Eating well: Understanding and shaping the mealtime experience of older adults in residential care

Submitted by Ross Watkins to the University of Exeter as a thesis for the degree of Doctor of Philosophy in Medical Studies in February 2018

I certify that all the material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

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Abstract

Background: Many interventions aim to alleviate well-documented problems of malnutrition in residential care homes and improve residents' health and wellbeing. Despite some positive findings, little is known about how and why mealtime interventions might be effective, and in particular, what effects residents' experiences of mealtimes have on health outcomes.

Aim: The aim of this project was to gain an insight into residents' experiences of mealtimes in order to inform the development of a mealtime intervention. By addressing the issues that impact on residents' enjoyment of meals, interventions may target improvements in the health and wellbeing of residents more effectively.

Methods: This thesis is comprised of three pieces of empirical work conducted using multiple methods. In a systematic review of stakeholder perceptions of mealtimes, five databases were searched from inception to November 2015, followed by thematic analysis of extracted data. In a second study, semi-structured interviews were conducted with eleven residents from four care homes in the South West UK. Thematic analysis was used to derive content and meaning from transcribed interviews. These studies informed the development of a staff-focussed training programme (study three) using the process of Intervention Mapping (IM) as a guide. The feasibility of this intervention was assessed using qualitative surveys and analysed using multiple methods. Fourteen staff from two care homes participated in the feasibility study, which investigated the deliverability of the training programme and the acceptability of its content.

Findings: The systematic review and resident interview study revealed that the dining experience was a focal point for residents' broader experiences of residing in a care home. Whilst meal quality and enjoyment impacted on the dining experience, the provision of care was pivotal in determining mealtime culture and resident agency within the home. This had implications for self-efficacy and social relationships, particularly in the context of transitioning from independent living to a care home community. These findings informed the development of a mealtime intervention, which was found to be deliverable and acceptable to staff.

Conclusion: Mealtimes are a mainstay of life in a care home through which residents' experiences are characterised, exemplified and magnified. Understanding how residents interact with one another, accommodating their preferences and encouraging autonomy may enhance their mealtime experiences. Evidence from the empirical work supports the development of interventions aimed at mealtime staff to improve resident self-efficacy. This thesis has established the necessary groundwork for a pilot trial and future definitive trial to assess resident (and staff) outcome measures including social (e.g., collective engagement) and psychological outcomes (e.g., wellbeing), as well as health outcomes (e.g., nutritional status).

Acknowledgements

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Statement of candidate's contribution to co-authored papers

There are three studies in this thesis which have been written up as manuscripts for publication: Two of these have been published and the other one is currently being prepared for publication. As detailed below, the substantial contribution to co-authored papers was made by the candidate. All chapters have been written up as manuscripts and are presented in the format requested by the respective journal. Efforts have been made to reduce repetition: However, since each manuscript is stand-alone some information may be redundant.

Paper 1: Chapter 4

Watkins, R., Goodwin, V., Abbott, R., Backhouse, A., Moore, D. and Tarrant, M. (2017). Attitudes, perceptions and experiences of mealtimes among residents and staff in care homes for older adults: A systematic review of the qualitative literature. *Geriatric Nursing*.

The first manuscript presented in this thesis, in Chapter 4, was submitted to Geriatric Nursing and accepted in December 2016. The candidate developed the protocol, screened and selected the articles, collected the data from the included papers, analysed the data, and wrote the manuscript with supervisory advice from Mark Tarrant, Victoria Goodwin, and Rebecca Abbott. Amy Backhouse conducted parallel screening of titles and abstracts, as well as full texts, and reviewed extracted data from included papers. Darren Moore helped to develop the search strategy.

Paper 2: Chapter 5

Watkins, R., Goodwin, V., Abbott, R., Hall, A. and Tarrant, M. (2017). Exploring residents' experiences of mealtimes in care homes: A qualitative interview study. *BMC Geriatrics*.

The second manuscript presented in this thesis, in Chapter 5, was submitted to *BMC Geriatrics* and accepted for publication in July 2017. The candidate developed the methodology, collected and analysed the data, and wrote the manuscript with supervisory advice from Mark Tarrant, Victoria Goodwin, and Rebecca Abbott. Abi Hall independently coded interview transcripts and discussed emerging themes with the candidate.

Paper 3: Chapter 6

Watkins, R., Goodwin, V., Abbott, R., Hall, A. and Tarrant, M. (in preparation). Testing the feasibility of a staff-focussed training programme to improve social interaction, promote resident choice, and encourage resident independence at mealtimes in care homes for older adults.

The third manuscript presented in this thesis, in Chapter 6, is currently being prepared for publication. The candidate developed the methodology, collected and analysed the data, and wrote the manuscript with supervisory advice from Mark Tarrant, Victoria Goodwin, and Rebecca Abbott. Abi Hall independently coded the qualitative surveys and discussed emerging themes with the candidate.

Chapter 1: Introduction

1.1. Problem statement

In 2017, there were approximately 18,000 care homes in the UK (including about 5,200 described as ‘nursing homes’), supporting an estimated 405,000 residents aged 65 years and older(1). The physical and mental health, and broader wellbeing of these older adults, is a preoccupation for residential care providers, family members and wider society, which faces the challenge of an ageing population(2) and the rising costs of care provision(3). There are now more than 11.6 million adults over the age of 65, 1.5 million of whom are aged 85 or older(4), a figure predicted to more than double over the next twenty years(5). The health and wellbeing of older adults is determined by underlying medical conditions, physical factors, and emotional factors, and the interaction between these.

Older adults are predisposed to a number of medical conditions, including dysphagia, gastrointestinal disorders, heart disease, cancer, cachexia associated with chronic disease, Parkinson’s disease, Alzheimer’s and other dementias, as well as the side-effects attributable to the drug interactions of multiple medications(6, 7). Physical factors such as poor dentition and disability also impact health and wellbeing and may be associated with underlying medical conditions such as paralysis following a cerebrovascular accident (CVA), which in turn is associated with osteoporosis(8). Moreover, emotional factors, such as depression and anxiety, are often related to medical conditions(7), as well as those emotional factors such as loneliness and perceived isolation that stem from bereavement, living alone, a dwindling social network and infrequent involvement in social activity(9). These factors may be compounded by the stigma associated with old age, which is not considered attractive or indeed of any value in many Western Societies(10).

The health and wellbeing of care home residents is poor in comparison to their community-dwelling counterparts. For example, rates of malnutrition, one indicator of health and wellbeing, are considerably higher in care homes: An analysis of international data from twelve countries revealed that up to 70 percent of the care home population were malnourished or at risk of malnutrition, almost double the proportion of those living independently(11). Similarly, the prevalence of major depression has been found to be as much as four times higher amongst institutionalised older adults(12).

Presented with a growing population of older adults with increasingly complex health needs, the care sector itself is facing a funding crisis and perennial issues related to low staff morale, high staff turnover, deteriorating infrastructure, and negative media coverage. According to a recent report by Moore Stephens, 16 percent of care home providers in the UK are showing signs of financial distress and are at risk of failure: As well as having to shoulder the burden of increases to the National Living Wage (NLW) introduced in April 2017, much of this pressure has been attributed to the cost of hiring agency staff due to difficulties in recruiting and retaining skilled staff(13).

Given these challenges, innovative, cost-effective, and replicable interventions are needed to improve the health and wellbeing of care home residents. Mealtimes are an obvious target for interventions because they are perhaps the single most accessible, manageable and effective means of promoting health and wellbeing. Mealtimes are about much more than the food provided and consumed. For many residents in care, the mealtime can be the highlight of the day, providing opportunities for social interaction as well as the development of social relationships with dining companions as well as providers of care(14). Moreover, mealtimes have cultural significance: Throughout our lifetime, the shopping for, preparing, serving and eating of meals, along with the relationships and social interaction that accompany them, are a mainstay of daily activity. This preoccupation persists into old age and does not change with disability(15). Families bond over mealtimes, special occasions are marked by celebratory meals, and food provides a sense of familiarity and comfort, particularly in times of distress(16, 17). This changes when people transition into care and no longer have *ad libitum* choice over what, where and when to eat, and with whom(18).

Despite the socio-cultural significance of mealtimes and the potential impact of transitioning from independent living to a care home, much of the mealtime research to date has focussed on improving biomedical outcomes, in particular, addressing the issue of malnutrition. However, whilst there is widespread consensus on the need to improve nutritional status amongst older adults in care(19-21), further research is required to understand how this can best be achieved, and whether (and which) interventions may be developed to reduce morbidity and promote wellbeing. Malnutrition *per se* is clearly only one part of the problem, and it may be symptomatic of broader issues related to a loss of independence, a change of routine, or social relations with other residents and staff. In an illustrative study, Gleibs et al. (2011) demonstrated that the health-related benefits of a “water club” intervention were attributable to the social interaction indirectly facilitated by the club rather than to improved hydration actively promoted by it(22). This is indicative of the complexity of health and wellbeing in care homes, and suggests that directly addressing issues such as malnutrition may not be effective at improving broader health and wellbeing. For example, whilst malnutrition can be addressed by prescribing dietary supplements, improved wellbeing is arguably more likely to result from residents *wanting* to eat and *enjoying* the dining experience.

Prioritising a biomedical or overly “physicalistic” approach to improving health outcomes is a common criticism of health research. In an extension to Engel’s (1977) biopsychosocial model of health(23), Figure 1 illustrates some of the potential social and psychological influences on the lived experience of mealtimes in care homes. It demonstrates that poor health and wellbeing does not result from disease processes alone, but through the complex interaction of physical, cognitive, emotional, and behavioural factors. The current thesis recognises the complexity of resident health and wellbeing and seeks to redress the balance by exploring the experiential aspects of care.

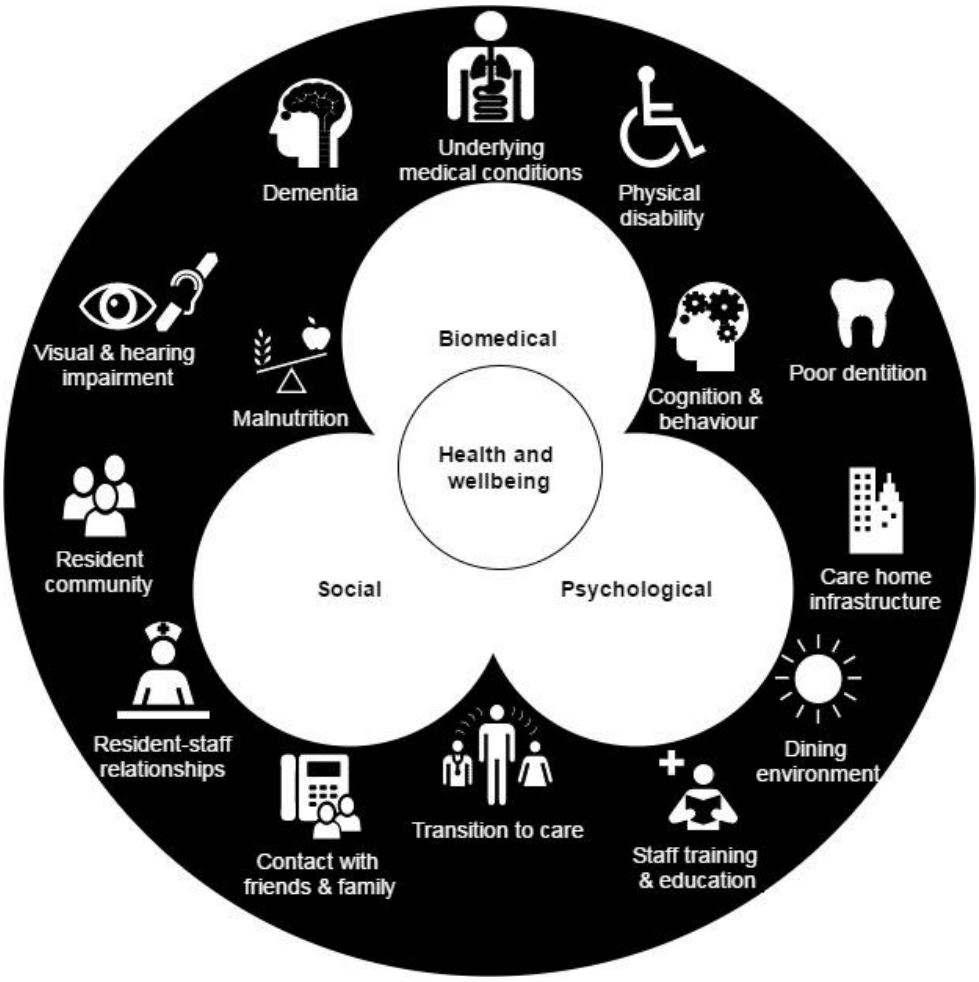

Figure 1. *Effects on the health and wellbeing of older adults in care homes*

This project is informed by two previously-published systematic reviews and a scoping review, which suggested that simple changes to the mealtime environment (e.g., the style of food service, seating arrangements and the playing of music) can positively influence nutritional outcomes and the behavioural and psychological symptoms of dementia (BPSD) (24-26). However, whilst these reviews evidenced the positive potential of mealtime interventions, they concluded that the quality of research to date was generally poor due to small sample sizes, the lack of randomisation, and inadequate control for confounding factors(24, 25, 27). Perhaps more critically for the purposes of the current study, the mealtime interventions that were evaluated lacked detail, limiting our understanding of how they work and how they can be replicated in a diverse range of residential care settings. This lack of specificity is a common problem in research reporting(28). Even where a more comprehensive account of the intervention was given, it was based on a single determinant, such as food improvement or an altered dining environment(27), which fails to account for the complexity of malnutrition causes(6) or the diverse range of influences on the mealtime experience(27).

The health and wellbeing of institutionalised older adults depends, to some extent, on enjoyment of mealtimes(15), yet residents often express dissatisfaction with the food and food service in care homes(29, 30). A number of studies have suggested that residents prefer mealtimes to be as natural and independent as possible, comparable to eating in one's own home and analogous to a "family-style" dining environment(31-33). Furthermore, residents express a desire for their meals, and the manner in which they are served, to reflect their food preferences(34). However, care home policy may not always reflect the preferences of residents and whilst "enjoying food and being able to eat food" are central to the UK Government's nutrition action plan, it is acknowledged that there are physical, cognitive, behavioural and cultural barriers (including those of staff) that impact on this(35).

1.2. Overall aim

Given the significance of mealtimes and their association with health and wellbeing, the aim of this project was to develop a better understanding of the mealtime experience, and use the evidence from preliminary research to inform the development of an intervention that could be tested for feasibility.

Objectives were to:

(i) Understand the attitudes, perceptions and experiences of mealtimes amongst residents and staff in residential care homes, and thereby identify some of the barriers and facilitators to providing an optimal mealtime experience

(ii) Identify and develop a theoretical understanding of how the mealtime experience can be enhanced by drawing on existing evidence, and supplementing it with the primary research obtained by interviewing residents

(iii) Develop a mealtime intervention in conjunction with key stakeholders, and model the processes and outcomes that underpin it using the Intervention Mapping (IM) process as a guide

(iv) Assess the feasibility of the mealtime intervention in terms of its deliverability and the acceptability of its content amongst care home managers and staff

These objectives correspond with the guidance given by the Medical Research Council (MRC) on the development of complex interventions(36), outlined in section 3.2.

1.3. Relevance and significance

This project seeks to increase capacity in care home research, an often neglected area due to the real and perceived challenges of working with (a) the resident population, who are often physically and cognitively frail, and (b) the care home sector which can involve private businesses, low paid and low valued care professionals with a high employee turnover. As well as issues related to recruiting vulnerable older adults, the guarded attitudes of care home owners and managers, the inflexibility of established routines, and poor staff compliance with research protocols have all been cited as obstacles to research(37). Despite the well-documented challenges, there is potential for simple interventions to have benefits for residents, which in turn could have benefits for the care home (e.g., increased satisfaction) and the quality of resident-centred care they provide.

1.4. Overview of the thesis

In addressing the aim of developing and testing a mealtime intervention designed to improve the health and wellbeing of residents, the thesis continues in Chapter 2 with a literature review of the research to date on mealtime interventions in care homes. Chapter 3 provides a review of the empirical work undertaken including an outline of the methodological approach and methods applied to each study. The empirical component of the thesis begins in Chapter 4 with a systematic review of the attitudes, perceptions and experiences of mealtimes in care homes amongst residents and staff. This is important background in trying to understand psychosocial influences on the mealtime experience, and identifying any barriers and facilitators to providing optimal mealtimes. The over-arching influence of care provision on mealtimes also provides a clear rationale for developing an intervention that targets staff.

Chapter 5 picks ups on the paucity of resident-focussed mealtime research and explores residents’ experiences of mealtimes through qualitative interviews and mealtime observations. The findings reported in Chapters 4 and 5 are then used to develop a mealtime intervention, reported in Chapter 6. The intervention is comprised of staff training workshops that aim to improve social interaction, resident choice and independence at mealtimes, the feasibility of which are tested in the empirical component of this chapter. Chapter 7 presents a general discussion of the findings, the strengths and limitations of the empirical work, and reflections on the research process, as well as concluding remarks.

Chapter 2: Literature review

2.1. Chapter overview

This chapter reviews past literature on mealtime interventions in care homes and their effect on the health and wellbeing of care home residents. The first section (section 2.2) introduces the topic of care homes for older adults, and the state of health and wellbeing amongst this population. Then section 2.3 presents the types of mealtime interventions that have been implemented in care homes, which have aimed to ameliorate the health and wellbeing of care home residents. This section is informed by two existing systematic reviews, focussed on nutritional outcomes(24) and the behaviour symptoms of dementia(25), and a scoping review of interventions for improving mealtime experiences in long-term care(26). This research has helped guide the empirical work of the thesis. The chapter ends with a summary of the previous sections and how they relate to the overall aim of this PhD (section 2.4).

