficulties in the elderly population in care homes, particularly during mealtimes and pill-swallowing routines and whether these difficulties are being addressed in the care home setting. For the purpose of clarity, information relating to pill-swallowing routines will be discussed more

comprehensively as a separate heading although it will be briefly mentioned in other areas as well.

Participants reported that while some residents were independent, many of the residents presented with swallowing difficulties due to both general ageing, and due to existing comorbidities. Literature suggests that swallowing difficulty is common in older people. The swallowing process is incredibly complex and involves the muscles, the brain, and the cranial nerves (Christmas & Rogus-pulia, 2019). These are affected during ageing and even due to some medical conditions. Participants in this study did not directly distinguish between presbyphagia, sarcopenia, or dysphagia in their descriptions of the difficulties observed or in their management of swallowing difficulties during mealtime and pill-swallowing routines instead the focus was on the signs observed and the management of these signs. However, a speech-language therapist and doctor was regularly consulted and it may be understood that there was some degree of interprofessional collaboration that took place in drawing up a management plan for residents with swallowing difficulties.

Participants reported a range of swallowing difficulties in the oral and pharyngeal phases of the swallow. One of the prominent difficulties was that of chewing and bolus manipulation and which is commonly reported in the literature on the older population. Research suggests that the natural process of ageing results in certain physiological changes, the most common being the reduced speed of swallowing and reduced strength (Eibling & Coyle, 2017; Nogueira, 2015; Nogueira & Reis, 2013). Structural and physiological changes resulting from ageing and certain medical conditions such as Parkinson's disease, Alzheimer's disease and dementia are known to contribute to swallowing difficulties with manipulation and preparation of the bolus (Christmas & Rogus-pulia, 2019). Ageing is associated with sarcopenia which refers to a age-

related decrease in muscle mass and quality and this is reported to reduce the strength of the tongue which subsequently results in reduced force during bolus preparation and clearance (Christmas & Rogus-pulia, 2019; Eibling & Coyle, 2017). Presbyphagia which refers to age-related changes to the swallowing mechanism may occur without any visible signs of impairment in swallowing difficulties and not all elderly individuals with presbyphagia may present with impaired swallowing. Furthermore, changes in dentition may also contribute to difficulties in manipulating the bolus (Nogueira, 2015). Jardine and colleagues (2018) however note that inadequate chewing is a stronger predictor of poor oral intake and compromised nutrition than dentition. Additionally, the literature suggests that reduced saliva and the risk of xerostomia may contribute to difficulties in the oral phase of swallowing (Christmas & Rogus-pulia, 2019). In addition to the natural effects of ageing on the swallow mechanism, comorbidities as well as medications commonly prescribed for these comorbidities may also contribute to the bolus manipulation difficulties observed (Christmas & Rogus-pulia, 2019). Apraxia resulting from dementia, or delirium associated with certain medical conditions, and reduced level of consciousness in older individuals may result in oral phase difficulties. Furthermore, medication may lead to reduced consciousness levels, weakened oral strength, perceived dry mouth, reduced appetite, and motor incoordination in the elderly residents which may all contribute to swallowing difficulties amongst the elderly (Eibling & Coyle, 2017; Nogueira, 2015; Nogueira & Reis, 2013). Difficulties in the oral phase and with bolus manipulation may also account for the difficulty participants observed in the residents regarding the pocketing of food in their mouth and inability to swallow.

Participants in this study also noted that coughing, choking and aspiration was commonly observed in the residents. Similar to the causes of difficulty in bolus manipulation, structural and physiological changes related to ageing serve to modify the swallowing process. Tongue

weakness, reduced muscle mass and strength, the lowered position of the larynx, and laryngeal changes associated with sensory and motor changes like vocal cord atrophy may contribute to the aspiration and choking observed. Hiramatsu et al. (2015) noted that laryngeal fatigue, and xerostomia with associated multiple swallows may increase the prevalence of aspiration and pneumonia in the elderly population. Furthermore, age-related changes which result in reduced strength, co-ordination, stability, and endurance of the swallowing mechanism will also influence the interaction between the suprahyoid and thyrohyoid muscles which consequently may result in older individuals presenting with fatiguability during longer meals (Hiramatsu et al., 2015). This could account for why participants reported that residents require more time during meals and also why they often improved oral intake with a few breaks during a meal. Furthermore, medication and various conditions such as Parkinson's disease and dementia may cause impairments in the pharyngeal phase of the swallow resulting in coughing, choking and aspiration. Dementia often results in feeding difficulties as well as swallowing difficulties. Feeding difficulties refers to difficulties such as feeding independently and maintaining attention during feeds, and swallowing difficulties refers to difficulties in the three phases of swallowing, both of which serves to increase the risk for aspiration and choking (Flynn et al., 2018). Participants reported that some of the elderly residents were diagnosed with some form of dementia and this may explain why choking and aspiration is such a commonly reported observation by the caregivers, in addition to the increased risk of aspiration due to ageing itself. Ageing, comorbidities, swallowing impairments, and medication all affect the overall body of the older individual but specifically their swallowing ability, functional independence, and psychological wellbeing all of which influences an individuals' behaviour and temperament. Participants reported that a common difficulty they observed in the residents was that of refusal to eat, drink, or consume pills and associated hostility and aggression.