2.2. Introduction to care homes

There is no standard definition of a care home. Their form and structure are referred to multifariously as long-term care (LTC) facilities(38), assisted (care) living facilities(39), and residential aged care facilities(40), as well as residential care homes(41) and nursing homes(35). Although the type of care they offer may vary, there is no clear delineation in category. In the UK alone, there is disparity: In England, the Care Quality Commission (CQC) distinguishes between “residential care homes”, which offer residents support with washing, dressing, toileting and at mealtimes, and “nursing homes”, which provide 24-hour medical care from a qualified nurse in addition to these services(42); In Scotland and Wales the term “care home” is used generically to include facilities with nursing care, whilst Northern Ireland differentiates “nursing homes” from “residential homes”(43). Throughout this thesis, the term care home will be used in the broader sense to refer to a setting in which residents usually have a single room and access to on-site care services, and including those care homes with nursing services(44). Its collective use is intended to provide clarity given the range of terminology, the inconsistency of categorisation and the fact that there is considerable overlap in the activities of daily living (ADL), and clinical needs of residents across settings.

The majority of homes across the UK are independently-owned. Figures from 2010 attributed 73 percent of care home ownership in England to the private sector, 14 percent to the voluntary sector, and 13 percent to the public sector (predominantly local council-owned)(45). This represents a significant shift in the care home market over the last three decades. For example, in 1984 local council-run accommodation accounted for 55 percent of all care home places in the UK, compared to less than 10 percent of places in 2014(46). Despite the dominance of private sector providers, the majority of care home places are funded, in part or in full, by local councils(46). The care home market in England had an estimated value of £22 billion in 2010, comprised of approximately £16 billon of public funding and £6 billion of self-funded spend(47).

In 2015, just over 15 percent of all care home places in the UK were provided by four private sector companies: Four Seasons, Bupa Care Homes, HC-One Ltd., and Barchester Healthcare(46). Of the three providers with more than 10,000 places each across their portfolios (Four Seasons, Bupa Care Homes and HC-One Ltd.), approximately 70 percent of places were funded to some extent by the local council(48). This is indicative of the business model assumed by many private sector providers. Barchester Healthcare, the smallest of the quartet (by number of resident places) is positioned as a high quality provider with a resident population which was estimated to be more than 50 percent self-funded(48). The next largest twenty-one providers accounted for a further 15 percent of market share (six of which were voluntary sector-owned), whilst the remaining 70 percent of the market consisted of providers with less than 0.4 percent of total care home places(48).

The care home sector has faced significant challenges over recent years. Despite a 9 percent increase in the number of places for residents requiring nursing services since 2010, there has been a steady decline in non-nursing places(49). A key feature of this decline is its variation across the UK: In the East of England non-nursing places have fallen by 2 percent, whilst London has experienced an 18 percent reduction(50). This presents a problem for local councils and service users, as would-be residents and their families seek an affordable placement locally. As the increase in nursing places has been similarly variable, the problem is not necessarily confined to those requiring residential care only(49). The issue of availability of affordable placements is compounded by the trading conditions experienced by some privately-owned providers of care. In the year 2015/16, 77 local councils had to deal with at least one care home in their area that had ceased trading, whilst 31 councils reported at least one provider relinquishing their contract to provide care(51). One of the reasons for the financial instability of some care homes is that they are often burdened by debt due to the loan of capital required to build and maintain a facility capable of housing residents, and meeting the statutory requirements set out by regulatory bodies such as the CQC(46).

The care home sector also struggles to recruit and retain staff, the majority of whom earn the National Minimum Wage or close to it(52). A survey conducted by the National Care Forum (NCF) in 2011 found that more than 40 percent of front-line care home staff had left their job within a year of taking up their post, which compares to an average of around 15 percent for other employment sectors in the UK(53). The job vacancy rate in care homes in England for the same period was around 4 percent, which was more than double the overall vacancy rate in the UK labour market(53). The economic cost of high rates of staff turnover include the recruitment, induction and training costs of new employees. Moreover, there is a pervasive belief that staff turnover adversely effects quality, as the skills and experience of departing employees are lost, and staff shortages may be incurred(54). This poses challenges to the development of interventions based on staff training and education, risking short-lived benefits if staff are quick to move on, or necessitating repeated interventions to ensure that replacement staff (and the residents in their care) benefit. Furthermore, any interventions in which resident and staff interactions are associated with improved wellbeing, or in which staff are expected to deliver the intervention, are likely to be disadvantaged by high staff turnover. Training interventions designed to be conducted in the home by senior staff, without the need for external training agencies, could help to retain knowledge and skills “in-house” and mitigate against this.

2.2.1 Older adults in care homes

Approximately 4 percent of adults in the UK aged 65 and over reside in a care home(55), although the majority of residents (approximately 60 percent) are aged 85 and over(1). Women, who account for about three quarters of the care home population, remain in long-term care for two to three years on average, whilst men have an average length of stay of between one and two years(55). Most residents will die in their care home, or be moved to hospital or palliative care facility shortly before their death. As life expectancy increases, people enter care with increasingly complex health needs and often with multi-morbidities. It is well-established that life expectancy outpaces improvements in disability-free life expectancy (DFLE), but over recent years (to 2014), this gap has widened, with more people living longer with multiple conditions, and in a frail state(50). The role of the care home has therefore changed over time to cater increasingly for clinically unstable older adults, many of whom require specialist care, such as those residents with dementia(43). The care home population has also become more diverse in terms of religion, ethnicity, and culture, which has resulted in additional challenges around communication between residents and staff, the provision of food, and approaches to death and dying(43). Thus, the increasingly multifarious nature of care homes places further pressure on their ability to accommodate individual needs and preferences.

2.2.2. The health of care home residents

By their very nature, care homes accommodate frail older adults with health problems and conditions which effect one or more activities of daily living (ADLs)(56). At 65, around 15 percent of adults have at least one ADL-related difficulty, rising to about 50 percent in those aged 85 and over, and by their late 80s, one third of adults have difficulty completing five or more ADLs(50). Frailty itself has been described as a distinct state of health, in which multiple physiological systems are in decline, putting people at greater risk of adverse health events such as infections and falls(50). It is estimated that 10 percent of adults aged 65 and over are frail, rising to between 25 and 50 percent in those aged 85 and over(57). The context of health status amongst older adults is important because care homes have become a place of last resort for most people, admitted because of their high care needs, and not simply because care homes offer an alternative form of housing. Whilst care homes may have traditionally fulfilled this role, so-called “retirement villages” or assisted living units have been developed to cater for older adults who do not have acute care requirements. Bupa, one of the UKs largest care home providers, asserts that 90 percent of those residing in their care homes have “high support needs”(58).

These support needs are wide-ranging and often complex, requiring the management or treatment of disorders and their symptoms. In a cohort study involving 277 residents across eleven care homes in the UK, the ten most prevalent diagnoses were found to be dementia (62 percent), essential hypertension (45 percent), osteoarthritis (37 percent), cerebrovascular diseases (31 percent), osteoporosis (20 percent), chronic renal failure (15 percent), non-insulin-dependent diabetes (15 percent), recurrent depressive disorder (15 percent), atrial fibrillation / flutter (14 percent), chronic ischaemic heart disease (13 percent)(59). Recent data suggest a growing incidence of diabetes amongst residents, found to affect nearly 20 percent of 65-74 year olds in Bupa care homes in the UK according to a 2009 census(58). In addition to underlying disease, over half of care home residents are estimated to be affected by urinary incontinence(60). The prevalence of faecal incontinence has not been widely researched, but a recent study found around 40 percent of residents to be affected, with diarrhoea, urinary incontinence, and dementia increasing risk(56). Incontinence may also be associated with CVA (61) and falls(62).

The biopsychosocial model of health (Chapter 1) illustrates how underlying medical conditions, and physical and emotional factors combine to affect health and wellbeing. As well as pre-existing medical conditions, it is estimated that as many as three quarters of care home residents have a disability(55). For example, in the 2009 Bupa census, more than 40 percent of residents aged 65 or over had severe mobility problems, whilst more than 60 percent had moderate or severe visual impairment(58). Many of the above conditions can have a profound influence on subsequent health events: Visual impairment, for instance, can increase the risk of fall, or cause a decline in emotional health(63). In other words, comorbidities are problematic not just because of physiology, but because they change the way that people interact with the social and physical world. This highlights the importance of managing residents' overall health in order to reduce the risk of further decline. Unfortunately, in the UK, access to healthcare services for care home residents (e.g., physiotherapy, speech and language therapists, opticians, dentists, etc.) is widely considered to be inadequate. According to a 2010 CQC survey, in only 43 percent of Primary Care Trusts (PCTs) were care home residents likely to be able to access all the health services they required[1], and in 2011 a joint working party led by the British Geriatrics Society described current provision as "a betrayal of older people, an infringement of their human rights and unacceptable in civilised society"(43).

Perhaps the greatest challenge to care homes is managing the health of residents with neurological or mental health disorders (including those with cognition problems). This includes residents living with dementia, aphasia, depression, epilepsy and Parkinson's disease. In 2009, approximately three quarters of Bupa care home residents in the UK were reported to have a neurological or mental disorder, with dementia reported to be the most prevalent (44 percent)(58). The provision of care for residents with such

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[1] PCTs were mainly administrative bodies, responsible for commissioning primary, community and secondary health services from providers. Until 31st May 2011 they also provided community health services directly. PCTs were abolished in March 2013, and replaced with clinical commissioning groups.

disorders can prove particularly challenging at mealtimes: Many require feeding assistance from skilled staff, and the dining environment may need to be managed to optimise the mealtime experience for all residents. For example, residents with dementia are more than twice as likely to display challenging behaviour(58), and this may be distressing for both the individual with dementia and fellow residents, particularly at mealtimes(25).

As discussed in section 2.3, a number mealtime interventions have been developed to alleviate the behavioural and psychological symptoms of dementia (BPSD) including playing background music, introducing contrasting crockery and altering the lighting in the dining room. There is a dual purpose to many of these interventions in that they aim to induce a calm and relaxing atmosphere for residents with dementia and reduce negative behaviours, and in so doing, create conditions that encourage food intake. Malnutrition is key issue in care homes because it is an important indicator of health and wellbeing and an intermediary in the disease process(6). Thus, malnutrition is not just a result of ill-health, it is also a cause of it. Similarly, low mood and depression are associated with increased morbidity, as well as an increased risk of malnutrition(64). Conversely, increasing residents’ sense of wellbeing and desire to eat has positive implications for overall health. Reflecting the biopsychosocial model, this thesis argues that physical health is intrinsically linked to social and psychological influences. Whilst malnutrition is an important health issue in care homes, as described below, its causes are complex, and therefore it cannot be remedied by interventions that consider it in isolation.

2.2.2.1. Malnutrition in care homes

Malnutrition[2] is characterised by low body weight, unplanned weight loss, or diminished nutritional intake(65). Older adults are at greater risk of malnutrition as adequate dietary intake may be compromised by changes to body composition, reduced organ function(66), and underlying health conditions(67). For example, specific micronutrient deficiencies are common in older people: Folate (vitamin B12) deficiency, for instance, has been observed in 29 percent of community-dwelling older adults and 35 percent of those in care homes(67), and vitamin D supplementation is recommended for adults over 70(68).

Whilst supplementation can address such deficiencies, weight loss is a more conspicuous and multifaceted marker of malnutrition, attributable to wasting, primarily caused by inadequate energy intake, sarcopenia, or cachexia(69). Sarcopenia is a highly prevalent manifestation of malnutrition and physical inactivity caused by a decline in skeletal muscle tissue, which has implications for muscle function, strength, and ultimately independence(70). Cachexia, a complex metabolic syndrome associated with underlying health conditions such as cancer and cardiac failure, is distinct from wasting and age-related loss of muscle mass (sarcopenia) as it does not readily respond to increased energy intake(71). Nutritional status in older adults may also be compromised by poor appetite, caused by factors such as poor dentition, swallowing difficulties (dysphagia), a loss of taste and smell, and drug interactions(6). There are also several physiological mechanisms, not yet fully understood, that cause a reduction in appetite with advanced age. For example,

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[2] Malnutrition is term used to denote both under- and over-nourishment (i.e., unbalanced nutrition), but it also used as a synonym for undernutrition (insufficient dietary intake or defective assimilation). For the purposes of this thesis, it is intended to mean undernutrition.

research suggests that our satiety threshold decreases with age, and that the dysregulation of certain gut hormones may inhibit a hunger response(72).

Malnutrition is a major issue for residents in care homes(73, 74), affecting at least a third of residents, and estimated to be evident in over half of the people admitted to hospital from care homes(75). It is a major issue not only because it is associated with a poorer quality of life, increased morbidity, and higher rates of mortality in older adults(19), but because it often remains undetected and untreated in care homes(76). In medically-compromised individuals, the effects of malnutrition and sarcopenia may contribute to reduced immune function, impaired wound healing and delayed recovery(77). This has wider implications for the care system in terms of the need for hospital admission, the length of stay, and the pressures this puts on the availability of hospital beds(78).

The incidence of malnutrition is considerably higher in care homes than in the community. In a systematic review of the nutritional status in older adults across healthcare settings, the prevalence of malnutrition in nursing homes and long-term care facilities was found to be 17.5 percent and 28.7 percent respectively, compared with around 3 percent in community-dwelling older adults(79). Malnutrition is particularly prevalent amongst care home residents with dementia, more than half of whom are estimated to be affected(80), and for whom weight loss increases with the severity and progression of disease(81). It is not clear why people with dementia are at greater risk of malnutrition, but increased energy expenditure, dementia-related metabolic factors, and reduced food intake are implicated(66). In particular, it is likely that reduced cognition inhibits the ability and / or desire to eat(6).

Whilst the causes of malnutrition in older adults are complex and multi-faceted, the issue of malnutrition itself may be compounded in institutional settings by influences such as food choice, access to food, and food quality, as well as nutritional care and mealtime support; all of which can adversely affect food intake and further increase the risk of malnutrition(82-84). Moreover, psychosocial factors such as apathy, anxiety, depression, and self-neglect are known causes of malnutrition(67). Therefore, interventions that target the social and psychological dimensions of mealtimes by increasing residents' enjoyment of meals and their willingness to eat may reduce the incidence of malnutrition, and in so doing, improve wellbeing overall. For instance, the Gleibs et al. study(22) (Chapter 1) posits social interaction as the probable mechanism underlying health-related benefits.

2.2.2.2. Low mood, depression, and poor emotional health in care homes

Admission to a care home has been described as "a choice of last resort" and "an evil to be avoided at all costs"(85). Research suggests that this is because the transition into a care home may be accompanied by a loss of self-efficacy, an identity shift, and / or a reluctance to live with "uncongenial" others – factors which may diminish wellbeing(85-87). It has also been suggested that this transition is one of the most stressful events in the life of an older person(88), particularly as it may follow the death of a spouse, or occur on discharge from hospital, when an individual is ill-prepared for such a change. According to Hodgson et al. (2004), the most stressful time for a resident is the first four weeks after admission to a home, often manifest in confusion and depression(89), though the process of psychological transition may be far longer (from six to twelve months or more)(87).

Depression encompasses a number of disorders, including major depressive disorder, bipolar disorder, mood disorder, adjustment disorder, and depressed mood, which may occur on a spectrum, with sub-clinical symptoms representing a less severe manifestation of a particular disorder(90). Although the causes of the various forms of depression are complex and not fully understood, comprised of genetic factors, external events, inner stresses and biochemical processes, there are a number of risk factors associated with depression. These factors include social isolation, bereavement and other adverse events, pain and physical health, and a change of circumstances(91, 92). Perceived inadequacy of care has also been reported as a risk factor for depression(92). Many of these risk factors are more prevalent amongst older adults. However, whilst clinically significant depressive symptoms are reported in approximately 15 percent of the community-dwelling population, only 1 to 5 percent of older adults are estimated to have symptoms of major depressive disorder(90). This compares with studies that report a range of 14 to 42 percent of major depression amongst adults in long-term care(12, 93).

The increased incidence of depression in care homes may be due to relocation as a result of health issues or the loss of a caregiving spouse(90), or a result of a *depressogenic* environment characteristic of a particular care setting. For example, a loss of control among institutionalised older adults is associated with low self-efficacy, and feelings of worthlessness and uselessness(94). One way of addressing the issue of personal control is to seek resident (and family) input in meetings about their care, or to channel decisions through resident-led committees, but this has resource implications, and may disadvantage frailer residents, or residents with cognitive impairment, who are unable to participate in the decision-making process(18). Additionally, a sense of personal control has been shown to increase through social connectedness in broader contexts(95). Although much of the research in aged care suggests that institutions are inherently *depressogenic*, comparatively low rates of depression have been detected in some congregate older populations, such as amongst older female kibbutz residents(96). Factors such as a good social network(97, 98), having a role(s) within the community(99), and a healthy lifestyle predicated on physical activity(100), good nutrition(101), and access to quality health services(102) are thought to prevent or alleviate depression.

2.3. Mealtime interventions in care homes

Although mealtime interventions to date have been wide-ranging in nature, they can may be broadly categorised as (a) nutrition-based, (b) centred on changes to the dining environment, and (c) focussed on mealtime assistance. Nutrition-based interventions include those which have tested the effectiveness of using oral nutritional supplements(103), introducing snacks between meals(104), and fortification studies(105). The introduction of music during dinner(106) and improving the ambience of the dining room(107) are examples of interventions predicated on dining environment alterations, whilst help with eating(108), including the staff training associated with this(109), exemplify mealtime assistance interventions. These interventions will be discussed as categorised in sections 2.3.1, 2.3.2 and 2.3.3. The effectiveness of mealtime interventions has been predominantly measured using nutritional outcomes, behavioural outcomes (linked to BPSD-related symptoms), staff feedback, and cost effectiveness, whilst only a few have measured quality of life and wellbeing outcomes. This will be discussed in section 2.3.5. Despite evidence in the reviewed literature for positive outcomes in mealtime interventions(24-26), there are some common limitations to the research conducted to date, referred to in section 2.3.6. Sections 2.3.7 and 2.3.8 begin to shift the focus away from the predominantly biomedical mealtime research conducted to date – and the limitations associated with it – to consider the impact of social and psychological factors on health and wellbeing.

2.3.1. Nutrition-based interventions

As inadequate food and fluid intake is highly prevalent amongst residents in care homes, nutrition-based interventions may be perceived as the most direct and immediate response to weight loss and malnutrition. The most common intervention is the use of oral liquid nutrition supplements (ONSs)(110), but there is limited controlled evidence for the effectiveness of ONSs at increasing energy intake or body weight in residents(111, 112). Positive outcomes have been reported in studies which have used research staff to administer ONSs(113), but similar results have not been replicated in usual care scenarios, where resident adherence may be poor and care home staff inconsistent in their delivery of supplements(114). Inadequate staffing to administer and promote the use of ONSs has been posited as a principal factor in these low efficacy findings(114).