Participants reported that not only did residents' behaviours and temperaments affect the caregivers' experience but they also believed it affected the residents' experiences of mealtime and pill-swallowing routines. The psychological profile of residents may contribute to residents' willingness to eat, drink, and swallow pills. Psychological factors may result in poor appetite which is reported to be a common problem in the community-dwelling as well as the elderly population in care homes (Pilgrim et al., 2015). Depression is reportedly the most frequently occurring psychological issue in the elderly and can impair appetite (Pilgrim et al., 2015; Zhao et al., 2018). A major risk factor for depressive symptoms in the elderly is loneliness, and this might be more common in the elderly in care homes (A. Jansson, 2020; A. H. Jansson et al., 2017; Zhao et al., 2018). Participants in this study used verbal interactions, praise, and cueing and humour to promote alertness and to provide some form of social interactions for residents which could mitigate some of the reluctance to eat in residents and also directly address some of the loneliness which residents may have felt. As discussed above, the aesthetics and socio-cultural aspects of mealtimes is critical in optimising mealtimes in care homes and promoting oral intake. Insufficient knowledge on nutrition, cynical attitudes, negative beliefs that they may no longer benefit from healthy eating, refusal of unfamiliar foods, and frustration over the loss of autonomy and control of their food preferences have all been identified as factors which could contributed decreased motivation to eat appropriately among residents in care homes (Mahadevan et al., 2014).

At the two care homes in this study, residents were able to eat in a general dining area with other residents and also completed mealtimes in their specific wards with residents eating separately but in a room with other residents. It may be interesting to conduct a study on whether elderly residents in care homes, at least those with relatively intact cognitive function and significant mobility, have differences in their oral intake in the different mealtime environments. Eating alone is not as pleasurable as eating although not always possible

(Pilgrim et al., 2015). In addition to the psychological factors which contribute to poor appetite and reluctance to eat, physiological factors may also contribute. The changes in olfaction and gustatory sense related to ageing may reduce the enjoyment elderly individuals obtain from the mealtime experience. In this regard, modifications and support would have to be from the kitchen supplying the food and further research may be required in this area to facilitate the provision of meals that account for possible changes to taste and smell and how caregivers may collaborate with kitchen staff regarding the food options. Additionally chronic conditions such as Parkinson's disease, and dementia which were reported in the elderly population in the care homes in this study, have its own effects on appetite with some increasing appetite, while other decrease appetite (Bennett et al., 2014). Additionally, pain related to ageing or chronic illness may also result in a refusal to eat and poor appetites in the elderly residents (Pilgrim et al., 2015). Furthermore, medications to treat these may also increase the risk of poor appetite as medications affect level of arousal and can also affect taste and smell. Caregivers in this study reported that some residents did present with medical conditions such as Parkinson's disease, hypertension, and dementia; and some of the medication for these does have an impact on appetite (Pilgrim et al., 2015).

Participants in this study reported their view on the barriers to mealtimes and pill-swallowing routines for the elderly residents. These included the swallowing-related impairments as a consequence of ageing and various comorbidities. They also mentioned that residents' behaviour and temperament during meals also served as a barrier when residents were non-compliant. These served as barriers as they presented significant health risks for the residents. Some participants mentioned that residents' health profiles and their refusal to eat, residents were at an increased risk of weight loss. The literature suggests that with the continual increase in the number of elderly individuals residing in care homes, including in South Africa, it is

vital to ensure that residents' nutritional needs are met to improve prognosis and quality of life (Mahadevan et al., 2014). Barriers to mealtimes may involve issues related to swallowing itself but also includes issues related to the overall mealtime experience. Eating and drinking are essential activities which are associated with significant social and emotional implications (Burges Watson et al., 2018). Mealtimes comprise of important psychosocial aspects and these may have an effect on food intake and quality of life in the elderly (Fetherstonhaugh et al., 2019; Keller, 2016). Existing literature suggests that difficulties at mealtimes can lead to anxiety, depression and isolation (Faraday et al., 2021). For all of these reasons, it is critical to understand the barriers to mealtimes from the perspectives of the caregiver and the resident so that these issues may be addressed.

Caregiver Involvement in Pill-Swallowing Routines

Global and local policies and guidelines pertaining to medication management are clear that the administration of medication is completed by a registered nurse or a staff member that has been adequately and professionally trained in the administration of medication (National Department of Health, 2011; Nicholson & Damons, 2022). In line with this, caregivers in this study who were not enrolled nurses made it abundantly clear that they did not administer medications. However, through the observations and the interviews, it was noted that although they were still occasionally involved in the administration process when required. This could be attributed to the various challenges that were manifest during the pill-swallowing routines with the elderly residents.

Participants reported that much of the difficulties present during mealtimes were also present during the pill-swallowing routines. This included swallowing difficulties observed in the residents by the caregiver as a result of ageing or comorbidities as well as challenges associated with residents' refusal of oral intake, whether that be of food, liquid, or pills. As discussed, the

process of ageing comes with its associated negative effects such as frailty, deterioration in functional independence, and an increased risk for chronic diseases (Nicholson et al., 2022; Nogueira & Reis, 2013). These effects may be even more prominent in the South African context where a quadruple burden of disease exists which implies and increased risk for chronic conditions such as stroke and dementia. In this study too, participants reported that many residents have been diagnosed with diabetes, hypertension and dementia. This increased risk may further a need for multiple medications as a result of chronic conditions (Nicholson et al., 2022; Nicholson & Damons, 2022). Dagil & Sharma's (2014) study supports this by suggesting that elderly individuals may take from two to nine different medications per day. In this study as well, participants reported a significant range in the number of medications that residents were required to take ranging from no medication to upwards of 15 pills per day. These medications included over-the-counter medicines such as vitamins in some cases, especially where residents presented with intact abilities to consume their pills independently. Multiple medications itself increases the risk of adverse effects on the health of individuals and errors in the administration of medicines may serve to aggravate this risk.