Two randomised controlled trials (RCTs) conducted by Simmons et al. (2010; 2015) compared a control group with two intervention groups, one receiving ONSs and the other a variety of snacks and beverages twice daily between meals(110, 115). Both studies found that caloric intake increased significantly in the intervention groups compared with usual care, though there was no significant increase in the body weight of participants over the six-week(115) and 24-week(110) intervention periods. It was suggested that the lack of positive effect on body weight may be due to co-morbidities and medications that lead to unintentional weight loss, as there is a general trend towards declining health in this population(110). Both studies also supported the cost-effectiveness of nutrition-based interventions at enhancing caloric intake, albeit outside of the context of usual care. However, in a systematic review of the cost and cost effectiveness of using ONSs in community and care settings, the authors found it difficult to evaluate the cost effectiveness of ONS use in increasing energy intake in care homes due to the small sample sizes of studies, insufficient outcome measures, and a lack of reporting on a range of nutrient intakes(116).

Despite the ubiquitous use of ONSs in care homes, there is growing emphasis on the provision of real food snacks, which have been shown to be marginally more cost effective at increasing caloric intake(110), and which may be more appealing to residents in both flavour and familiarity than ONSs(24). Between meal snacks also offer residents greater flexibility in choosing when and what to eat, and may increase caloric intake in those with smaller appetites (who struggle to meet their energy requirements over three meals), or those who are habitual grazers. Though there is a paucity of research into the socio-cultural significance of snacking, real food snacks may provide opportunities for social interaction between meals in a way that ONSs, which are inherently medicalised, do not. After all, “real food” is a continuum of the socio-cultural norms associated with the enjoyment of eating that may seamlessly be incorporated into the everyday diet, and which may be viewed as a treat and enjoyed by residents.

A study conducted by Lorefalt and Wilhelmsson (2012), which included the provision of individualised snacks alongside an education and training programme delivered to mealtime staff, resulted in increases in energy intake and clinically significant weight gain(104). Snacks were also offered at night, and this was found to significantly reduce the length of night-time fasting(104). Prolonged fasting is known to contribute to weight loss and muscle weakness, as the body starts to break down glycogen stores in order to access energy. In Norway, it is recommended that the length of night-time fasting for older adults in care homes should not exceed eleven hours, but research suggests that average overnight fasts are between fourteen and fifteen hours(117). Though irregular meal consumption amongst residents is known to reduce energy intake and body mass index (BMI)(118), more research is required to assess the impact of meal timings in care homes given that meals may be concentrated into a few hours during the day. A further consideration is that breakfast is often unstructured in care homes, and may be served to residents at any given time throughout the morning.

A few studies have tested the effect of flavour enhancement on energy intake at mealtimes, using sauces compared to no sauce (usual care)(119), and the addition of flavourings (e.g., celery powder) and / or MSG to part or all of the meal(120, 121). Though a significant increase in energy intake was reported with the addition of sauce to meals, the pooled results from the randomised studies using flavour enhancement did not yield significant increases in energy intake or body weight(24).

Despite the positive outcomes associated with nutrition-based interventions, and their role in managing micronutrient deficiencies, if interest in eating is poor or residents are not skilfully assisted, it is very difficult to improve nutritional status(18).

2.3.2. Changes to the dining environment

It has been suggested that one way of increasing interest in eating is to improve the dining environment. Several studies have assessed the effect of enhancing the dining room ambience by adopting a family-style approach to mealtimes, or creating a restaurant-style service(32, 33, 38, 41, 122). These studies have incorporated physical changes to the dining room (including renovation), as well as changes to the food service (e.g., pre-plated to buffet), the mealtime protocol (e.g., flexible mealtimes), and the table dressing (including improvements to dining utensils and table arrangement). There has been considerable overlap in intervention methods and design, but broadly studies have focussed on creating a more relaxed dining environment (family-style) or an atmosphere more akin to fine dining (restaurant-style).

The findings from dining environment interventions have been mixed. In a RCT conducted by Njis et al. (2006), family-style meals were reported to have a significant effect on quality of life, fine motor function and body weight over a six-month period(32). However, in a one year case-control study, Kenkmann et al. (2010) observed no effect on weight gain with more home-like conditions compared with usual care(123). Furthermore, as reported in a meta-analysis conducted by Abbott et al. (2013), the pooled effect of three RCTs based on changes to the dining environment(33, 107, 122) found no overall significant effect on body weight (weighted mean difference 1.1 kg, 95% CI:−0.7 to 2.8, p = 0.24)(24). An enhanced dining environment was positively associated with quality of life in two studies(32, 107), suggesting that changes to the dining environment may improve resident wellbeing if not nutritional status. Qualitative research undertaken with residents also supports this assertion(41, 124).

In their systematic review assessing the effectiveness of mealtime interventions on BSPD, Whear et al. (2014) reported on seven studies which tested the effects of playing music in the dining room(25). Six of the studies(125-130) used relaxing music including nature sounds (e.g., bird and whale songs), soft piano music, and classical music pieces, and one study(106) used different types of music (relaxing, 20/30s, and pop). The Cohen-Mansfield Agitation Inventory (CMAI), or a version of it, was used to measure aggressive and agitated behaviour in six of the studies, whilst the seventh used the Gottfries-Brane-Steen (GBS) scale. All seven studies observed positive effects of music on BSPD, and four of the studies using CMAI scores reported the cumulative or lingering effects of music on aggressive or agitated behaviours(25). However, the studies reviewed by Whear et al. were limited by study design and sample size, and controlled trials are needed to further understand the utility of music as means of improving BSPD at mealtimes(25): As much as it may have a calming influence on some residents, it may equally disturb others. There is limited evidence to suggest that music can effect caloric intake, with one study finding no effect on food intake and/or body weight(131), and another finding higher caloric intake with some types of music(106). Dining room lighting and visual stimulation (e.g., using coloured glasses and contrasting black placemats with a white tablecloth), has also been shown to reduce agitation, but evidence for this is underpowered(25).

In a qualitative study based on pre- and post-renovation ethnographic observations of the dining environment, Chaudhury et al. (2016) identified five themes pertaining to residents' mealtime experience and staff practice: (1) autonomy and personal control, (2) comfort of a homelike environment, (3) conducive to social interaction, (4) increased personal support, and (5) effective teamwork(38). Post-renovation, increased functional space, appropriate furniture, and homelike lighting nurtured residents' functional abilities, and provided greater comfort to residents and visiting relatives. However, although alterations to the physical environment enhanced the dining experience for residents, the study reported variability in staff practices and recommended that future research focus on addressing organisational and staff culture(38). Despite the critical role that staff play in residents' experiences of mealtimes, the care they provide is generally undervalued and their perceptions of care quality often overlooked(132, 133). It is clear that resident outcomes are intrinsically linked to care provision, and that direct engagement with staff may provide a more nuanced approach to improving the mealtime experience in care homes. Furthermore, the dining environment plays an integral part in establishing the socio-cultural context of mealtimes, which is discussed in section 2.3.7.

2.3.3. Mealtime assistance interventions

Given the high prevalence of malnutrition in care homes, described in section 2.2.2.1, it is perhaps surprising that there is a paucity of robust research focussed on feeding assistance interventions. In three observational pre-post studies, one-to-one feeding assistance was found to increase food intake by approximately 25 percent(134-136). In a fourth study by the same lead author, the body weight of residents receiving one-to-one feeding assistance or between meal snacks increased by an average of almost two kilogrammes in six months(137). Although the authors did not report on the relative effect of feeding assistance and between meal snacks on body weight, the average time taken to deliver each intervention was considered significant. An average of 42 minutes of staff time per person / per meal and thirteen minutes per person / per snack were attributed to the intervention group, compared with five minutes, and less than one minute respectively, for usual care(137). Whilst it was concluded that the provision of individualised snacks may be a less time-consuming (and more practical) means of increasing body weight in residents, there are clear implications for resident support (and staffing levels) at mealtimes.

Alternative approaches to feeding assistance have included a study based on a pre-post trial of reminiscence therapy at mealtimes, which resulted in marginal increases in food intake in seven residents with dementia(108), and a RCT of 24 residents with dementia, which reported significant improvements in eating independence with verbal prompts and positive reinforcement(138). In a recent systematic review of the effectiveness of interventions to directly support food and drink intake in people with dementia, Abdelhamid et al. (2016) concluded that studies with a strong social component around mealtimes provided consistent suggestion of improvements to quality of life(139). These have included a facilitated breakfast club in which residents were given supported involvement in preparing, conversing, eating, and clearing up(140), and a study in which residents dined with their carers(141).

Staff training interventions have focussed on nutrition education, enhancing mealtime care, and improving feeding skills. Lorefalt and Wilhelmsson (2012) combined nutrition education, follow up support, and the provision of individualised snacks in multifaceted pre-post study which resulted in body weight increases of almost two kilogrammes after three months(104). Research by Simmons and colleagues (2001; 2004) found that providing eating assistance training to staff increased food intake in residents with low food intake: The training was comprised of one-to-one support, a prompting protocol, correct positioning, accommodating residents’ preferences for what, where and when to eat, and promoting social interactions(134, 135). Training and educating care home staff has also been shown to positively influence their attitudes and beliefs towards feeding assistance at mealtimes(18).

Positive outcomes were also recorded in an observational study by Suominen et al. (2007) in which staff on dementia wards learned to use and interpret the MNA and detailed food diaries: After one year, residents' mean energy intake was reported to have increased by 21 percent(142). However, these findings contrast with the results of an RCT by Chang and Lin (2005) which observed no change in dementia residents' energy intakes, despite staff in the intervention group having significantly more knowledge and improved feeding skills(143).

A more nuanced approach to staff training was undertaken by Mamhidir et al. (2007) who tested the effects of a staff education programme predicated on promoting integrity (improved communication and meal situations) amongst residents with Alzheimer's disease(144). The controlled trial reported weight increases in residents managed by staff who received the intervention, compared with weight losses seen amongst residents in the control arm. Moreover, staff diaries suggested that integrity promoting care enhanced social interaction between residents and improved the dining atmosphere(144).

Even if staff have the appropriate skills and experience, mealtime assistance may be compromised if there are inadequate levels of staffing during meals. In seeking alternative solutions, a few studies have observed the effects of using mealtime volunteers, as well as paid assistants. Three descriptive studies conducted in care homes in the US(145-147) reported positive feedback from care home staff(147), and high levels of commitment and satisfaction amongst volunteers(145), but observations revealed that while some assistants showed creativity and skill, others appeared bored or rushed(146). Positive outcomes were reported in a pre-post implementation observational study in which current non-mealtime staff were trained to provide feeding assistance:

More time was spent assisting each resident and higher food intakes were observed compared with usual nursing care(148). In a recent systematic review of the use of mealtime volunteers to improve the care of patients or institutionalised residents, the authors concluded that there was some evidence of enhanced care, but that the design and reporting of studies was generally poor(149). The authors also described several issues associated with mealtime volunteers including the need for appropriate training to ensure a high quality of care, a "buddy system" that allies volunteers to trained professionals, and the use of registered nurses or specialist healthcare assistants in the case of patients or residents with dysphagia(149).

2.3.4. The pivotal role of staff in mealtime interventions

The skill and enthusiasm of care home staff is essential to ensuring that mealtime (or any) interventions are delivered as intended, and are ultimately successful. This is exemplified by research conducted on the effectiveness of ONSs discussed in section 2.3.1, which suggests that ONSs improve nutritional status when administered by skilled research staff(113), but may not be effective in the context of usual care due to poor adherence on the part of staff and / or residents(114). As the axis of care provision, interventions in care homes rely on staff, and therefore need to be designed with staff in mind. Moreover, staff should be involved in the development and testing of interventions to ensure that they are deliverable and acceptable. In this regard, staff have a pivotal role to play in interventions aimed at improving resident health and wellbeing, and may themselves be a good target for interventions concerned with improving outcomes for residents.

There are also compelling upstream reasons for developing staff-focussed interventions. For example, a lack of staff training has been cited as a significant barrier to good nutritional care and a contributory factor to the prevalence of malnutrition(150). Whilst staff recognise the effect of mealtimes on residents’ quality of life(151), the provision of care may be undermined in a number of ways. Studies have reported that staff receive a lack of support, and feel under pressure to complete routine tasks throughout long shifts(35, 151), resulting in them doing little more than serving residents their food at mealtimes(41). These pressures can result in a breakdown in communication between mealtime staff(151), feelings of frustration and a sense that they are undervalued(35). Thus, mealtime interventions are required to help support staff in the challenging environment within which they work. Effective interventions may have the potential to ameliorate some of the issues around staff retention highlighted in Chapter 1 and section 2.2.

As well as the impact on staff, a lack of support at mealtimes has a deleterious effect on residents. For instance, feeding difficulties are often reported to be a physical barrier to food intake and the maintenance of good nutritional status(24, 151, 152), but much depends on the skill of the carer providing feeding assistance, ensuring a consistent and focussed approach to eating, and promoting autonomy and dignity(153). Yet, staff in the reviewed literature described receiving little support in delivering mealtime assistance(151), and expressed their frustration with the time pressures they faced(35), as well as some confusion over the exact nature of their roles and responsibilities at mealtimes(151). When staff are ill-supported, ill-prepared and rushed, there is a risk that feeding assistance can become “mechanistic”, and that this can diminish social interaction between residents and residents and staff, which may in turn adversely impact their enjoyment of meals(153).

2.3.5. Measuring the effectiveness of mealtime interventions

Most mealtime studies to date have taken a quantitative approach and focussed on individual-level outcomes, such as investigating the effects of an intervention on resident food intake(33, 131, 137), body weight(123, 141, 144), and nutritional status (i.e., using a nutritional assessment tool)(103, 142, 153). This reflects the predominantly biomedical approach to addressing resident health. Where interventions demonstrated an increase in food intake, it did not always correspond to changes in body weight(142, 154, 155) or nutritional status(104, 142). Whilst this may have been due to a small sample size or the short duration of the intervention, it is important to consider that care home residents may be frail and vulnerable, and approaching the end of their life: Improved nutritional status may not therefore be the most realistic or appropriate outcome for these individuals(26). Fewer mealtime studies have considered non-nutritional individual outcomes such as quality of life(32, 107), social interaction and / or communication(141, 144), autonomy(141), agitation(125, 128), depression(144, 156), function(32, 157) and cognition(123, 154). Evidence from these studies suggests that outcomes tend to change positively when they are proximal to the intervention (e.g., quality of life, agitation) whereas distal outcome measures (e.g., falls, cognition) do not(26).

Limited research has been carried out on interventions in which structural outcomes (e.g., knowledge and attitudes of staff, improvements to the dining environment) and procedural outcomes (e.g., staff participation at mealtimes, resident time at meal) are measured as ultimate outcomes. However, such structural and process outcomes can indicate whether certain components of complex interventions are effective(26). For example, whilst playing music at mealtimes may not improve the nutritional status of residents (an individual outcome), it may improve perceptions of the dining environment (a structural outcome). Thus, as many interventions to date have focussed exclusively on individual outcomes, it has been difficult to assess how and why components of those interventions may have been effective. If the focus is turned more towards the social and psychological aspects of care, whereby interventions are developed to enable residents to feel greater comfort, enfranchisement, or “homeliness”, then structural and procedural outcomes become more relevant. In other words, interventions predicated on improving the mealtime experience should take a holistic approach to measuring outcomes rather than focussing purely on individual outcomes (traditionally associated with a biomedical approach).

2.3.6. Limitations of the research to date

Mealtime intervention studies to date have been limited in terms of both quantity and quality. Whilst there has been a considerable growth in care home research over the last decade or so, it has tended to focus more expressly on the “geriatric giants” of falls, incontinence and mental health (especially dementia)(158). The paucity of studies associated with the mealtime might in part be explained by the challenges of collecting and analysing mealtime data, and drawing meaningful conclusions from findings. For example, measuring nutritional or BPSD outcomes (ultimate outcomes) is difficult given confounding factors (in particular, resident co-morbidities), and the lack of understanding of the complexity underlying resident interactions, as well as food and fluid intake(27).

As observed by Abbott, Whear and colleagues, the quality of studies has been generally poor due to small sample sizes, a lack of studies with a RCT design, and inadequate control for confounding factors (including those pertaining to residents, staff and the individual care homes)(24, 25). Furthermore, these interventions are not adequately described and their mechanisms are rarely addressed, limiting our understanding of how they work and how they can be replicated in a diverse range of residential care settings. This is indicative of the complexity of mealtimes, which are influenced on multiple levels by the individual characteristics of residents, their inter-personal relationships, direct and indirect caregiving, organisational (within home) practices, and governmental or regulatory activities(159). Whilst previous research suggests that interventions can positively influence outcomes such as food intake and BPSD, more research is needed to investigate the determinants that are amenable to change. Given that mealtime outcomes are effected by multiple determinants across multiple levels of influence, well-defined and well-evaluated complex interventions should be the focus of future research(27). The MRC framework for developing complex interventions is described in section 3.2.

By almost exclusively focussing on health outcomes (e.g., malnutrition issues), much of the research to date has missed the broader impact that the mealtime experience can have on residents: The biomedical approach has been prioritised to the detriment of the biopsychosocial reality of health and wellbeing. The point is that, even if malnutrition were the main health concern in care homes, the way to address it is not by solely implementing the interventions reviewed above. Rather, complex interventions are needed which recognise the complex experiences and health and wellbeing outcomes of living in care. For instance, full consideration should be given to the socio-cultural significance of mealtimes.

2.3.7. The socio-cultural context of mealtimes

Mealtimes are regarded as the high point in the day for residents, promoting social interaction, and developing social relationships with staff and dining companions(14). Whilst social interaction may positively influence food intake(18), social isolation has been associated with reduced food consumption(84). A range of social interactions were observed in an exploratory study by Curle and Keller (2010) including making conversation, sharing, humouring, and providing assistance – interactions which were in turn influenced by resident characteristics, tablemate roles, the dining environment, and the behaviour of staff(14). Whilst such studies provide a useful description of the types of interaction and their influences, there is a scarcity of research around the meaning of mealtimes and companionship at meals(14), as well as the effect of specific influences on social relationships (e.g., tablemate interactions)(18).

This is particularly pertinent as research suggests that little social interaction takes place at mealtimes. In a study involving systematic observations of residents in a care home in Norway, only 6.8 percent of residents' behaviours demonstrated independent social engagement (e.g., initiating conversation or passing food), whilst only 5.7 percent of staff behaviours were reported to facilitate social engagement amongst residents(160). Contrary to intuition, residents requiring feeding assistance may be more socially engaged than residents who are able to eat independently given their face-to-face interaction with staff(18). It has been posited that social interaction at mealtimes could be enhanced by seating residents appropriately according to their needs(161), providing family-style meals in which residents are encouraged to serve themselves(162), and encouraging staff to eat with residents(163), but more research is needed to evaluate potential benefits. Furthermore, whilst it is recognised that mealtime staff are an important catalyst for social interaction amongst residents(161, 162), the issue of inadequate staffing has been cited as a major barrier to this(134, 136).

Staff attitudes and beliefs can also represent a dichotomy between social aspects, and functional or organisational aspects of the mealtime(18). Whilst some staff prioritise social interaction, relaxation and resident autonomy, others may focus on adherence to routine, ensuring that the mealtimes are well-managed and that residents receive the appropriate feeding assistance and support with medical conditions; a more paternalistic approach. Pelletier (2005) distinguishes between nursing assistants described as “technical feeders” who prioritise adequate food intake and “social feeders” who perceive mealtimes as a time to socialise(164), highlighting a demarcation in approaches to feeding assistance that has repercussions for both staff training and resident wellbeing.

In addition to the social dimension, mealtimes have important socio-cultural connotations that have implications for resident quality of life. For example, traditions linked to food consumption, learned in childhood and developed into adulthood, can provide a strong link to identity(16, 17). Food may also be used to express feelings, celebrate special occasions, cope with emotions, and nurture a sense of companionship(165). An exploratory qualitative study conducted by Evans et al. (2005) found that residents’ personal remembrances of family mealtimes could help them to reconnect with their personal identities, and that this could increase their quality of life(16). The authors remarked that an understanding of a resident’s family history and food preferences was particularly significant in facilitating their transition to the social world within the care home(16). However, given the collective nature of the care home environment, accommodating personal needs and preferences can be problematic, especially where resources are limited. Proponents of culture change within care settings often urge a “person-centred” approach as a guiding standard of practice, though its exact meaning remains ambiguous.

2.3.8. Person-centred care

As well as neglecting the social-cultural reality of mealtimes, existing (biomedical) approaches have also failed to account for individual psychology. The concept of a “person-centred” approach to care was first proposed by the psychologist Carl Rogers in the 1980s. He argued that our capacity for growth does not diminish with age, and that individuals should have the opportunity to continue to learn, undertake personal challenges, and maintain close and intimate relationships into their dotage(166). He advocated an approach to care characterised by empathy, sensitivity, active listening, and acceptance, where wellbeing and quality of life is defined by the individual (person-centredness)(167). Since then, a person-centred approach to care has been associated with interventions that aim to de-institutionalise care environs, including inventions predicated on creating a “home-like” setting where meals are freshly prepared on site, and residents have access to outdoor spaces. As well as changes to the physical environment, a more resident-centric approach to mealtimes has been proposed(18).

In a conceptual model developed by Reimer et al. (2009), the person-centred mealtime is comprised of four main elements which endeavour to promote the social side of eating, create a sense of belonging, and place value on residents as individuals (see Figure 2)(18). By focussing on the social and psychological dimensions of mealtimes, the benefits to resident health and wellbeing are inferred. Thus, as per the biopsychosocial approach, health outcomes should not be considered distinct from underlying social and psychological processes.

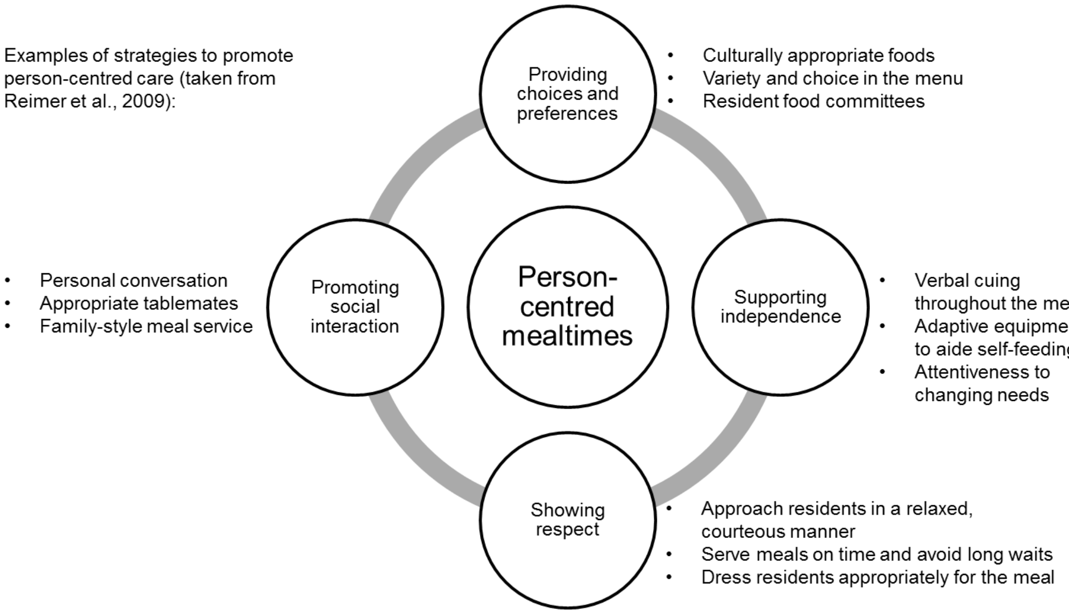


Figure 2. *Four elements of person-centred mealtime care (Reimer et al., 2009)*

In addressing these aspects of care, interventions may do better to assess resident satisfaction and measure social interaction, rather than focussing on nutritional outcomes. It follows that positive health outcomes may be compromised if these elements of care are not adhered to. For example, supporting independence, especially the ability to self-feed, has implications for dignity, and social interaction (or a lack of) may impact food intake(18). Invariably, the role of staff is integral to the facilitation of person-centred care, and the number and skill of mealtime staff is likely to have a profound impact on the dining experience of care home residents.

More broadly, person-centred care is about enabling residents to fulfil their potential and flourish as individuals, despite their transition into care and the identity shift that comes with it. No longer living independently can adversely impact feelings of self-efficacy, as many day-to-day responsibilities, choices, and decisions are taken away, and residents adjust to a life of dependence. This identity shift and the low self-efficacy (and poor sense of wellbeing) that may accompany it, can be a self-fulfilling prophecy. In other words, an individual transitions into care, is absolved of independence, and therefore feels worthless, useless, and powerless, which diminishes one's sense of health and wellbeing(86, 87). In comparable research, Warmoth et al. (2016) found that being labelled as "frail" was associated with older people self-identifying with frailty and acting accordingly, losing interest in participating in social and physical activities, which is turn resulted in poor physical health and increased stigmatisation(168). Simply put, a negative sense of self perpetuates negative behaviours (and poor health outcomes). This underscores the importance of person-centred care (i.e., enabling the individual to define wellbeing and quality of life) and of managing the transition to a care home to ensure that an individual still feels a sense of independence and control.

2.4. Chapter summary

Care homes vary in service offering, size and quality, though broadly they support a physically and/or cognitively frail resident population, many of who have complex health issues. Care homes operate within challenging market conditions, due to the high costs associated with maintaining facilities that meet the standards expected by service users and regulatory bodies. Staff turnover is also a perennial issue in the care home sector and this has implications for quality. These all present challenges to the implementation of new interventions.

It is clear that the health and wellbeing of care home residents is poor in comparison to older adults living in the community. Whilst this may be strongly influenced by the underlying health conditions and physical factors that effectuate a move to residential care, there may be aspects of care home life that can influence health and wellbeing. The prevalence of depression and malnutrition is higher in care home residents(12, 79, 93) and a number of mealtime interventions have targeted ultimate outcomes that aim to alleviate these adverse health events. These outcomes include increases in food intake and body weight, quality of life, and improvements in BPSD. Although many studies to date have been poorly designed, underpowered and inadequately described, there is evidence to suggest that a range of interventions predicated on nutritional intakes, the dining environment, and mealtime assistance, can alleviate BSPD and ameliorate health status(24, 25). The focus of future research should be on well-defined interventions that target aspects of the mealtime that are amenable to change(27). Given the diverse nature of care homes and the resource pressures they face, interventions should also be cost-effective, sustainable and widely replicable.

There is growing recognition that the effectiveness of mealtime interventions is dependent on establishing a favourable socio-cultural environment. This relies on creating a pleasant dining environment, positive resident and staff interactions and a culture that accommodates individual needs and preferences. However, there remains a gap in our understanding of what is required to achieve these conditions. This is the starting point of this thesis, which will begin by investigating stakeholders' views and opinions of mealtimes in care homes: Only by understanding current experiences can strategies be designed to enhance the mealtime experience (and improve health outcomes for residents).

The next chapter (Chapter 3) outlines the empirical work conducted as part of this PhD, as well as how the studies relate to each other. It describes the research strategy and details the different methods used to improve our understanding of mealtimes in care homes. The studies are presented in chronological order and are intended to demonstrate a narrative which builds towards the development of a mealtime invention (Chapter 6).

Chapter 3: Overview of empirical methods

3.1. Chapter overview

This thesis is comprised of three pieces of empirical work that investigate stakeholders' perceptions of mealtimes, further explore the experiences of residents, and use the evidence to inform the development of a staff-focussed mealtime intervention. The current chapter details the research strategy and outlines each study's contribution to the overall aim of the PhD. Included in the chapter is a discussion of the different methods used to answer the thesis research questions. This chapter begins by introducing the research strategy, and then describes the empirical methods applied. Each section gives an overview of the method and details the different aims that each piece of work addresses. The chapter concludes by outlining the structure of the thesis.

3.2. Research strategy

MRC guidance on developing complex interventions stipulates that an intervention should be developed systematically, drawing on the best available evidence and applying appropriate theory, then testing it using a phased approach which begins with feasibility trials (or piloting) to address key uncertainties(36). These steps should precede evaluation of the intervention, which may take place alongside a large scale implementation of the study. This approach is summarised in the MRC's complex interventions framework, comprised of a four-stage process: "Develop, test, evaluate, and implement"(36). In accordance with MRC guidelines, the current thesis is concerned with the first two stages of this process: (1) developing a mealtime intervention which aims to improve the health and wellbeing of care home residents (including evaluating evidence and theory building), and (2) testing it for feasibility. Although beyond the scope of this PhD, it is hoped that this will lead to a future full scale evaluation and implementation study.

In order to provide the rationale for a proposed intervention, existing data are interrogated to determine whether the intervention is likely to be effective. One of the first steps in developing a complex intervention is to conduct a systematic review, either because no review exists that addresses the specific research question, or because existing reviews are of poor quality(169). Additionally, some empirical work may be needed, often qualitative in nature, to anticipate how the deliverers and recipients of the proposed intervention will respond. For instance, a qualitative study can facilitate the development of a specific theory of behaviour change that may be applied to a planned intervention(170). Finally, intervention development should also incorporate modelling in order to describe the participant journey through the intervention components and address questions about who will deliver the intervention, how long it will take to deliver, and what each stakeholder will do as part of the intervention(169). The process of intervention development is likely to expose a number of uncertainties regarding the intervention, such as how acceptable it is to those for whom it is intended or are required to deliver it. These uncertainties can be targeted through feasibility testing.

In accordance with the MRC framework, three different studies were conducted: (1) a systematic review of qualitative literature; (2) a qualitative study based on interviews with residents in care homes; and (3) a multiple methods study testing the feasibility of a staff-focussed training programme. The studies were anticipated to be complementary, collectively contributing to a greater understanding of the role of mealtimes in care homes. Sections 3.2.1, 3.2.2, and 3.2.4 explain and discuss each piece of work's aims and objectives in relation the overall thesis goal.

3.2.1. Systematic Review (Chapter 4)

A *systematic review* is a literature review which employs a systematic approach to identify, collate, synthesise and analyse the best available evidence relating to a specific research question(171, 172). The methodological rigour which defines systematic reviews as the reference standard for synthesising evidence enables researchers to make informed decisions about the effectiveness of healthcare interventions(172, 173). Moreover, the high quality summaries generated by evaluating all of the relevant existing research provides the basis for undertaking new research and intervention development(172). In particular, systematic reviews may be used to test hypotheses, support existing theories, identify any gaps in current research, or highlight the need for high quality evidence in a particular area(171, 174). Traditionally, such reviews have adopted an objective and primarily quantitative approach, with all relevant articles identified, integrated and then assimilated through statistical analysis(175). However, evidence synthesis of qualitative studies is now recognised as a valuable and necessary approach to addressing health services research questions(176). As qualitative evidence enables a researcher to explore context, analysis of the data may yield richer findings or lead to richer conclusions(177). Such findings shed light on why an intervention may or may not be effective, or can elucidate the thoughts and beliefs of those giving or receiving interventions.

Unlike traditional literature reviews, systematic reviews use explicit methods to reduce selection bias (i.e., including studies with which the researcher is familiar and which may support a particular perspective): Ideally, the transparency of this approach should allow for replication of the methods to produce reliable findings(171). The methods applied are detailed in advance in a systematic review protocol, ensuring that it is carefully planned and explicitly documented, thus promoting accountability and research integrity(173), as well as reducing the risk of selective reporting bias, which has been identified as a serious problem in clinical research(178, 179). The protocol details the predefined inclusion and exclusion criteria, the process of screening and selecting studies, the data extraction procedure, the quality assessment criteria (using validated tools), and the method of data synthesis(171).

Although all systematic reviews should adhere to clear methodological guidelines and should be explicit in detailing procedure, one needs to be mindful of the type of research that is being synthesised. Whilst researchers reviewing the same set of quantitative data would expect to draw the same conclusions, researchers applying the same review question to qualitative data may reach different conclusions due to the researcher’s choice of analysis, method of data synthesis and theoretical standpoint(177). Despite reviews of qualitative literature being less prescriptive in nature, researchers should still be transparent in their approach. Reviewing qualitative evidence using thematic analysis is an established method that maintains an explicit and transparent link between the researcher’s conclusions and the text from primary studies, thus upholding a key principle of systematic reviewing(180). The utility of thematic analysis as a qualitative research method is discussed in section 3.2.2.

The development of a protocol enables methodological decisions to be made in advance, and each stage of the review process to be carefully reported, which further mitigates the risk of bias(172). Once a protocol has been established, it is recommended that it is registered, for example on the

PROSPERO database (www.crd.york.ac.uk), which prevents unplanned review duplication, reduces research waste(181), and helps to ensure that the completed review is consistent with what was planned in the protocol(182).

Given the value of systematic reviews in synthesising existing research and establishing evidence for the effects of a particular phenomenon, a systematic review of the qualitative literature was conducted to investigate the attitudes, perceptions and experiences of mealtimes in care homes amongst stakeholders. This was intended to build on evidence for the effectiveness of mealtime interventions from quantitative studies by exploring *how* and *why* they might be effective in more depth. In order to achieve this, the review sought to complete the following objectives: (1) identify and select qualitative studies evaluating the attitudes, perceptions and experiences of mealtimes in care homes, (2) summarise the key themes that emerge from the qualitative research, and (3) identify influences on the mealtime experience from the perspective of the key stakeholders (i.e., care home residents, their relatives, and care home staff). In this regard, the review provided a summary account of the mealtime experience as reported by qualitative studies to date. Although mealtime interventions have been shown to enhance resident health and wellbeing (as described in Chapter 2, section 2.3), little is known about the social and psychological components of mealtimes and their role in affecting health and wellbeing. This review found that residents and staff identified the enjoyment of meals, mealtime culture, resident agency, and the provision of mealtime care as integral to the mealtime experience. By ascertaining stakeholders' perspectives of mealtimes in the available literature and identifying a paucity of research in the area, the systematic review informed the development of a qualitative interview study to further explore residents' experiences.

3.2.2. Interview Study (Chapter 5)

By applying qualitative methods to research, our conceptual understanding of social phenomena in natural (rather than experimental) settings can be improved, with emphasis placed on the meanings, views and experiences described by participants(183). Qualitative studies can produce a large amount of textual data, for example from transcribed recordings of interviews and focus groups, as well as "field notes" or reflective notes detailing the researcher's observations: These data are descriptive in the sense that they explore some aspect of human experience in-depth rather than providing explanations *per se*. In contrast to quantitative data, the researcher is required to sift through the data and interpret them(184). Qualitative methods such as interviewing enable researchers to explore processes that occur in people's daily lives and reveal determinants that may have been omitted from previous theory-driven research(185). In addition, qualitative research may be used to assess social practices and processes, identify barriers and facilitators to change, discover the cause of interventions' successes or failures, and investigate meanings or understandings(186).

Much qualitative research is interview based, of which there are three types: structured, semi-structured, and depth interviews(183). According to Patton, qualitative interviews should contain questions that are open-ended, neutral, sensitive, and clear to the interviewee(187). Whilst structured interviews comprise questions asked in the same order with the same wording in accordance with a rigid interview schedule, semi-structured and depth interviews offer more flexibility(188). Semi-structured interviews are the most common type used in qualitative studies, employing a loose structure consisting of open-ended questions that target the topic under investigation, whilst also enabling the interviewer (or interviewee) to diverge and explore an idea in more detail(183, 188). Thus, the spontaneous aspect of semi-structure interviews allows the interviewer to pursue new paths that that may not have been considered initially(189), as well as word questions instinctively and so develop a more natural, conversational style(190). Given the exploratory nature of the interviews with care home residents, a semi-structured approach was considered the most appropriate for this study. In depth interviews may have been unnecessarily onerous for participants, and would have limited interview coverage to one or two topics only(183).