In this study, participants reported that some of the difficulties which they observed the residents having during the swallowing of pills were that residents were sometimes hesitant to consume their pills because they did not enjoy the taste and texture of the pills, that residents were unable to swallow the pills, and that residents did not want to adhere to their prescriptions because there were too many pills and they experienced fatigue. Medicine swallowing difficulties may be present in individuals in the presence or absence of dysphagia and a known swallowing problem (Kappelle et al., 2016). Radhakrishnan and colleagues (2021) conducted a study looking into the factors associated with difficulty swallowing pills in healthy adults. In this study, approximately a quarter of their participants reported that swallowing becomes difficult due to the taste of the medication and results in non-adherence. A study by Patton and

colleagues (2017) concur that a lack of physical skills to swallow medicines may serve as a barrier to adherence to pills. These were resident-related factors which influenced caregivers' experiences as well.

The nurses included in the study reported that they experienced difficulties in administering solid pills to those elderly residents with some degree of swallowing difficulties. Other caregivers also reported that they did observe nurses experiencing difficulty in this regard. A study by Forough et al., (2020) found this to be a significant barrier as well in addition to heavy workloads and time constraints. Interestingly, most participants in this study reported that they did not feel overworked and that they had sufficient staff to assist during both mealtimes and pill-swallowing routines, although some did mention that they felt they required more human resources. This was however in reference to other activities of daily living and not necessarily to mealtimes and pill-swallowing routines. Heavy workloads and inadequate staff were reported to be common barriers during both mealtime routines and medicine management in the existing studies on care homes (Bennett et al., 2014; Forough, Lau, et al., 2018; Forough, Wong, et al., 2018b; Liu et al., 2020; Sefidani Forough et al., 2021; Shune & Linville, 2019; Watkins, 2018).

Nurses adopted certain strategies in order to account for the reluctance to swallow pills, polypharmacy, and swallowing problems affecting the ability to swallow pills. Participants involved in the administration of the medication reported that in residents who experience difficulty swallowing the pills, they would crush all the pills, whether two or more together in a cup and provide the medicines in this form often mixed with porridge, mousse or other food item. An Australian study found that modification of medicines was the most common method to improve the administration of the pills during pill-swallowing routines (Sefidani Forough et al., 2021). Pills would often be mixed into thickened liquids, yoghurt, custard and the like

(Sefidani Forough et al., 2021). When using this method, participants reported that the nurse would give the medicines to the caregiver who would mix it into a portion of the food and then feed it to the residents. These are reported in the literature to be compromising practices which may reduce the effectiveness of the medicines (Nicholson et al., 2022; Nicholson & Damons, 2022). This method is also against best practice. A South African guideline on medication management in residential care facilities for older persons published by the National Department of Health (2011) clearly mentions that in the event of residents experiencing difficulties swallowing a solid pill, nurses should consult with pharmacists on potential substitutes in other forms as crushing the pills may make them inactive. Another important point mentioned in the guideline was that medicines should not be left for residents to take at a later stage, but rather that the nurse should ensure that the resident has swallowed the medication. In the current study, it was observed that sometimes, especially in those who with greater physical abilities and functional independence, pills were left by a resident and the nurse would not monitor whether the resident had swallowed the pill. In addition to ensuring that the residents have swallowed the pill, guidelines suggest that it is just as essential to monitor and observe the resident for any ill effects and these should be reported as soon as possible (National Department of Health, 2011; Nicholson et al., 2022; Nicholson & Damons, 2022; Sefidani Forough et al., 2021). Findings from the current study suggests that caregivers, even those for whom medicine administration was not in their scope of practice, played a part in ensuring that residents swallowed a pill and in reporting adverse effects on the elderly residents noted during their shift however there were inconsistencies in practice with caregivers only monitoring and assisting with those elderly residents who experienced difficulties or who presented with reduced functional independence and low levels of arousal. The literature suggests that administration errors during pill-swallowing routines are common and may result in significant adverse effects on the health of individuals including prolonged need for

hospitalisation and can also prove to be fatal for the residents (Nicholson et al., 2022). The findings suggests a need for further investigation into whether those caregivers who are not trained in medicine management may have a role to play during pill-swallowing routines with elderly residents in the care home setting. These findings also raises concerns on potential administration errors occurring in the care home setting, whether nurses are aware of the consequences of modifications to pills, whether modifications are guided by the literature, and whether nurses have adequate training on both the pharmacological aspects of medicines but also on the psychological and behavioural interventions which may be applied to ensure successful and safe pill-swallowing routines (Sefidani Forough et al., 2021)

Aim 3: To Describe Caregivers' Perspectives on Training and Support needs for Mealtime and Pill-Swallowing Routines with Caregivers

The final aim of this research was to understand and explore participants' perspectives on training and support needs during mealtimes and pill-swallowing routines. The researcher sought to achieve this aim through providing participants' perspectives on previous training and additional training needs.

Objective 4: To describe caregiving to the elderly in terms of training, confidence, and preparedness from the perspective of the caregiver.

Interestingly, some participants reported that the training they had received was adequate and they did not feel that they required more training. Others reported that training was adequate but they would appreciate any opportunity to learn more in an effort to optimise service-provision. Others still, mentioned that the most beneficial "training" was that which they learnt through experiential learning in the course of their employment through the assistance of senior

colleagues and the provision of miscellaneous programmes provided at their employment sites. Participants were now comfortable with mealtimes because of their level of experience.

The lack of research with caregivers in care homes relating to mealtimes and pill-swallowing routines notwithstanding, the findings in regards to perspectives on training needs differ in some aspects to the existing literatures. A study conducted on the perspectives of mealtime management in care homes from the perspectives of cross-disciplinary care staff found that participants reported limitations in training and shared that increased training may optimise care during mealtimes and the consistency of mealtime and pill-swallowing routines (Bennett et al., 2014). However, similar to the findings from this research, the study revealed that hands-on training and practical experience was beneficial. Similar findings were reported by Bennett (2014). This may also explain why participants in this study viewed their training to be adequate. Most participants had been employed at the sites, or worked as a caregiver for an extended period of time. Through this time, they may have obtained competence through practical experience. Additionally, they also reported that they received regular training on various topics which may also have contributed to their views. However, topics covered in training were reportedly not always relevant or related to mealtimes and pill-swallowing routines.

Participants also provided some guidance on which areas of mealtime management they would prefer to receive more trainings on. These included training on choking, aspiration and its aetiologies, swallowing-impairments associated with different medical conditions observed in the care homes, and the behavioural challenges experienced with residents during mealtimes e.g. non-compliance. Forough et al., (2021) reports that traditionally, training and management has prominently been concerned with managing swallowing difficulties arising from a medical diagnosis however, in the elderly population and in those with dementia, there may be a need

for further training and education on management techniques addressing behaviour. Caregivers may also benefit from the creation of at least basic guidelines regarding best practices and management techniques for challenges arising during mealtimes and pill-swallowing routines, even if these are site-specific and formulated in relation to the difficulties experienced in the immediate setting.

7. Limitations

There were certain limitations to this study. This study only considered care homes in Gauteng and results may differ across South African provinces and even across the different regions in Gauteng where caregivers may experience different challenges relating to the work environment and the profile of the residents residing at the care homes. Research in other provinces and other care homes in Gauteng may provide more information regarding the generalisability of these results to other contexts. Additionally, the sample size while adequate for the current study was small however, data saturation had occurred and no novel information was being revealed during data analysis. Another limitation of this study was that interviews and focus groups were conducted in English. Although participants were sufficiently proficient in English, interviews and focus groups conducted in the home language may have elicited information which may otherwise have been not as efficiently communicated in English.

8. Implications

8.1 Clinical/Practice Implications

Findings from this research study suggests that although caregivers report a mostly positive experience during mealtimes, there are multiple barriers to optimum mealtimes and pill-swallowing routines with elderly residents. While some of these barriers are a result of residents' medical diagnoses, other factors affecting caregivers' experiences is their level of experience, communication between care home staff, and caregivers' perceptions of their job.

Training programmes and workshops aimed at addressing various barriers and increasing facilitators may be useful. These include events addressing the various topics identified by the caregivers such as choking/aspiration, training on common medical conditions in the care home, and also workshops aimed at improving the communication between all care home staff. A speech-language therapist may have a crucial role in formulating and implementing various programmes addressing these training needs related to swallowing and communication as these are speech-language therapists' areas of expertise. Additionally, although participants in this study did not report being short-staffed, findings did suggest that assisting some residents would take relatively long due to their various difficulties and for this reason it may be necessary to consider adding more staff to assist in these routines to prevent increased caregiver burden.

8.2 Research Implications

There is a paucity of literature regarding mealtime management and the perspectives of caregivers employed at care homes during this daily activity, especially from the local context and from other low-and-middle-income countries. The findings also suggests that there are significant gaps in the South African literature regarding medicine administration practices in care homes with elderly residents and further investigation needs to be carried out in this field. Much of the available research has focused on the perspectives of pharmacists or professional nurses. However, this study finds that even those caregivers who are not professional nurses may have a role in assisting residents with pill-swallowing routines. Additionally, the findings of this study provides some understanding of the perspectives and experiences of caregivers within the care home setting. The way in which caregiving has previously been conceptualised may be challenged as caregivers within the South African context have had the opportunity to

share their insight and experiences with working with elderly residents in care homes, particularly during mealtime and pill-swallowing routines.

Future research in this topic should consider the perspectives of additional facility staff including kitchen staff, speech-language therapists, medical doctors involved in mealtimes and pill-swallowing routines and compare these to those of residents so that these findings can be merged to develop and implement plans which optimise staff and resident experiences during mealtimes and pill-swallowing routines. Future research could also investigate whether non-medical caregivers i.e., those not currently involved in medicine administration, have a role to play in reducing medicine administration errors and improving medicine administration particularly within the care home setting and what this role may look like and how speech-language therapists may contribute to increasing awareness regarding the consequences of unsupervised pill modifications.

8.3 Policy Implications

This research contributes to available literature regarding the barriers and facilitators experienced by caregivers during mealtime management and allows us to understand the practices of caregivers in the care home setting when working with elderly individuals. This information can guide the formation of reference guidelines and the development of workshops and training programmes tailored to addressing the needs identified within the context of elderly residents in care homes. The research also has implication for medicine administration and practices implemented by care home staff during this process. Policies and procedures should be developed in conjunction with caregivers to clearly outline their roles in pill-swallowing routines with residents and how they may facilitate the overall process. These

policies may need to be formulated and then adapted across different care homes based on the specific barriers present in individual care homes.

9. Conclusion

This research contributes to the scarce literature available regarding caregiver perspectives on mealtimes and pill-swallowing routines with elderly residents in care homes, particularly in the South African context. Findings suggest that caregiver experiences are moderated by diverse barriers and facilitators to mealtimes and pill-swallowing routines. Communication was a key finding and served as both a facilitator and a barrier during mealtimes and pill-swallowing routines. This was influenced by various resident characteristics such as their medical diagnoses and their behaviours; and, by various caregiver characteristics such as their job philosophy, level of experience, and familiarity with residents at the care homes. Although this research contributes to the existing literature, further research is required into why certain barriers may be present, and how some of the barriers may be reduced or eliminated. In addition to identifying barriers and facilitators, the research also identified what difficulties caregivers perceived to be experiencing during mealtimes and pill-swallowing routines and how these difficulties were being addressed and how residents were being supported through these difficulties. The findings suggests that there were a range of difficulties associated with normal ageing as well because of various medical conditions and caregivers were utilising multiple strategies and techniques to assist residents during mealtimes and pill-swallowing routines and that these were being tailored to specific residents depending on their presentation. Food modifications were common and included taste, texture, bolus, and diet modifications and these were selected based on resident characteristics. Caregivers provided support based on their familiarity and knowledge of residents and these were in line with existing literature. However, certain management techniques may influence quality of life of residents and further

investigation is required into how caregivers and other care home staff collaborate to balance nutritional needs of residents with the psycho-social characteristics of mealtimes. The research also provided some initial information regarding medicine administration. Findings suggest that best practices are not implemented during the administration of medication, and this raises concerns regarding the risk for adverse effects because of administration errors. Lastly, this study found that although caregivers feel they have been trained adequately, they may still benefit from workshops and training aimed at addressing some of the challenges they face during mealtimes such as residents' refusal to eat. The results of this study provided much needed information regarding mealtime and pill-swallowing routines from the perspectives of the caregiver in the South African context.