Field notes are gathered during participant interviews, designed to capture the researcher’s thoughts about the atmosphere and interaction – including nonverbal expressions and gestures – contributing to a more comprehensive understanding of the data(191). These notes are used alongside interview transcripts during data analysis to help make sense of participant experiences and emerging insights(183). Observations of the natural setting (e.g., mealtimes) should also be included in the field notes to provide context and enable the researcher to try to interpret a situation from the participants’ perspective(192).

In qualitative research, the analytical process often starts during data collection and continues iteratively, with participant responses prompting the researcher to refine questions, develop hypotheses and investigate emerging themes in the data(184). Unlike quantitative methods of research, qualitative sampling strategies are not intended to identify a statistically representative group of respondents, but rather gather data that can be used to create or develop analytical categories and theoretical explanations of the phenomena under scrutiny(183). Therefore, sampling is not designed to produce findings which maximise external validity or generalisability. Analytical categories which describe and explain social phenomena may be derived inductively, that is, using a “bottom up” approach(193), or used deductively, where data are assigned to a set of *a priori* categories either at the beginning or part way through the analysis, for example in the “framework approach”(184).

The inductive process of identifying analytical categories as they emerge from the data and developing hypotheses from the ground or research field upwards is known as “grounded theory”(194). Grounded theory is distinct from other qualitative methods because it derives themes and categories from the data rather than from pre-set aims and objectives or pre-defined analytical categories(194, 195). Crucially however, its goal is to produce a plausible theory of a particular phenomenon by searching for, and describing, patterns grounded in the data(196, 197). Where theory building is not the primary research objective, thematic analysis has been proposed as a more accessible and flexible form of analysis, as researchers need not adhere to the implicit theoretical commitments of fully-fledged grounded theory(197).

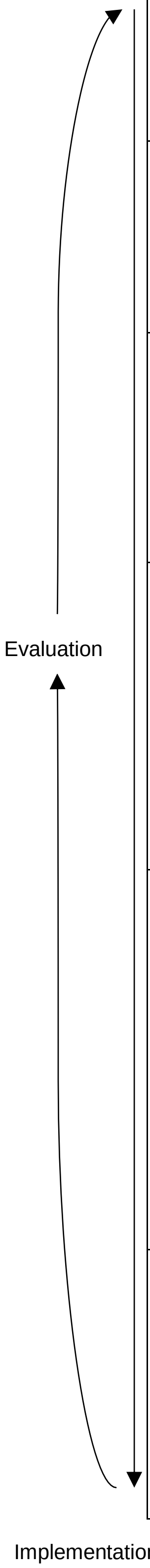
This was the approach taken for the interview study. In trying to gain an insight into residents’ perspectives on mealtimes and elicit the important issues that impact on the dining experience, the interviews sought to produce conceptually-informed interpretations of the data rather than developing a theory. Like grounded theory, thematic analysis identifies, analyses and reports themes within the data (and can be carried out inductively). Moreover, it often extends beyond this, and interprets various elements of the research topic(198). Though it is widely used within different theoretical frameworks and epistemologies, it can complement a constructionist approach, which explores the ways in which identity, experiences, and perceptions are described within the context of the research topic (e.g., the mealtime).

An inductive approach to thematic analysis indicates a strong link between the themes identified and the data themselves(199). Thus, the themes that emerge from coding interview or focus group transcripts may not correspond directly to the questions posed by the researcher, meaning that analysis is data-driven and not beholden to analytic preconceptions(197). This approach is aligned to the broader theoretical underpinnings of the current thesis, which aims to interpret the forms, functions, and consequences of the mealtime experience in order to inform the development of an intervention. In general terms, thematic analysis can usefully summarise key elements of a large data set, and/or offer a “thick description” of the data(191), as well as highlight the similarities and differences across the data set(197). It is also conducive to social and psychological interpretations of the data(197). For these compelling reasons, thematic analysis was selected as the method to analyse participant interview transcripts. As data were collected, repeated ideas (e.g., views and opinions) were tagged with codes, which could then be grouped into analytical categories. It was an iterative, emergent process, which helped to conceptualise the mealtime experience of care home residents. Moreover, analysing the interview data in this way helped to build an interpretive account of this experience. It was anticipated at the start of the thesis that the findings from both the primary research study and the systematic review would be used to inform the development of an intervention.

3.2.3. Intervention development

Any attempt to promote health and wellbeing, or adapt or change environmental influences on health and wellbeing must design or adapt existing interventions and develop a clear plan outlining how they should be implemented, and this process should be systematic(200). Adopting a systematic approach to intervention development should facilitate replication, as details about the intervention including recipients, deliverers, setting, mode of delivery, intensity, and fidelity to protocol are elucidated(201). This process can also help with documentation, providing an audit trail which supports a move towards more evidence-based practice and greater research integrity. In addition, detailed intervention protocols can be reviewed, evaluated and updated to improve health outcomes(36).

There are a number of frameworks designed to facilitate the process of intervention design and development, including Intervention Mapping (IM). IM consists of six fundamental steps, each comprised of a number of tasks that generate a product which serves as a guide for the subsequent step(200). Table 1 below illustrates the tasks to be addressed during each step. IM is in an iterative procedure, as the program developer can move between tasks and steps, and repeat or elaborate on tasks through a process of ongoing evaluation. It begins by assessing the needs of the target group at risk of one or a number of health problems and conducting an analysis of the possibilities to address these problems using an evidence-based approach(202). Whilst the health problems of older adults in care homes are well established, this thesis is concerned with the development of an intervention that is focussed on the social and psychological determinants of health and wellbeing rather than a conventional approach that is based on biomedical outcomes.



Step 1: Needs Assessment	• Establish a participatory planning group • Conduct the needs assessment • Assess community capacity • Specify community goals for health and quality of life
Step 2: Matrices	• State outcomes for behaviour and environment change • State performance objectives • Select important and changeable determinants • Create a matrix of change objectives
Step 3: Theory-based intervention methods and practical application	• Generate program ideas with the planning group • Identify theoretical methods • Choose program methods • Select or design practical applications • Ensure that applications address change objectives
Step 4: Intervention program	• Consult intended participants and implementers • Create program themes, scope, sequence and material lists • Prepare design documents • Review available program materials • Draft program materials and protocols • Pre-test program materials and protocols • Produce materials and protocols
Step 5: Adoption and Implementation	• Identify potential adopters and implementers • Re-evaluate the planning group • State program use outcomes and performance objectives • Specify determinants for adoption and implementation • Create a matrix of change objectives • Select methods and practical applications • Design interventions for adoption and implementation
Step 6: Evaluation plan	• Review the program logic model • Write effect evaluation questions • Write evaluation questions for changes in the determinants • Write process evaluation questions • Develop indicators and measures • Specify evaluation design

Table 1. *Six stages of Intervention Mapping (adapted from Abraham et al., 2015)*

Once a thorough needs assessment has been conducted, behavioural objectives for the intervention are set (stage 2), specifying who and what will be the target for change. These behavioural objectives are then used to inform outcome measures, which are needed to determine whether the intervention has the intended effects. During the third stage of IM, researchers specify how they think the intervention will work by explaining the underlying “change theory”. This is often illustrated in a logic model, which contains a list of the modifiable determinants and the underpinning mechanisms (or regulatory processes) that aim to effect change(200). The regulatory processes that have been identified in the logic model can be mapped onto change techniques that have proven efficacy in previous research(201). Therefore, the logic model serves both as a tool to inform that content of the intervention and as a tool for evaluating the effectiveness of the intervention.

The methods used to deliver the intervention, the fourth stage of IM, are key to ensuring that the intervention can be replicated and implemented faithfully. Thus, it is essential that stakeholders (i.e., the deliverers and recipients of the intervention) are involved in intervention development, including its means of delivery (e.g., written documents and face-to-face interaction)(169). The value of involving stakeholders in all appropriate stages of health research has gained increased recognition over recent years both in the UK and internationally. For instance, organisations such as the MRC, the Health Technology Assessment (HTA) Programme, the National Cancer Research Institute (NCRI),the Consumers’ Health Forum (CHF) of Australia, and the Cochrane Collaboration advocate the role of stakeholders as partners in research(203). As well as bringing unique perspectives to research, stakeholder engagement increases its relevance, and demonstrates an appreciation of the views of people who both receive and deliver the intervention, which may help to build trust, collaboration, and acceptance of studies(203, 204). As a result, interventions that yield positive results may be adopted into practice more quickly, fulfilling the ultimate goal of improving recipients' care experience, decision-making, and health outcomes with greater efficiently (and less uncertainty)(205).

Once an intervention has been developed in conjunction with stakeholders, researchers can focus on stages five and six of the IM process, "implementation" and "evaluation". In order to ensure that an intervention is acceptable to its target group and that it is sustainable in context (i.e., there are sufficient resources to deliver the intervention in everyday practice), it should be piloted. Pilot or feasibility studies may also be used to assess issues of practicality, including whether the planned evaluation is practical (e.g., can a sufficient number of participants be recruited?)(169). Issues concerning evaluation should be anticipated at earlier stages of IM, but the iterative nature of IM enables interventions to be refined or redesigned based on the outcomes of pilot and / or feasibility studies. The approach taken in this thesis is broadly aligned to the first four steps in the IM process. A needs assessment (Step 1) was carried out in Studies 1 and 2, and this informed the matrices (Step 2), intervention methods and practical application (Step 3), and intervention programme (Step 4), which were employed in Study 3.

3.2.4. Feasibility Study (Chapter 6)

A feasibility study is "pre-study" research which is conducted in order to collect information needed to develop the plan for the main study(169). The research questions addressed in a feasibility study are generally concerned with distinct aspects of the study design or study processes, such as the ability to retain participants, the estimated timelines for study visits or assessments, or adherence to the study protocol(206). In other words, a feasibility study asks if something can be done, and whether and how the study should proceed(207). Thus, it may not be an RCT, or a blueprint for a main trial, and it may not assess the same outcomes(169). In this regard, feasibility studies may be considered distinct from a *pilot study*, which is often defined as a small-scale replica of the main proposed study (although the terms are often used synonymously[3]). The National Institute for Health Research (NIHR) defines a feasibility study as addressing the question, “Can this study be done?” (by probing uncertain parameters), whilst a pilot study is defined as the main study run in “miniature”(208).

As described in section 3.2, feasibility testing and/or piloting should be employed to address uncertainties following the development of an evidence-based intervention. This can enable the intervention to be refined prior to a large scale implementation, and allow researchers to address any methodological, clinical or procedural issues with the study design. Once this stage is complete, there should be reasonable certainty that the intervention can be delivered as intended, that it is acceptable to providers and recipients, and that the proposed study can be undertaken successfully. Thus, by undertaking feasibility (or pilot) trials, researchers can improve the chances of full scale implementation successfully achieving its objectives(169).

The systematic review and interview study detailed in Chapters 4 and 5 sought to assess the existing data and identify and explore the experiential components of mealtimes. The evidence gathered in these studies informed the

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[3] There is some ambiguity over the use of the terms *feasibility study* and *pilot study*. The MRC guidance does not make a clear distinction, whilst others distinguish feasibility studies as independent pieces of work based on specific uncertainties to determine the viability of a future study.

development of staff-focussed training programme (i.e., the first stage of the MRC framework). As the training programme was designed to be delivered by staff to staff recipients, there was uncertainty around the procedural aspects of the intervention (i.e., delivery and acceptability). Thus, the feasibility study sought to answer the following questions:

- Could the workshops be delivered within the time allocated?
- Was the proposed content acceptable to stakeholders?
- Was the training guide fit for purpose?
- Were the facilitators able to deliver workshops as intended?
- Did care homes have the resources to deliver the training?
- Was the training received positively?
- Did recipients feel motivated to change their practice?

These questions prompted a multiple-methods approach to data collection and analysis using a participant survey consisting of open and closed questions, alongside researcher observations of intervention delivery. Content analysis was used for data synthesis, as it can be used for both qualitative and quantitative data and may be applied inductively or deductively. It also allows for data to be synthesised from different textual sources (e.g., survey data and participant observation forms)(209). The method offers a systematic and objective means of describing and quantifying phenomena, enabling the researcher to assess theoretical issues and enhance understanding of the data(210). The opportunity for quantification of data is a recognised as a key distinction from thematic analysis(209). In short, content analysis enables logical conclusions to be derived from the data, as well as providing a representation of the facts that can elicit a practical guide to action(211).

Using a deductive approach to content analysis, coded data (e.g., coded survey data) may be extracted into an *a priori* or structured categorisation matrix, with the meaning of each category (or sub-category) described through its contents. Successful content analysis demonstrates a clear link between the findings and the data, where the data are simplified to form categories which reflect responses to the research questions in a reliable manner(210).

3.3. Structure of the thesis

The three studies are complementary and contribute to the overall thesis goal, but are also stand-alone. Accordingly, each one has been written as a manuscript and submitted (or will be submitted) to a peer-reviewed academic journal. The systematic review manuscript was published in *Geriatric Nursing(212)*, the qualitative interview study was published in *BMC Geriatrics(213)*, and the feasibility study is currently being prepared for publication. The studies are presented in the format that was requested by the respective journals with the exception of the addition of chapter numbers and references to appendices. Each chapter is introduced prior to presentation of the manuscript, and Chapters 4 and 5 are followed by a chapter conclusion intended for narrative purposes.

Chapter 4: A systematic review of the attitudes, perceptions and experiences of mealtimes amongst stakeholders

4.1. Chapter overview

This chapter presents the first piece of thesis work employed to advance the understanding of the perceptions of mealtimes in care homes amongst residents and the staff that support them. Specifically, the systematic review examined the evidence of the factors that influence residents' experiences of mealtimes.

4.2. Background to the current research

The current research was the starting point for understanding the social and psychological factors associated with the dining experience in care homes. How residents and staff perceive of and experience mealtimes must be considered in order to understand how mealtime interventions can address resident health and wellbeing. Previous research(24-26) provides some evidence that mealtime interventions are effective at improving health-related outcomes. Nevertheless, as discussed in Chapter 2, interventions have been limited in scope, and most have focussed on quantitatively measuring individual outcomes. Much of this research has been concerned with improving nutritional outcomes, but this only part of the picture. Residents' mealtime experiences can affect health and wellbeing in a multitude of ways, and therefore it is important to consider their social and psychological dimensions (in addition to the biomedical dimension).

Considering the multicomponent aspect of the mealtime experience and its effect on resident health and wellbeing is an essential part of developing a complex intervention (section 3.2). By taking a systematic approach to intervention design, key uncertainties can be identified (and addressed), and a greater understanding of the intervention’s workings can be developed. MRC guidance on the development of complex interventions advocates the wholesale engagement of stakeholders, yet there was a paucity of stakeholder (i.e., resident and staff) input in the literature reviewed in Chapter 2. Thus, whilst there is some evidence that mealtime interventions are effective, their development, and in many cases their implementation, has been entirely researcher-led. As care home staff are invariably the intended deliverers and / or recipients of mealtime interventions, their involvement is essential in determining whether an intervention can be effective in the real world.

As highlighted in the IM process, discussed in section 3.2.3, intervention development begins with a needs assessment. Building on existing knowledge, the systematic review is intended to elicit stakeholder views and opinions of mealtimes in care homes in order to inform the development of an intervention that addresses some of these needs.

4.2.1. Aims of the current research

The aim of this review was to identify the attitudes, perceptions and experiences of mealtimes in care homes amongst residents, their relatives, and care home staff. Data were collated and analysed to identify shared attitudes, perceptions and experiences across studies. The review had the following objectives: (1) to identify and select qualitative studies evaluating the attitudes, perceptions and experiences of mealtimes in care homes, (2) to summarise the key themes that emerge from the qualitative research, and (3) to identify the main influences on the mealtime experience from the perspective of the key stakeholders (i.e. care home residents, their relatives, and care home staff).

4.3. Attitudes, perceptions and experiences of mealtimes among residents and staff in care homes for older adults: A systematic review of the qualitative literature[4]

4.3.1. Abstract

Objective: Addressing problems associated with malnutrition in care home residents has been prioritised by researchers and decision-makers. This review aimed to better understand factors that may contribute to malnutrition by examining the attitudes, perceptions and experiences of mealtimes among care home residents and staff.

Methods: Five databases were searched from inception to November 2015: Medline, Embase, PsychINFO, AMED, and the Cochrane Database. Forward and backward citation checking of included articles was conducted. Titles, abstracts, and full texts were screened independently by two reviewers and quality was assessed using the Wallace criteria. Thematic analysis of extracted data was undertaken.

Results: Fifteen studies were included in the review, encompassing the views and opinions of a total of 580 participants set in nine different countries. Four main themes were identified: (1) organizational and staff support, (2) resident agency, (3) mealtime culture, and (4) meal quality and enjoyment. Organizational and staff support was an over-arching theme, impacting all aspects of the mealtime experience.

Conclusion: Mealtimes are a pivotal part of care home life, providing structure to the day and generating opportunities for conversation and companionship.

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[4] Watkins, R., Goodwin, V., Abbott, R., Backhouse, A., Moore, D. and Tarrant, M. (2017). Attitudes, perceptions and experiences of mealtimes among residents and staff in care homes for older adults: A systematic review of the qualitative literature. *Geriatric Nursing*.

Enhancing the mealtime experience for care home residents needs to take account of the complex needs of residents while also creating an environment in which individual care can be provided in a communal setting.

4.3.2. Introduction

Approximately 15,600 facilities in the United States provide residential care for an estimated 1.4 million older adults(214). In the UK, more than 400,000 older people live in a care home(44), including almost 20 percent of the population aged 85 and over(55). According to the 2011 Census of Population in Canada, nearly 30 percent of over 85 year olds live in special care facilities compared to about 1 percent of the population aged 65 to 69, illustrative of the increasing need for care facilities among the oldest old(215). As the number of older people increases globally, there is likely to be a greater demand for residential care. In Australia, care home places have grown steadily since 1995 to reach approximately 185,000 in 2011, including an increase of more than 2,500 over the previous year(216). In less developed countries where there is not an established infrastructure of residential care facilities, family members have traditionally borne the responsibility for the care of their elderly relatives. However, as the inhabitants of developing countries move to urban centres in search of greater employment prospects, the need for residential care is likely to increase in the communities they leave behind, highlighting the burgeoning global nature of care provision for older adults and the issues that accompany it(217).