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Appendices

Appendix A

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

R49 Ms SY Lakhi

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M220411

NAME: (Principal Investigator)	Ms SY Lakhi
DEPARTMENT:	School of Community Development Department of Speech Pathology and Audiology University
PROJECT TITLE:	*Swallowing difficulties in the elderly: caregiving needs and responsibilities for the elderly residing in care homes*
DATE CONSIDERED:	2022/04/29
DECISION:	Approved unconditionally
CONDITIONS:	
NOTE:	If contact information regarding student study participants is required, please contact the Registrar's office - <Nicoleen.Potgieter@wits.ac.za>
SUPERVISOR:	Dr J Seedat
APPROVED BY:	Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	2022/06/22

This Clearance Certificate is valid for 5 years from the date of approval. An extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office secretariat on the 3rd floor, Phillip Tobias Building, Parktown, University of the Witwatersrand, Johannesburg.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated from the research protocol as approved, I/we undertake to submit details to the Committee. I agree to submit a yearly progress report. When a funder requires annual re-certification, the application date will be one year after the date when the study was initially reviewed. In this case, the study was initially reviewed in **April** and therefore reports and re-certification will be due in the month of **April** each year. Unreported changes to the study may invalidate the clearance given by the HREC (Medical).

Signature of Principal Investigator _____ Date _____

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
SPEECH PATHOLOGY AND AUDIOLOGY

Appendix B

Date: March 2022
To the Manager

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE CENTRE

Dear Madam

My name is Saleha Lakhi, and I am completing a research project in fulfilment of a master's degree in speech pathology. My proposed research will be on Pill swallowing care needs and responsibilities to elderly individuals residing in care homes from the caregiver's perspective. I am conducting the above research in collaboration with Dr Jai Seedat, who is currently doing research at your facility. I will be focusing on one aspect specifically i.e., the role of caregivers. I am interested in conducting this study because there is a lack of knowledge and literature regarding swallowing service provision towards individuals in residential care settings in South Africa. This is important as swallowing ability often changes with age, and how this change may influence one's ability to safely manage with pills they may be required to take is unknown in South Africa. The need for this research is only enhanced by the increasing elderly population with novel and innovative advances in medicine, which has encouraged discourse on increasing and optimising health-related services and quality of life of the elderly.

I am hereby seeking your consent to conduct my research at your site. The study will include observations of caregivers during mealtimes and the administration of medication and interviews and thereafter focus groups with caregivers at the site.

The observations will include observations of the site and the general practices of the caregivers during residents' pill swallowing routines, e.g., how pills are prepared and provided to the resident, any modifications that are made to the pills, instructions provided to the resident, and general practices around the entire pill-dispensing regimen and routine. The interviews and focus groups will include questions on caregiver experience in caring for elderly residents generally as well as specifically when administering medication orally. The interviews and focus groups will be conducted at a time of the caregivers' choosing. By the end of my research, I hope to understand how confident and at ease caregivers feel when administering the medication to residents (dispensed by nurses), any challenges they experience, concerns they may have and potentially if they would like any suggestions from me as a speech therapist to make this routine easier and safer for the resident.

With the research, I aim to contribute to the available literature on caregivers' perspectives providing care to elderly individuals within care homes in the South African context. My proposed research considers that an increasing elderly population and the reportedly high prevalence of swallowing impairments in elderly individuals within care homes supports the need for more research into this area to ensure that caregivers are supported in their provision of care and that elderly residents receive the optimal level of care possible. As mentioned above, I will be working alongside Dr Seedat on all aspects of this research and together we hope to provide a holistic overview of practices by caregivers.

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SPEECH PATHOLOGY AND AUDIOLOGY

This letter is a preliminary letter of permission for me to conduct this research at your facility. Your permission will be subject to me receiving ethical clearance from the University of the Witwatersrand Human Research and Ethics Committee (Medical). Your initial permission letter will be included in my ethics application, and once I receive my ethical clearance certificate, I will forward this to you for your records.

Upon completing my study, I am willing to provide a summary of research findings and provide you with a bound copy of the entire research report.

If you require any further information, please do not hesitate to contact me on 0834407321 or by email at 1644602@students.wits.ac.za. Thank you for your time and consideration in this matter.

_____

Saleha Lakhi (Ms)
(1644602)
MA Candidate
Speech Pathologist and Audiologist
University of the Witwatersrand

I hereby grant permission for the centre to be used as a research site

☐ Yes ☐ No

Name: _____

Position: _____

Date: _____

Place: _____

Signature: _____

Witnessed by:

Name of Witness: _____

Signature: _____

Date: _____

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SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
SPEECH PATHOLOGY AND AUDIOLOGY

Appendix C

Study title: Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

Dear Caregiver,

Hello. My name is Saleha Lakhi. I am a speech therapist completing a master's degree in Speech Pathology at the University of the Witwatersrand. I am doing research to find out what the experiences of caregivers at care homes are when working with elderly residents during meals and when giving medication. As you are employed at _____and you engage in different tasks including assisting at mealtimes and providing medications for the residents as part of your job, I would like to invite you to take part in this research. I believe that you could provide useful information about mealtimes and swallowing medication that could help me identify how you are managing caring for residents who may have difficulty swallowing food, drinks, or medication. This information is not yet known in South Africa, and it is important to get this information, as older people are living longer with advances in medicine. Information from you will help me and other professionals, as well as the manager at your facility, to know how to assist and support the residents with swallowing, and how to support you with the mealtime and medication routine if support is needed. The information will also be used to plan better and provide the necessary care for other individuals living in residential facilities so that eating, drinking, and taking pills does not become something that they don't look forward to doing, and so we know better what to expect. Putting in place information workshops, training and mentoring for staff at residential care facilities is also something that we can plan for if we see that there is a need for this.

You can take your time to decide and ask me any questions that you may have. If you do agree to take part in this research, this is what will happen:

- I, Saleha Lakhi, the researcher will observe you during two routines, namely mealtime routines and medication routines. You will not be required to do anything different from what you normally do. I will complete a form based on what is seen.
- Thereafter I will invite you to participate in an interview which will be recorded using a voice recording device. This interview will take place at a time and place of your choosing when it is most convenient for you. In the interview, we will talk about your experiences and practices during meals and when administering medicine to elderly residents. The information you provide in the interview will be used to write up a report, but your name will not be shared with others.
- I may thereafter invite you to a group discussion, where we will talk about your role during mealtimes and medication dispensing. This group will have five to seven other caregivers, and each will have an opportunity to talk about any aspect of eating, drinking, and swallowing of the residents, what your experiences with these activities are, and your role and practices when feeding and giving medications to the residents. The information that is discussed in this group will remain within the people in the group. As the researcher, I will write up the results of this but will not reveal your name or any of the other group members' names. If I use anything that you say when I write

the results, I will replace your name with a false name. Only the caregivers who are involved in the group discussion will know that they have taken part in this discussion. This discussion will take approximately 30 minutes of your time.

- If you feel that you may be able to provide information better in a language other than English i.e., an African language then the researcher will include a translator in the interviews and focus groups. The translator will also know your identity but will have a signed consent form to ensure that your name, identifying information, and information shared during the interviews and focus groups are not shared with others except the researcher.
- As we are currently still working under COVID-19 lockdown restrictions, which may change in the future as this research continue, I will ensure that I adhere to all regulations from both the government as well protocols from the facility. This will include mask use, social distancing, and infection control. The focus group discussion noted above will take place in a well-ventilated room that is able to accommodate eight people with social distancing.

Your rights if you agree to participate in the study: You can stop at any time if you wish without any consequences and without providing a reason. There will be no negative consequences. As I will be spending a large amount of time at the facility, I will get to know who you are over time. I would like to assure you that your personal identifying information will not be revealed in any of my results or if I publish the results from this research. All information, such as names, will be replaced with false names, and anything that you say in the group discussion, will not be linked to your actual name. Only I will know who you are, and all my results will have a false name on my computer. I will ensure that I keep the information I get stored safely on my computer, which will be password protected and locked in a cupboard in my personal cupboard at home safely. If I don't use any information from the research, all the data will be destroyed after six years. As noted above, I cannot guarantee that you will be anonymous if you choose to participate in the group discussions, as each group member will know each other. However, each caregiver in that group will be asked to sign a consent form before they participate in the group discussion and they will be informed that the discussion and what is spoken about in the group, must remain within the group. It is up to you to decide if you would like to participate in this research. You may ask for clarity at any time.

You will have the option of consenting to one, two, or three parts of the research.
Part one: being included in the observations that I will do during mealtimes and medication dispensing.
Part two: being included in an individual interview
Part three: being included in a group discussion

You will have individual consent forms to sign for each part. If you wish to participate in this study, please contact me via SMS/call/email, or alternatively send me a "please call me" and I will get back to you. My contact details are provided below.

It is possible that after the interview and/or group discussions, you may feel upset, worried, or anxious based on what was discussed. Should you wish, there will be a trained counsellor and psychologist that you can speak to. Her name is Ms Esmerelda Vilancoulos. You can let me know or you may contact Ms Vilancoulos by yourself and arrange a time to chat to her. Her details: esmepsychologist@gmail.com or 067 116 9254. You will not have to pay anything to be counselled by Ms Vilancoulos.

If you have any concerns over the way the study is being conducted, you can contact the Chairperson of this Committee who is Professor Clement Penny, who may be contacted on telephone number 011 717 2301, or by e-mail on Clement.Penny@wits.ac.za. The telephone numbers for the Committee secretariat are 011 717 2700/1234 and the e-mail addresses are Zanele.Ndlovu@wits.ac.za and Rhulani.Mukansi@wits.ac.za

Thank you for reading this Study Information Sheet.

March 2022

Saleha Lakhi
Speech-Language Therapist
MA Candidate
University of the Witwatersrand
C: 083 440 7321
E: 1644602@students.wits.ac.za

Appendix D

PARTICIPANT CONSENT SHEET: Caregiver Observations

Title of Study: Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

1. I have been given a Participant Information Sheet which explains the nature and processes involved in this study, which is attached hereto.
2. I was given time to read it, or had it read to me, in a language I understand.
3. I was given time to ask any questions I wanted to and found any answers given to me to be reasonable and satisfactory.
4. I believe I fully understand why the study is being conducted and what the intended outcomes will be.
5. I understand that there will be no immediate benefit to me, should I agree to participate, nor will I receive any payment; conversely, participation will not cost me anything but my time.
6. I understand that I am giving consent to being observed as I conduct my daily mealtime routines and medication dispensing routines with the residents at the facility where I work
7. I understand that, even if I initially consent to take part in the study, I may subsequently withdraw at any time and would not be required to give any reasons; if that happened, any data collected about me for the purposes of the study would immediately be destroyed, unless I give consent for it to be retained
8. I understand that only the researcher will have my contact details, which she will not reveal to anyone
9. I understand that the researcher may write up and publish the results of what she observes anonymously
10. I have been given a range of contact details, listed below. If I require further information or become concerned about any aspect of this study, I am free to speak to any of these contacts.