Over half the people admitted to hospital in the UK from care homes are reported to be malnourished(1), having low body weight, unplanned weight loss or diminished nutritional intake(65). The causes of malnutrition are complex and involve a number of (often inter-related) factors associated with underlying medical conditions (e.g., dysphagia, gastrointestinal disorders, drug interactions, cachexia)(6). Physical factors (e.g., disability, poor dentition), psychosocial factors (e.g., anxiety, depression) and food choice, quality and access issues can all also adversely affect food intake and increase the risk of malnutrition(6, 27, 218, 219). Malnutrition is particularly prevalent among (although not restricted to) residents with cognitive impairment, and this can exacerbate the decline in their functional abilities(220). Critically, because it is associated with a poorer quality of life, increased morbidity and ultimately a greater risk of mortality(19), malnutrition is a key indicator of the health and wellbeing of older adults in care. Therefore, there is a need for a greater understanding of these various influences on food intake in order that interventions may be developed to reduce the risk of malnutrition. The current systematic review examined the potential environmental, cultural, social and behavioural influences on nutritional status based on the views and opinions of mealtimes held by residents and staff in care homes for older adults. As mealtimes are an integral part of day-to-day life in care homes, these psychosocial ‘ingredients’ may be an important catalyst for the health of residents, in terms of food delivery and general wellbeing.

The need to improve the nutritional status of older people living in care homes has long been recognised(19-21). However, it is unclear which interventions are most effective at reducing morbidity and improving wellbeing. Two recent systematic reviews suggested that simple changes to the mealtime environment (e.g., the style of food service, seating arrangements and the playing of music) can positively influence nutritional outcomes in care home residents and the behavioural and psychological symptoms of dementia (BPSD) (24, 25). However, the conclusions of the reviews were limited because of the small sample sizes, lack of randomization, and inadequate control for confounding variables of included studies(24, 25, 27). Furthermore, descriptions of mealtime interventions often lacked detail, limiting understanding of how they work and how they can be replicated. Even in those studies where a more comprehensive account of interventions was given, an emphasis on single intervention components, such as food quality improvement or an altered dining environment(27), likely fails to account for the complexity of malnutrition causes(6) or the diverse range of influences on the mealtime experience more generally(27). The lack of specificity is a common problem when reporting on intervention studies(28), and this has implications for their practical effectiveness: It is important to account for the whole effects of an intervention, how it varies among recipients, between settings and over time, and what causes this variation(36).

The aim of this review was to extend the research on mealtime interventions by synthesizing the available qualitative data from interview studies involving care home residents and staff in order to develop an experiential account of mealtimes. By uniquely bringing together the attitudes, perceptions and experiences of mealtimes in care homes as reported by residents and staff themselves, the review aimed to document components that may structure the implementation of mealtime interventions, and more generally highlight some of the features of mealtimes that can ultimately impact the nutritional status and health and wellbeing of care home residents(221).

4.3.3. Methods

The systematic review was conducted in accordance with Centre for Reviews and Dissemination (CRD) guidelines on undertaking reviews in healthcare(222). The protocol was registered with the International Prospective Register of Systematic Reviews (PROSPERO) (CRD42015025890).

Literature Search and Eligibility Criteria

The search strategy used a combination of MeSH and free-text terms (Appendix A). Five databases were searched from inception to November 2015: Medline, Embase, PsychINFO, AMED, and the Cochrane Database. Searches for grey literature were conducted in the Health Management Information Consortium (HMIC) and the Social Policy and practice (SPP) databases. No date or language restrictions were applied to the database searches. All qualitative studies, or mixed-method studies with a qualitative component, which used a recognised method of data collection (e.g., focus groups, interviews) and analysis (e.g., thematic analysis, grounded theory, framework analysis), and explored the attitudes, perceptions and experiences of mealtimes in care homes for older adults were included. This encompassed studies set in both care homes and nursing homes that accommodated residents with and without cognitive impairment. Studies with a purely quantitative design, conference abstracts and commentaries were not included in the review.

Two reviewers (RW, AB) independently screened titles and abstracts, and then full-text articles. EndNote X7.0.2 software was used to manage references throughout the review; duplicates were removed and forward and backward citation checking of each included article was conducted.

Data Extraction

Data on each study's population, setting, study methods and focus were collected using a bespoke data extraction form (Table 2). Data were extracted by one reviewer (RW) and checked by a second reviewer (AB). Study quality was assessed using the Wallace criteria for qualitative studies(223) by one reviewer (RW) and checked by a second (AB).

Data synthesis

Thematic analysis was used to synthesise the data across studies. This approach offers a flexible, yet rich and detailed account of data, enabling the researcher to identify, analyse and report patterns within it(197). The results sections of each paper were considered the primary source of data, and each line of text was coded according to its meaning and content. This line-by-line coding generated a code bank from which data could be organized into meaningful groups (themes) based on their similarities and differences(224). Two of the included studies were also coded and organized into themes by a second reviewer (AB) to ensure that both reviewers (RW and AB) were deriving similar meaning and content from the text. These themes were then independently reviewed, categorized and defined as themes and sub-themes by both reviewers. Sub-themes provided structure to complex themes, and allowed inference of a hierarchy of meaning within the data(197). Participant quotes are used to illustrate emergent themes.

4.3.4. Results

The systematic search returned a total of 253 articles, all of which had title and abstracts available in English. The titles and abstracts were screened for relevance by two reviewers (RW and AB), who independently classified each paper using the eligibility criteria. Full text copies of all potentially relevant studies were then obtained and independently double-screened. EndNote X7.0.2. software was used to manage references throughout the review. Once the searches had been run, results were exported to EndNote and any duplicates were automatically identified and removed. This process was assisted by hand searching for duplicates. Forty studies were retrieved as full text, ten of which met the inclusion criteria, along with five studies identified through grey literature and forward and backward citation searches (35, 38, 40, 41, 124, 151-153, 225-231) (Figure 3). Of the 30 articles discarded at full text

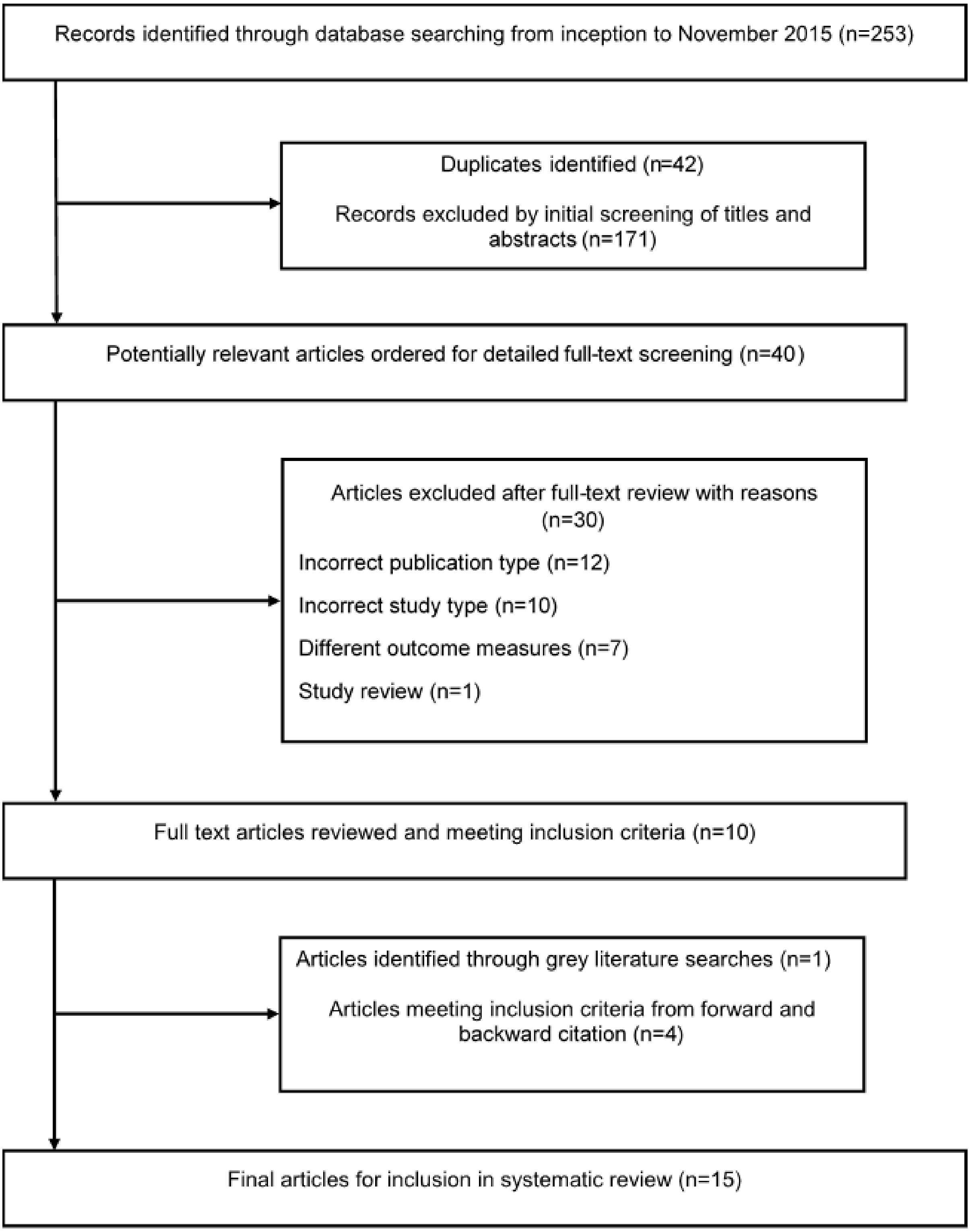

Figure 3. *PRISMA Flow Diagram*

screening, reasons for exclusion included incorrect study type (n=10), where there was no qualitative research component to the study, and different outcome measures (n=7), where the attitudes, perceptions and experiences of mealtimes among residents and staff was not a measured outcome. The remaining thirteen articles were discarded either because they were commentaries or because they were reviews of other studies.

Study characteristics

Five of the studies were comparison studies(38, 41, 226, 228, 229), including a longitudinal study which explored the transition of older adults from their own home to the care home(229); a mealtime experience study comparing a small living unit to that of a traditional nursing home(226); a study that assessed the effects of pre- and post- environmental renovations on the mealtime experience(38); one that reported on the subjective outcomes of changes to the resident menu and food sourcing(228); and a study that explored the experiences of residents and staff following new ‘restaurant-style’ meal provision(41). The other ten studies were cross-sectional studies, four of which incorporated data collection from observations (e.g., field notes) alongside data obtained from interviews and questionnaires(40, 152, 227, 230). These ten studies elicited perspectives on meals and mealtime management from a broad range of stakeholders, including speech pathologists, care managers, nursing staff, assistants in nursing, care, domestic and support staff. They explored the extent to which the management of mealtimes met the needs of residents, considering factors such as the dining environment, the quality of the food, and the role of staff in providing mealtime assistance and facilitating social interaction. One of these studies was concerned specifically with exploring the problems facing nurses in providing feeding assistance to people

Study	***Country***	***Stakeholder group***	***Setting***	***Setting number/ sample size***	***Study methods***	***Focus of study***
Adams et al. (2013)(225)	USA	Nursing home residents	Skilled nursing facility (SNF)	3 / 104	Standardised interview with two open-ended questions	Dining preferences
Bennett et al. (2014)(151)	Australia	Speech pathologists, care managers, nursing staff, assistants in nursing, care, domestic, and support staff	Skilled nursing facility	10 / 61	Semi-structured interviews followed by qualitative content analysis	Mealtime management
Bennett et al. (2015)(40)	Australia	Nursing home residents and staff	Residential aged care facilities (RACFs)	2 / 43 Residents (n=14), staff (n=29)	Questionnaires, observations followed by post-positivist, reality-oriented inquiry	Mealtime management
Bungaard (2005)(226)	Denmark	Residents	Living units (housing 6-8 older adults)	1 / 5	Ethnography with observation, semi-structured interviews followed by hermeneutic analysis	Mealtime experience
Chaudhury et al. (2016)(38)	Canada	Residents, care aides and nurses	Long-term care facility (LTC)	2 / 27 Residents (n=10), care aides and nurses (n=17)	Pre- and post-renovation observations, staff survey followed by thematic analysis	Dining environment
Dunn & Moore (2014)(35)	UK	Care assistants	Nursing homes	2 / 5	Semi-structured interviews followed by thematic analysis informed by positioning theory	Feeding assistance
Harnett & Jonson (2016)(227)	Sweden	Residents, staff and managers	Nursing homes	5 / 45 Stakeholder numbers not specified	Focus groups, semi-structured interviews, observations using frame analysis	Mealtime experience
Hewitt et al. (2007)(228)	Guyana	Residents and staff	Residential care home	1 / 14 Residents (n=14)	Focus groups, semi-structured interviews followed by analysis using a framework approach	Mealtime experience

Kenkmann & Hooper (2012)(41)	UK	Residents and staff	Residential care home	4 / 48 Residents (n=16), staff (n=32)	Observation of meal and drink provision, unstructured individual interviews followed by content analysis	Restaurant-style meal provision
Kofod (2012)(229)	Denmark	Residents	Residential care home	4 / 16	Semi-structured and unstructured interviews, observations followed by content analysis	Mealtime experience
Kofod & Birkemose (2004)(230)	Denmark	Residents, relatives and staff	Stay-and-living environments (SLEs)	4 / 26 Residents (n=19), staff (n=7)	Interviews and observations followed by parallel analysis of themes	Dining environment
Osinga & Keller (2013)(153)	Canada	Dietetic students	Long-term care homes (LTCs)	Not specified / 9	Semi-structured interviews followed by thematic analysis	Mealtime experience and feeding assistance
Palacios-Ceňa et al. (2012)(231)	Spain	Residents	Nursing homes	4 / 26	Semi-structured and unstructured interviews using a phenomenological approach and the Giorgi proposal for analysis	Mealtime experience
Pasman et al. (2003)(152)	The Netherlands	Nursing staff	Nursing homes	2 / 106 Residents (n=60), nurses (n=46)	Participant observations, interviews followed by case study analysis	Feeding assistance
Philpin et al. (2014)(124)	UK	Nursing staff and residents	Residential care homes	2 / 45 Staff (n=15), managers (n=4), residents (n=16), informal carers (n=10)	Focus groups, interviews followed by thematic analysis	Dining environment

Table 2. *Description of included studies*

with dementia(152), and another study investigated dietetic students' experiences of providing mealtime assistance to care home residents(153).

The studies involved 580 participants, of whom more than 300 were residents of care or nursing homes and approximately 250 were managers or staff (the exact number of stakeholder cohorts is unclear because one study interviewed 45 participants, but did not specify how many of these were residents, staff or relatives(227)). Twelve of the fifteen studies included residents, although residents reported their views and opinions in only eight of these. One study included data from the relatives of care home residents(229).

Study quality

The quality of the included studies was evaluated using the Wallace criteria (Appendix B),which is intended to enable judgements to be made about the strength of qualitative research(223). The criteria comprise twelve questions that attempt to address the validity and reliability of studies that vary in design, context or setting, and theoretical perspective, thereby synthesizing the evidence in way that is transparent and explicit. In this review, all of the included studies had clear research questions, used an appropriate study design to address the research questions, and adequately described the context or setting of the study, as specified by the Wallace criteria. The theoretical or ideological perspective of the authors was explicit in ten of the studies and provided a logical link to the design of the study, the methods employed, and ultimately the outcomes. Data collection was adequately described in all of the studies with the exception of Bundgaard (2005), which did not specify any details of the observation. In eight of the studies, the lack of detailed description meant that it was not clear that data collection was rigorously conducted to ensure confidence in the findings, though the findings reported in nearly all the studies were substantiated by the data. Nine of the studies made reasonable claims about the generalizability of their findings, with many reflecting on the impact of the dining environment on mealtimes, the attitudes of staff, the juxtaposition of an institutionalized setting and the pursuit of “homeliness”, and the behavioral, cultural and economic challenges of providing individual care amongst a collective. Five studies failed to address the limitations of the methods used or findings(152, 225, 227-229), and in four studies(35, 153, 226, 230) it was not clear that ethical issues had been adequately addressed or that the confidentiality of participants had been respected. In summary, the included studies were of mixed quality. Some of the research was reported poorly, insufficiently describing the rigor of data collection, the limitations of the methods used and the data collected, and adherence to ethical practice. On the basis of evaluation using the Wallace criteria, five of the fifteen studies may be considered to be of high quality.

Qualitative synthesis

Of the fifteen studies included in this review, four focused on evaluating the mealtime experience from the perspective of residents only, three elicited the views and opinions solely of carers and eight collected data from a combination of staff and residents.

The analysis revealed four themes that reflect the overall attitudes, perceptions and experiences of residents and staff in relation to mealtimes in care homes: (1) organizational and staff support, (2) resident agency, (3) mealtime culture, and (4) meal quality and enjoyment. Organizational and staff support was an over-arching theme, having the most profound influence on mealtimes. Together, these four themes highlight the complex nature of the mealtime experience and its impact on care home residents’ health and wellbeing. Participant quotes, used to illustrate themes, are taken directly from their original texts unless stated otherwise.

1. **Organizational and staff support**

The role of staff and the influence of care home policy defined this theme. The support provided by staff was undermined in a number of ways, adversely affecting the mealtime experience and resulting in negative perceptions of it. Mealtimes were recognised by staff as directly impacting quality of life: ‘‘I would say that in residential care it’s perhaps right up there with priority number one or two ... it is the one thing they wake up for most days’’ (Bennett et al. (2014), p.330). At the same time, mealtimes were highlighted as putting particular strain on the provision of care, with staff commenting that there was a lack of organizational support at mealtimes and that they felt pressured to complete routine tasks during long shifts(35, 151).

> *Member of staff – “Doing a twelve hour shift … three days, all after each other … the third day it is really tiring … If we don’t have as many residents in then they drop the staffing levels so you’re kinda working three of us, instead of maybe four of us and that other person makes a big difference … You go home and its tiring, it’s tiring … feeding ‘em, that can be a slow process cos they’re not very fast at eating … you can’t be forcing food down ’em can yer? You just wish that you could have a bit of extra help [more staff]”. (Dunn & Moore, p.5)*

It was acknowledged that staff have multiple duties but, at mealtimes, may do little more than serve the food(41). Time demands, shift changes and a poor relationship between staff was also associated with a breakdown in communication between staff at mealtimes(151). Perhaps as a result of some of these pressures, staff expressed frustration at providing mealtime support, suggesting that some residents can be ill-tempered or obstructive.