Contact details:

Saleha Lakhi, Principal Investigator and Researcher, telephone no. 083 440 7321 or by e-mail at 1644602@students.wits.ac.za

Jaishika Seedat, Research Supervisor, telephone no. 082 466 3573 or by e-mail at Jaishika.seedat@wits.ac.za

Professor CB Penny, Chairperson of the Human Research Ethics Committee (Medical) at the University of Witwatersrand, on telephone no. 011 717 2301, or by e-mail at Clement.Penny@wits.ac.za.

Ms. Z Ndlovu or Mr Rhulani Mkansi, Committee Secretariat, telephone nos.: 011 717 2700 or 1234, or by e-mail at: Zanele.Ndlovu@wits.ac.za or Rhulani.Mkansi@wits.ac.za

Name of Participant: _____
Date: _____
Place: _____
Signature or mark _____

Witnessed by:
Name of Witness: _____
Signature: _____
Date: _____

PARTICIPANT CONSENT SHEET: Caregiver Interview Participation

Title of Study: Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

1. I have been given a Participant Information Sheet which explains the nature and processes involved in this study, which is attached hereto.
2. I was given time to read it in a language I understand.
3. I was given time to ask any questions I wanted to and found any answers given to me to be reasonable and satisfactory.
4. I believe I fully understand why the study is being conducted and what the intended outcomes will be.
5. I understand that there will be no immediate benefit to me, should I agree to participate, nor will I receive any payment; conversely, participation will not cost me anything but my time.
6. I understand that I am giving consent to participate in an interview where the researcher will ask questions about my experiences and practices in mealtime routines and medication dispensing routines with the residents at the facility where I work.
7. I understand that a translator may be present during the interviews if necessary so the information I provide can be understood properly by the researcher.
8. I understand that the researcher and translator will not share my name or identifying information.
9. I understand that the researcher may use anonymous quotes in her research results.
10. I understand that if after this interview I feel like I need to talk to someone about my feelings and emotions based on what was discussed, I may contact Ms Esmerelda Vilancoulos who is a trained psychologist and counsellor at: esmepsychologist@gmail.com or 067 116 9254
11. I understand that, even if I initially consent to take part in the study, I may subsequently withdraw at any time and would not be required to give any reasons; if that happened, any data collected about me for the purposes of the study would immediately be destroyed, unless I give consent for it to be retained.
12. I understand that only the researcher will have my contact details, which she will not reveal to anyone.
13. I have been given a range of contact details, listed below. If I require further information or become concerned about any aspect of this study, I am free to speak to any of these contacts.

Contact details:

Saleha Lakhi, Principal Investigator and Researcher, telephone no. 083 440 7321 or by e-mail at 1644602@students.wits.ac.za

Jaishika Seedat, Research Supervisor, telephone no. 082 466 3573 or by e-mail at Jaishika.seedat@wits.ac.za

Professor CB Penny, Chairperson of the Human Research Ethics Committee (Medical) at the University of Witwatersrand, on telephone no. 011 717 2301, or by e-mail at Clement.Penny@wits.ac.za.

Ms. Z Ndlovu or Mr Rhulani Mkansi, Committee Secretariat, telephone nos.: 011 717 2700 or 1234, or by e-mail at: Zanele.Ndlovu@wits.ac.za or Rhulani.Mkansi@wits.ac.za

Name of Participant: _____
Date: _____
Place: _____
Signature or mark _____

Witnessed by:
Name of Witness: _____
Signature: _____
Date: _____

PARTICIPANT CONSENT SHEET: Caregiver Focus Group Participation

Title of Study: Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

1. I have been given a Participant Information Sheet which explains the nature and processes involved in this study, which is attached hereto.
2. I was given time to read it in a language I understand.
3. I was given time to ask any questions I wanted to and found any answers given to me to be reasonable and satisfactory.
4. I believe I fully understand why the study is being conducted and what the intended outcomes will be.
5. I understand that there will be no immediate benefit to me, should I agree to participate, nor will I receive any payment; conversely, participation will not cost me anything but my time.
6. I understand that I am giving consent to participate in a focus group discussion, where the researcher will ask questions about my experiences and practices in mealtime routines and medication dispensing routines with the residents at the facility where I work.
7. I understand that a translator may be present during the interviews if necessary so the information I provide can be understood properly by the researcher.
8. I understand that the researcher and translator will not share my name or identifying information.
9. I understand that the researcher may use anonymous quotes in her research results.
10. I understand that if after this group discussion I feel like I need to talk to someone about my feelings and emotions based on what was discussed, I may contact Ms Esmerelda Vilancoulos who is a trained psychologist and counsellor at: esmepsychologist@gmail.com or 067 116 9254
11. I understand that, even if I initially consent to take part in the study, I may subsequently withdraw at any time and would not be required to give any reasons; if that happened, any data collected about me for the purposes of the study would immediately be destroyed, unless I give consent for it to be retained
12. I understand that any information that is shared in the group discussion cannot be shared with people outside of the group.
13. I understand that only the researcher will have my contact details, which she will not reveal to anyone.
14. I have been given a range of contact details, listed below. If I require further information or become concerned about any aspect of this study, I am free to speak to any of these contacts.

Contact details:

Saleha Lakhi, Principal Investigator and Researcher, telephone no. 083 440 7321 or by e-mail at 1644602@students.wits.ac.za

Jaishika Seedat, Research Supervisor, telephone no. 082 466 3573 or by e-mail at Jaishika.seedat@wits.ac.za

Professor CB Penny, Chairperson of the Human Research Ethics Committee (Medical) at the University of Witwatersrand, on telephone no. 011 717 2301, or by e-mail at Clement.Penny@wits.ac.za.

Ms. Z Ndlovu or Mr Rhulani Mkansi, Committee Secretariat, telephone nos.: 011 717 2700 or 1234, or by e-mail at: Zanele.Ndlovu@wits.ac.za or Rhulani.Mkansi@wits.ac.za

Name of Participant: _____
Date: _____
Place: _____
Signature or mark _____

Witnessed by:
Name of Witness: _____
Signature: _____
Date: _____

PARTICIPANT CONSENT SHEET: Caregiver Audio/Video Recording

Title of Study: Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

1. I have been given a Participant Information Sheet which explains the nature and processes involved in this study, which is attached hereto.
2. I understand that I am giving consent to being recorded via audio and/or video for the purpose of this research.
3. I understand that my identity will only be known to the researcher, and this will not be shared or known to anyone else.
4. I have been given a range of contact details, listed below. If I require further information or become concerned about any aspect of this study, I am free to speak to any of these contacts.
5. The recording will be stored in a secure location (a locked cupboard and/or password-protected computer) with restricted access to the researcher and the research supervisor.
6. The recording will be transcribed and any information that could identify me will be removed,
7. The recordings will be erased within either (a) two (2) years of the publication of the research findings, or (b) six (6) years if no publications arise from this research.
8. Anyone wishing to access this information in the future will first have to obtain the approval of the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg
9. Direct quotes from my interview and group discussion, without any information that could identify me, may be cited in the research report or other write-ups of research.

Contact details:
Saleha Lakhi, Principal Investigator and Researcher, telephone no. 083 440 7321 or by e-mail at 1644602@student.wits.ac.za

Dr Jaishika Seedat, Research Supervisor, telephone no. 082 466 3573 or by e-mail at Jaishika.seedat@wits.ac.za

Professor CB Penny, Chairperson of the Human Research Ethics Committee (Medical) at the University of Witwatersrand, on telephone no. 011 717 2301, or by e-mail at Clement.Penny@wits.ac.za.

Ms. Z Ndlovu or Mr Rhulani Mkansi, Committee Secretariat, telephone nos.: 011 717 2700 or 1234, or by e-mail at: Zanele.Ndlovu@wits.ac.za or Rhulani.Mkansi@wits.ac.za

Name of Participant: _____
Date: _____
Place: _____
Signature or mark _____
Witnessed by:
Name of Witness: _____
Signature: _____

Date:

Appendix E

Observation Schedule: Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

Date:	
Observer:	
Site:	

Guideline Components to Observe:

- Mealtime physical environment
- Interaction of caregivers with the residents
- Feeding safety routines
- Feeding routine
- Pill-swallowing routine
- Method of food administration: utensils, meal duration, size of bolus etc.
- Method of pill administration: Modifications
- Practices if/when swallowing difficulties are observed- pills and mealtimes.

Meal:	
Length of Observation:	
Descriptive notes	**Reflective Notes**
Mealtime Physical Environment	
Caregiver Interaction	
Feeding Safety Routines	
Mealtime Routines	
Pill-swallowing Routines	
Food Administration	
Pill-Administration	
General Practices	
Additional Observations	

Appendix F

Focus Group Schedule: Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

Time:
Date
Venue:
Moderator
Group Participants

Participant (in order of seating) Pseudonyms	Name of participant
Caregiver 1	
Caregiver 2	
Caregiver 3	
Caregiver 4	
Caregiver 5	
Caregiver 6	

Greeting
Introduce research.
Confirm caregiver consent to participate.
Areas to be discussed:

1. Experiences during mealtimes and pill-swallowing routines with residents
2. Facilitators and Challenges to providing care for elderly residents during mealtimes and pill-swallowing routines
3. Caregiver practices during mealtimes and pill-swallowing routines with residents
4. Training received and additional training needs in the care home to provide care during mealtimes and pill-swallowing routines.

Thank you for your time and your participation and interaction in this group. I'll provide the results of the study to the care home once it is completed. I'd like to just remind you again that information shared from this group is not confidential because it is a group setting, however, if you all could please keep the information shared private or keep the identities of the person who shared the information to yourself.

Appendix G

Interview Schedule: Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

Time of interview	
Date	
Method of interview	
Place	
Interviewer	
Interviewee/Code	
Site	
Position of interviewee	
Interview number:	

Introduction

Introduce researcher.
Information on interview
Purpose of the study
Confirm consent for the study.
The general structure of the interview (How it will begin, number of questions, Time length)
Questions

Opening questions

1. How are you? How is your day going?
2. Can you tell me a bit about yourself and your role at the centre?
3.

Content Questions

4. Participant demographics
5. Experience in nursing/caregiving and at care homes
6. Perceptions of caregiving to the elderly residents
7. Practices in mealtimes and pill administration for all residents
8. Facilitators and challenges to care provision
9. Thoughts on what is required for caregivers to provide the best care
10. Additional information that may not have been covered.

Conclusion

Thank you for your time. The information provided in the interview will be kept anonymous and private. Your name and any identifying information will be masked/removed before this information is shared with anyone else, and the report will not mention who has provided the information. The information will also be stored privately as mentioned in the information sheet provided to you. Do you have any questions before we finish this interview?

Appendix H

Distress Protocol: Swallowing Difficulties in the Elderly: Caregiving Needs and Responsibilities for Elderly Residing in Care Homes