> *Member of staff – "You take 'em the meal and they say 'Ooo, I didn't ask for that', you have to sort of bite your tongue and say 'well I asked you y'know', as polite as I can be because some o' 'em can be cantankerous, so you have to think, how do I word it? 'you did ask for this meal when I asked you'… but then obviously you just have to take it back and just say, 'they don't want this meal'. Them's the sort of things that you can lose your, to bite your tongue with". (Dunn & Moore, p.5)*

Some staff also said that they felt undervalued, and were not always treated respectfully by residents: "One feels like a servant at this unit … He who sat here, he could very well have taken a spoon himself. But I don't want to be rude". (Harnett & Jonson, p.16, reviewer edit). In contrast, staff also expressed empathy for residents, adopting a resident-centric perspective on care provision: "You know their self-esteem is poor, if you have a stroke and you can't manage, to have someone, a young person feeding you must be terribly frustrating''. (Bennett et al. (2014), p.330)

2. Resident agency

This theme was concerned with individual choice, control and autonomy. Food choice was linked to personal identity: "To tell me what I have to eat, how I'm supposed to do it and with whom, is like telling me to forget who I am, and to be another person" (Palacios-Cena et al., p. 486). At the same time, resident choice and autonomy was restricted by health and safety policy in the home, which caused frustration and irritation on the part of residents and staff.

> *Member of staff – "If he's at risk of choke he should be on a soft diet … because of this Mental Health Act that has come into y'see, we keep havin' to go back each time 'n' ask 'em again … obviously if they get*

annoyed then you walk away and you write in his notes, has refused … He knows he can't walk on the corridors without a frame, but he will … he'll say 'I know I 'aven't got me frame, but I'm nearly in't dining room', and I'll say 'that's not the point [resident's name], you need your frame'." (Dunn & Moore, p.6)

Being able to choose when, where and how to eat gave residents control over their lives: "Sometimes I feel like eating in my room, being able to choose what to eat...It makes me feel like I am at the wheel." (Palacios-Cena et al., p. 486). However, the very essence of communal living necessarily limited choice for the individual and compromised resident autonomy:

Interviewer – "How is the menu designed?"

Participant – "Well, we have meetings we do, and we get residents' suggestions for what they would like to eat. And then we try to build a menu together with the residents and the officer in charge."

Interviewer – "Are there any difficulties with that?

Participant – You always get one that's not happy don't you?"

Participant – "You can't please everyone can you?" (Philpin et al., p. 782)

Even in care homes where residents were consulted on their food preferences and were involved in designing the menu, compromise over meal preferences was inevitable and individual choice or traditional values were sometimes overlooked for the sake of collective provision.

Member of staff – "Some care recipients are old fashioned, you know, chicken on Friday. It can't be on a Saturday. You explain, yes but that was the way you had it at home. We can't do it like that here." (Harnett & Jonson, p.8)

There was a suggestion that resident choice could be undermined by the paternalistic attitude shown some by staff who claimed to know what residents liked when discussing menu-planning: "… it's a combination ... the team, (name of staff member) and the kitchen staff. 'Cos we know what they like. If they like curry we'll put it on. But not many of them like curry so it's an option. We know what they like you see" (Philpin et al., p. 782). In contrast, paternalism was also perceived in a positive light, indicative of staff 'knowing' their residents and harnessing a sense of belonging amongst those in their care, as one resident asserted: "The girls know what I want and they don't bring me things I don't like" (Philpin et al., p.782).

Another issue affecting resident agency was mealtime seating arrangements, which appeared to be based on a number of factors including the judgement of staff, resident behaviour, and the opinions of residents(33). Residents had mixed feelings about their table companions with some expressing indifference ("We talk when we meet at the dining table and apart from that we have nothing in common"), others harbouring a negative view ("I don't like to have my meal in the company of strangers and people I don't like"), whilst others struck a more conciliatory tone ("of course there are residents you prefer to others, but we are all friends") (Kofod & Birkemose, p. 131). Relations between residents, which are often brought into focus at mealtimes, highlight the challenge of generating a convivial and tolerant atmosphere in an institutional setting for residents with physical and emotional needs:

> *Resident – "She was at my table, where I used to eat, she started crying. I said, "What's up with you?" – There's no tears, but she started crying all the time and that Thai, that Chinese woman, when she coughs, she can't half cough! Sticks her tongue right out and coughs all over the table, you know, so I like to get in and out now." (Kenkmann & Hooper, p.*

102)

This scenario is also indicative of a mealtime culture that is often defined to some extent by residents’ illnesses and the challenges that their resultant behaviour may present. Furthermore, it demonstrates how the themes of resident agency and mealtime culture are interwoven, and in particular, how resident interactions can impact on the mealtime culture.

3. Mealtime culture

The socio-cultural significance of mealtimes emerged as a clear theme in the literature, with residents and staff expressing shared meanings and memories of food, and perceiving mealtimes as offering a sense of social normality and an opportunity for social interaction. Mealtimes were regarded as a focal point by residents and staff, around which all the other daily activities were scheduled(151, 231):

> *Resident – “I don’t need a clock, when we are called for breakfast it is 9 o’clock, lunch is around one, and in the evening when the noise of carts is heard in the kitchen it’s eight o’clock...” (Palacios-Cena et al., p. 485)*

As well as providing a structure to the day, mealtimes were seen to contribute to the broader “social fabric” of the care home(230). Indeed, a mealtime culture that encouraged social interaction was recognised by staff as being critical to the health and wellbeing of residents, with one carer (a speech-language pathologist) suggesting that the psychological and social needs of residents may outweigh nutritional needs: ‘‘I think people would give up optimum nutrition in order to have a meal that’s less nourishing in the company of friends’’. (Bennett et al. (2014), p. 330)

The socio-cultural significance of mealtimes was reaffirmed by residents who discussed missing their “home” or “spouse’s” cooking(225), and who described their enjoyment of preparing a “cooked dinner” or “proper meal”, invariably consisting of roast meat, potatoes, vegetables and gravy(124). Notably, the shift in responsibility for meal provision appears to extend beyond the enjoyment of the meal itself to the satisfaction derived from the preparation of it and the role of the cook as provider or host, as one resident articulated: “...I feel less of a woman...I’d been cooking for 70 years...it was my job...and now what is my role?” (Palacios-Cena et al., p. 486). For some residents, meal preparation was an integral part of their everyday life before admission to a care home:

> *Interviewer – “Before you came in here did you used to do a lot of cooking?”*
>
> *Participant – “Well yes, I used to. Lived with my mother didn’t I (laughs). So I did what she said ... and the family, the boys, liked their food, always have.”*
>
> *Interviewer – What kind of things did you cook for them?*
>
> *Participant – “Well dinner ... cook a dinner and soups they used to like – home-made soups. Laver bread we used to like – oh yes. ... laver bread oh yes we used to love laver bread.”*
>
> *Interviewer – “How did you cook it?”*
>
> *Participant – “Well you fry it in the frying pan ... lovely”. (Philpin et al., p. 776)*

Traditional or familiar food in the care home, as rooted in national culture, was reflected on positively by residents and staff alike(124, 225). The time-honoured meal appeared to provide a significant association with their collective memories of family mealtimes before coming into care, reinforcing residents’ identities, and the socio-cultural importance attributed to family meals. As one resident stated: “There is no greater wealth for somebody than being able to eat and feed his family” (Palacios-Cena et al., p. 486). Traditional foods and customs also played an important role in helping to maintain social cohesion(16) and, for some, contributing to wellbeing.

> *Member of staff – “And of course we were putting sherry in with the mince pie mix and some of the residents were having a sherry. Things were lovely. We had Christmas carols on at the time we were doing it, and obviously the Christmas decorations. And it was a lovely, lovely atmosphere, you know”. (Philpin et al., p.779)*

4. Meal quality and enjoyment

The final theme that emerged from the analysis was concerned with the physical aspects of the mealtime, and referenced meal quality and the dining atmosphere, including meal options, menu variety, food palatability and sensory appeal, and also the physical dining environment and the type of food service.

For staff, meal quality was associated with a healthy, balanced diet: “We look to try and give them the five vegetables a day and all this you know, health options and ... They’re pretty lucky, they have fresh meat every day, they have plenty of vegetables, five a day” (Philpin et al., p.778). However, it was acknowledged that promoting a healthy diet in the care home could be at odds with resident choice, and that ultimately, it was important that residents were offered what they perceive as a pleasurable diet*:* “They like the same things as us – the bad things. But if they’re not going to eat anything healthy it’s better for them to have a bit of something” (Philpin et al., p.783). For their part, residents alluded to the pleasure derived from the tastiness of food, a marker not just of meal quality, but also a connection to their past.

Participant: "[The chips] . . . which are not tasty again. Everybody says that. Well the majority of them – the people that I've spoken to – they say there's no taste with the chips at all. What it is I think they cook them in oil . . . I think, I don't know. . ."

Interviewer: "And what did you cook yours in?"

Participant: "Well you know if I cooked bacon and I'd put the fat from the bacon with the chips then it was nice and tasty."

Interviewer: "Oh my – very nice (both laugh)." (Philpin et al., p. 777)

Meals were discussed in relation to their presentation and variety, which staff expressed a desire to enhance(151). The quality of the food was described in one study as unpalatable(228) and in another by staff as indefensible at times(227). Despite this, staff reported presenting a united front to mitigate resident complaints(227), conscious of the repercussions.

Member of staff – "Sometimes there is quite a wastage in some of the meals … it makes you feel uneasy when they complain … they [residents] can go down and complain to the, err, boss". (Dunn & Moore, p. 5)

Staff also implied that offering residents an appealing meal can be challenging, particularly when they require a soft food diet.

Member of staff – "She looked at the [pureed] food a bit as if to say, 'what's that?' but then we explained to her, you know, this is what you've got to have because you nearly choked, y'know, an' now she's, 'oh right' an' she'll eat it". (Dunn & Moore, p.6)

Enhancing the décor of the dining room was associated with improving meal enjoyment in a number of studies(32, 33, 121, 123, 232), contributing to positive experiences that extend beyond nutritional intake alone. In one study, care staff reported improved resident mood following the introduction of new furnishings and lighting, and the addition of wooden-look flooring, decorative items and wall paintings to create a more homelike environment.

> *Members of staff – the "better physical environment with good furniture and with matching colour has better effect on residents' mood. High backed chairs, and beautiful dining tables give a homelike feeling"; "Dining is not just eating and going, let them (residents) celebrate it"; and "residents and staff feel more 'life' in there now". (Chaudhury et al., p. 13, reviewer edit)*

The provision of a restaurant-style service which focussed on meal presentation, improved surroundings, a wider range of choices, and extended dining-room opening hours was valued by residents in the study by Kenkmann & Hooper (2012). However, whilst residents appreciated the good food and choice, the restaurant-style service was acknowledged as having its limitations, with some residents expressing a desire for a quieter, more intimate dining experience in the evening.

4.3.5. Discussion

The importance of understanding how complex interventions work across a diverse range of groups and settings has been emphasised(36). By synthesizing the views and opinions of residents and staff in care homes, this systematic review reveals the complexity of the mealtime experience and highlights some of the 'active ingredients' of mealtime interventions(233). The multi-faceted nature of mealtimes, from the provision of nutritious food through to the creation of a dining atmosphere that provides opportunities for social interaction and resident agency, suggests that food intake, and the wider health and wellbeing of residents, may be unlikely to be improved through the implementation of single-component interventions, such as enhancing meal quality or dining room décor. Rather, this research suggests that care provision, resident agency, mealtime culture and meal quality and enjoyment are all important, interacting factors structuring residents' experiences of mealtimes (see Figure 4). Organizational and staff support emerged as an over-arching theme in the data and was felt to impact resident agency, mealtime culture, and meal quality and enjoyment directly. Figure 4 also illustrates the linear relationship between themes, with organizational and staff support impacting resident agency, which in turn help to define the mealtime culture, and which ultimately influence residents' enjoyment of meals. Although all four themes are important and independent experiential components of the mealtimes, they have a knock-on or cumulative effect on meal quality and enjoyment.

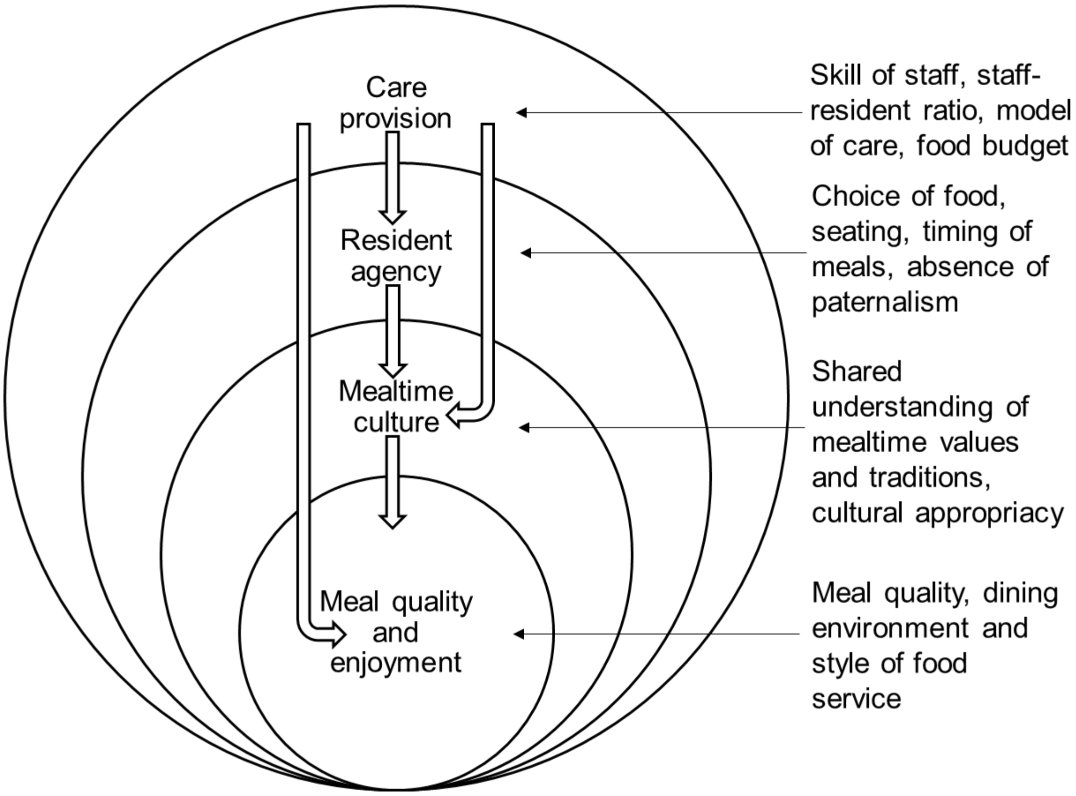

Figure 4. *Conceptual model for mealtime interventions*

Several studies have sought to increase care home residents' enjoyment of food through changing features of the environment (e.g., creating family-style mealtimes or a restaurant service(32, 33, 41)). However, while some environmental interventions may reduce anxiety among residents(38) and increase food intake(33, 232, 234), the collective nature of mealtimes can restrict the creation of a relaxed and intimate atmosphere(235, 236), and such interventions can undermine resident agency because they may fail to account for individual preferences (e.g., to eat alone)(237). Indeed, a key theme emerging from the current review was that of resident agency and the importance of individual choice, such as when to eat, what to eat, where to eat and with whom. A clear challenge highlighted by this review, therefore, relates to how individual choice and autonomy can be accommodated in mealtime environments which are communal and routinely perceived in a medical in context(18, 238).

A further feature of this review is its highlighting of the pivotal role played by staff in enabling resident nutrition and enjoyment of food. Feeding difficulties are often reported to be a physical barrier to food intake and the maintenance of good nutritional status(24, 151, 152), but much depends on the skill of the carer providing feeding assistance, ensuring a consistent and focussed approach to eating, and promoting autonomy and dignity(153). It has also been suggested that the company of care home staff at mealtimes can positively influence residents’ nutritional intake(32, 33, 121) and social interaction(18). However, a recent independent inspection of health and adult social care services in England carried out by the Care Quality Commission (2012)(44) found that one in six care homes did not always give residents a choice of food or support them to make a choice, and did not ensure that there were enough staff available to assist residents who needed help to eat and drink(50). Our review supports these findings and reveals several staff and institutional factors that can undermine the mealtime experience, including insufficient staff support for mealtimes, time/ role pressure, confusion over roles and responsibilities, and poor relations with residents(35, 41, 151, 227).

Drawing on data from nine different countries, this is the first systematic review of qualitative literature in this area and considered a broad range of residential care settings. Future qualitative research should explore how different settings, care models and cultural factors affect the provision of care and the impact that this has on resident and staff experiences. Despite care home residents being the central focus of mealtime interventions, only eight studies included in this review sought the views and opinions of residents themselves. Gaining greater insight into the resident experience is essential to identifying ways of improving care provision and can highlight the potential barriers and facilitators to the implementation of future interventions. Additional insight could also be sought from family carers or the relatives of care home residents, particularly as some residents may be unable or unwilling to articulate their experiences of mealtimes. Finally, given their influence on the mealtime experience, and their ability to inform and affect change, future research should include more input from stakeholders including care home owners or managers, occupational therapists, nutritionists and dieticians, and nursing staff. Involving these cohorts in future research will help to determine the feasibility and acceptability of mealtime interventions, and pave the way for effective implementation.

4.4. Conclusions from the systematic review

Mealtimes are a pivotal part of care home life, ensuring good nutritional status, providing structure to the day and generating opportunities for conversation and companionship. However, enhancing the mealtime experience for care home residents is problematic because of the complex needs of residents and the desire to create an environment in which individual care can be provided in a communal setting. This research highlights the areas in which particular attention might be focussed: Staff recognised the impact of mealtimes on residents' quality of life and stressed the need for greater mealtime assistance; residents coveted choice and valued their autonomy; and both staff and residents alluded to shared mealtime values rooted in traditions and memories of family mealtimes.

4.5. Chapter conclusions

As observed in the discussion of the systematic review (section 4.3.5), very little qualitative research has sought to elicit the mealtime experiences of care home residents, reinforcing the notion that they are the "silent recipients of care"(18). Overall, a large proportion of the studies in the review were cross-sectional, describing mealtime provision at one point in time. Moreover, the intervention studies were poorly described, limiting understanding of how they worked, and casting some doubt on the validity of the findings. Consequently, future research is needed to develop complex interventions that: (1) take account of stakeholders, (2) give adequate descriptions of the multicomponent mechanisms of the intervention, and (3) have longitudinal outcomes that measure whether the intervention is effective over the long-term. As a first step, the following study in Chapter 5 aimed to address the paucity of literature pertaining to the resident-stakeholder by exploring their mealtime experiences. The findings from the systematic review suggest that meal quality and enjoyment, mealtime culture, resident agency, and care provision are likely to be reflected in these experiences.

Chapter 5: A qualitative interview study of residents' experiences of mealtimes in care homes

5.1. Chapter overview

This chapter presents the second piece of work that was conducted as part of this thesis, a qualitative exploration of residents' experiences of mealtimes. The study aimed to elaborate and contextualise the underlying social and psychological processes that effect the dining experience for residents, including environmental, socio-cultural and institutional aspects of mealtimes to help identify priority areas for intervention development.

5.2. Background to the current research

Moving into a care home is life-changing and requires a significant amount of adjustment. In addition to forming new social connections, residents can face challenges to their privacy, dignity, and independence: This can have a profound impact on quality of life and wellbeing(239). Mealtimes bring this experience into sharp focus, as residents are thrust into a communal environment with little choice over who to sit with and when and what to eat. A regimented routine and paternalistic model of care can lead to low self-efficacy amongst residents(18). Despite the impact that the transition to care can have on quality of life and wellbeing, residents are often marginalised and excluded from research(240). The systematic review of qualitative studies in Chapter 4 returned only eight studies that had sought resident perspectives on mealtimes.

Given the rising cost to care homes from supply and demand pressures, the increasingly complex care needs of residents, and the financial burden facing individuals and society, there is a need to synthesise residents' perspectives on what influences wellbeing in order to improve care provision and minimise distress(241). Whilst there is a plenitude of quantitative data on the effectiveness of mealtime interventions, very little research has been informed by the views of opinions of the recipients of these interventions. The resident perspective is important in helping to decide *what* needs to be done, but also in shaping *how* it is done.

5.2.1. Aims of the current research

The views and opinions of care home residents were explored with the purpose of gaining a greater understanding of the relationship between mealtime experiences and health and wellbeing, building on the findings of the previous study. The current qualitative study explored: (1) residents' perspectives on mealtimes; (2) how residents' social interactions effect their enjoyment of meals; (3) and some of the barriers and facilitators to providing the optimal mealtime experience. This study was exploratory and interpretative in nature. By using qualitative methods, explanations were developed using an inductive approach(199). That is, patterns observed in participants' responses formed an explanatory model (Figure 5).

5.3. Exploring residents’ experiences of mealtimes in care homes: A qualitative interview study[5]

5.3.1. Abstract

***Background**:* Many interventions aim to alleviate well-documented problems of malnutrition in residential care homes and improve residents’ health and wellbeing. Despite some positive findings, little is known about *how* and *why* mealtime interventions might be effective, and in particular, what effects residents’ experiences of mealtimes have on health outcomes. The aim of this study was to gain an insight into these experiences and explore some of the issues that may impact on residents’ enjoyment of meals, and resulting health and wellbeing.

***Methods**:* Semi-structured interviews were conducted with eleven residents from four care homes in the South West UK. Thematic analysis was used to derive content and meaning from transcribed interviews. Interviews were supplemented by researcher observations of mealtimes.

***Results**:* The dining experience was a focal point for participants’ broader experiences of residing in a care home. Three themes pertaining to residents’ experiences were identified: (1) Emotional and psychological connections with other residents; (2) managing competing interests with limited resources; and (3) familiarity and routine.

***Conclusion**:* Mealtimes are a mainstay of life in a care home through which residents’ experiences are characterised, exemplified and magnified. Understanding how residents interact with one another, accommodating their preferences and encouraging autonomy may enhance their mealtime

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[5] Watkins, R., Goodwin, V., Abbott, R., Hall, A. and Tarrant, M. (2017). Exploring residents’ experiences of mealtimes in care homes: A qualitative interview study. *BMC Geriatrics*.

experiences. It may also help to ease the transition from independent-living to life in care, which can be particularly stressful for some residents, and improve health and wellbeing over the long-term.

5.3.2. Introduction

More than 400,000 older adults in the UK live in care(242), an estimated 60 percent of whom are aged 85 or over(243). Residential provision for these adults is generally referred to as a care home, defined as a setting in which residents usually have a single room and access to on-site care services, and including those care homes with nursing services(44). Regardless of their specific classification, there is considerable overlap in the health status and clinical needs of this population across settings. In England, approximately 75 percent of care homes are privately-owned, 15 percent are owned by the voluntary sector, and 10 percent are public sector(244). Around 70 percent of the care home market is state-funded(244). The health and wellbeing of care home residents is of ongoing concern. Effects of underlying medical conditions in older people are compounded by low mood, depression, anxiety, and loneliness(245), contributing to an often poor quality of life among care home residents(246). In the UK, the incidence of depression in care homes is particularly high, estimated to affect almost one third of residents, three times the proportion estimated to be affected in the community-dwelling population(247). A common side-effect of poor psychological or emotional health is a dwindling appetite and a decline in nutritional status(248). For instance, depression and apathy have been independently associated with weight loss in care home residents(249).

The current study investigated care home residents' experiences of their care, with a particular focus on their experiences of mealtimes. Mealtimes are an integral part of day-to-day life in a care home(250) and are a pivotal point for the delivery of care. The mealtime experience may therefore be an important catalyst for the health, wellbeing and quality of life of residents. Yet, a recent systematic review concluded that there is a paucity of research pertaining to the resident experience of mealtimes in care homes(212). Building on existing research that suggests a positive effect of mealtime interventions on nutritional outcomes of residents and the behaviour symptoms of people with dementia(24, 25), this study sought to address this gap by investigating the experiential component of mealtimes. This reflects Medical Research Council (MRC) guidance on developing and evaluating complex interventions which highlights the importance of establishing a theoretical understanding of how interventions work(36).

Mealtimes represent more than just the provision of nutrition; they may offer residents (and staff) the opportunity to form and sustain important social relationships. Food is used to provide comfort, express feelings, celebrate or reward success, and nurture companionship(165). Eating occasions are integral to tradition, to family life, and to identity(124). In stressful situations or in unfamiliar environments, or indeed when the notion of identity is compromised, food (and the social connections to it) may significantly influence quality of life(251). Whilst it is acknowledged that mealtimes have a critical socio-cultural role in the care of older people, existing interventions are characterised by their focus on single components, and lack the complexity associated with health and wellbeing determinants(24-26). For example, a nutrition-based intervention such as the provision of snacks between meals may not be effective in the long-term if interest in eating is poor or residents are not skilfully assisted. Similarly, an intervention based on altering the design of the dining room or changing the way in which food is served, does not ensure that the dining experience will be pleasant or that the social aspect of eating will be enhanced. Prior research has indicated that residents can feel disenfranchised in their care home, manifested in a perceived loss of control(252), as routine decisions are taken away from them and staff adopt paternalistic approaches to care provision at mealtimes(18). This negates a key element of person-centred health care and social care as defined by the Care Quality Commission (CQC), which advocates giving people choice and control over their own care, treatment and support(253).

Enabling resident choice or personal preferences is difficult in care homes because many residents choose not to draw attention to their negative experiences of care. In a study conducted in ten Australian nursing homes, Pearson et al.(161) observed that residents reported not wanting to be labelled as “whiners” and not wanting to inconvenience staff. Reimer et al.(18) describe care home residents as “silent recipients of care” as they tend not to raise concerns or express preferences about mealtimes, either because severe cognitive decline leaves them unable to do so, or because it is engrained within the cultural values of their generation(254). The absence of verbalised dissatisfaction cannot necessarily be taken as an indicator of satisfaction and warrants further investigation into care home residents’ experiences of their care. Such an investigation may help identify and develop a basis for future interventions in care homes(36). The current study aimed to:

1. Gain an insight into residents’ perspectives on mealtimes in care homes;
2. Elicit some of the important issues that impact on residents’ dining experiences, including how their social interactions may affect their enjoyment of meals.

5.3.3. Methods

Ethical approval for the study was given by the authors’ Research Ethics Committee (Reference Number: 15/07/075). Written consent was obtained from all participants prior to interviews.

Sampling of care homes

In England, care homes for adults are regulated by the Care Quality Commission (CQC), which carries out regular inspections to ensure that care is safe, effective and compassionate, and that improvements are made where necessary(44). Care homes rated by the Care Quality Commission (CQC) as inadequate or requiring improvement were not selected for inclusion in the study. A purposive sampling approach was used to select the participating care homes. This type of sampling is not intended to generalise to the population as a whole, but rather identify common links or characteristics between the observed setting and other settings like it(255), and reflect the diversity within the care home population(256). This is a standard approach to sampling in qualitative research. In the current study, the criteria for a typical case was to include privately-run, mid-size care homes from both a rural and urban locale. Recruitment took place through existing research networks at the lead researcher's institution, including PENCLAHRC's network of contacts for patient and public involvement in research (PPI). Care Home Managers in selected homes were sent a letter inviting them to take part in the study. The letter provided managers with some details about the study. The lead researcher then made an initial visit to interested care homes to discuss the study in more detail. Care home staff were given copies of the participant information sheet, which they could discuss with prospective participants. Once potential participants had been identified by care home staff, and any queries or questions about the study had been addressed, the lead researcher liaised with the Care home Manager about a suitable date and time to conduct the interviews. A key objective in the recruitment process was to ensure that the research did not detract from the provision of planned care in the sampled homes.

Participants

Male and female residents aged 65 years or older from selected care homes were invited to take part in this study. Whilst the care homes in this study also accommodate residents with mild cognitive impairment (MCI) or a diagnosed form of dementia, care home staff assisted in the recruitment of participants who were likely to be suitable candidates for interview and able to give independent and informed consent. As their primary care-givers, care home staff were best placed to assess whether residents were cognitively able to give independent consent. These were residents who were able to articulate their experience of mealtimes, as this was integral to the research. Informed by previous studies, it was expected that between ten and fifteen participants would be needed in order to give a sufficient range of experiences and depth of data to reach theoretical saturation(257, 258), the point at which no new data emerges to provide additional insights into the research question(199). Each participant who gave their consent to take part in the study was assigned a unique reference number (e.g. RES01).

Semi-structured interviews

Interviews were conducted by the lead researcher (RW) and focused on the experience of mealtimes, including the social environment in which they take place. The interview strategy (Appendix C) was designed to facilitate a coherent discussion, with participants free to say as much or as little as they wished. Each interview was conducted face-to-face in a private setting in the participating care home, and lasted approximately 20-30 minutes. In order to provide context to the participants and the researcher, interviews took place in the dining room between meals where possible. Only the lead researcher and resident participant were present during each interview.

As new issues or themes emerged in the interviews, they were included in subsequent interviews and structured further questioning. This approach was inspired by Grounded Theory(259) in which a theory emerges iteratively and develops through the analysis of data. As data are collected, repeated ideas (e.g., views and opinions) are tagged with codes, which can then be grouped into concepts and/or categories. Interviews were audio recorded and transcribed. During each interview, nonverbal expressions and gestures were recorded in the interviewer's field notes in order to enable a more detailed description of the conversation and give further insight into a participant's perspective. The field notes contained the researcher's observations and thoughts about the atmosphere and interaction, contributing to a "thick description" of the data(260). These field notes were also used during data analysis to note thoughts and emerging insights.

Observations and field notes

Prior to conducting interviews, mealtimes were observed at each of the care homes. This was non-participatory and served to provide context to the participants' interview data. Care home managers provided verbal consent for these observations. Field notes from these observations were anonymised for use in subsequent analysis and reporting.

Data analysis

Interview data were analysed using Thematic Analysis(197, 261). The aim of the analysis was to organise the data in a meaningful way so as to develop theory about the forms, functions and consequences of mealtime experiences in the care home environment. The organisation and analysis of data followed the steps outlined below:

1. *Familiarisation with the data* – Listening and reading through the data. The first coder was also the interviewer.
2. *Generation of initial codes* – Naming key features of the data.
3. *Searching for themes* – Grouping codes into potential themes.
4. *Reviewing themes* – Ensuring that the themes are distinct from other themes and internally coherent and consistent.
5. *Defining and naming themes* – Interpreting and giving the themes analytically meaningful names. Extracts that represent the essence of the respective themes were identified in this step.
6. *Generating a thematic network* – Mapping interconnection between the themes
7. *Producing Theory and Report* – Interpretation and reporting the themes and the interconnections between them beyond description and ensuring that all analytical claims are congruent with the extracts.

Two researchers (RW, AH) familiarised themselves with the whole data set and following initial familiarisation with the transcripts, developed a bank of codes. The researchers then coded the transcripts independently and compared analyses, with any differences resolved through discussion. Following this, the lead researcher (RW) organised the coded data into themes, which were reviewed by a second reviewer (AH). Differences were resolved through discussion of the themes. NVivo 10 (QSR International) was used to help organise and code the data. The provisional themes were then refined after discussion with all of the authors. To ensure that potential biases did not occur on the part of the lead researcher, a research diary was also kept. This enabled a reflexive approach to data collection and analysis(262), and provided insight which in turn help to inform data analysis. This is a well-established technique for improving the quality of the emerging explanations(263).

5.3.4. Results

Six women and five men were recruited from four care homes. Further recruitment was not undertaken as new themes in the data were not emerging. The age of participants ranged from 78 to 97 with a mean age of 87. None of the participants required feeding assistance. Two participants described having hearing difficulties, which effected conversation with their table companions. One participant was diabetic, which restricted food choice. The care homes were all privately-run, small to medium in size with a bedroom number ranging from 18 to 46. As well as describing various organizational and procedural aspects of them, participants gave nuanced accounts of their dining experiences which they linked to their broader experiences of life in care. Three themes emerged from the analysis pertaining to these experiences: (1) Emotional and psychological connections with other residents; (2) managing competing interests with limited resources; and (3) familiarity and routine (see Figure 5).

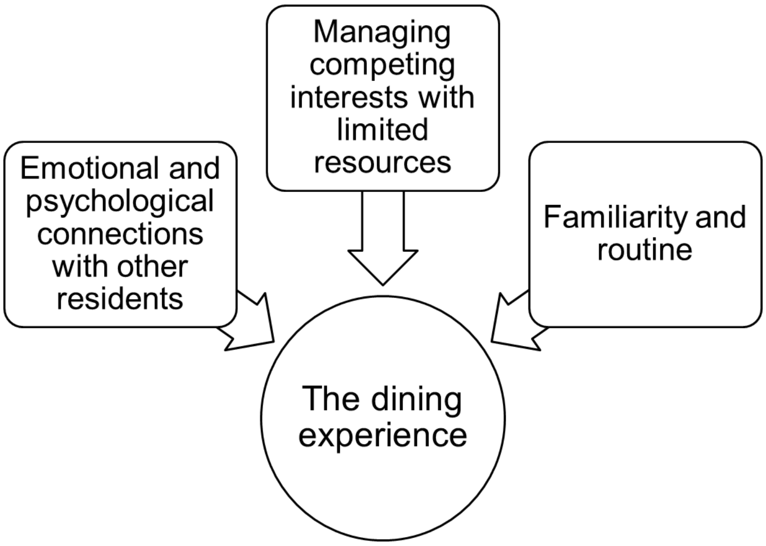

Figure 5. Experiential components of the mealtime

Although these themes reflect residents’ experiences of care in general, it was clear that mealtimes are a focal point for these experiences. Anonymised participant quotes are used to illustrate themes. Interviewer field notes are used to elaborate on the context and meaning of themes derived from participant responses.

1. Emotional and psychological connections with other residents

Participants discussed their social interactions in the care home, the nature of their relationships with other residents, and the implications that living in a care home community has for these relationships. Mealtimes were viewed as an opportunity to establish and maintain relationships with other residents, but it was acknowledged that communication difficulties provided a barrier to this. Relationships were also highly influenced by tablemate interactions. Therefore, staff had an important role in facilitating emotional and psychological connections between residents. For some of the participants, the transition from independent living to living in a care home had been difficult, but they had adjusted to it by developing positive relationships with other residents:

> *"You see, it might not work for everyone, but I don't know anyone here who's not happy here. You can tell from their faces. But the main reason for me is to find myself in a happy community. It's not as interesting as I might dream of, but so were a lot of jobs I had initially."* (RES07)

In each of the four homes, the dining room represented a significant communal meeting place for residents, some of whom may not have seen each other throughout the rest of the day. Even in participants for whom communication was physically limited, there was a desire to build relationships and a sense of community: *"I wished I could hear better, the conversation is limited only because our lives are limited now"* (RES07). Although there was an implicit acceptance of these difficulties, there was a desire to improve communication, and in so doing forge a renewed sense of community:

> *"I mean, it troubles me a little in that the three blokes who sit with me - or I sit with the three blokes - we're all in different stages of an illness which prevents communication. And I've been racking my brains as to how I might not sort of impose anything, but enquire of the girls, the care assistants, how we might go about changing it."* (RES08)

Moreover, participants made it clear that social interaction is more than verbal communication, and that despite their communication difficulties, they had a "shared understanding" or an "unspoken bond" between them, and that irrespective of their background and stage of illness, they had their "humanity in common". A sense of community, however it was manifested, enabled residents to feel emotionally and psychologically connected. However, the connected community could be interrupted on occasion by the abrasive personality of some residents or by the challenging behaviour that accompanies some types of dementia:

> *"There's (resident's name), she sits over there and we can hear her moaning about the food all the time, and she'll go at them, and one day, they put her out the room. She doesn't help out, because she makes her life a misery and no-one can't get on with her."* (RES04)

Tablemate interactions were a key factor in establishing emotional and psychological connections, as residents reported that they sat in the same place for each meal surrounded by the same table companions. Staff had an important role to play in facilitating social relations, either by enabling appropriate table groupings or by sitting down and eating with residents to support conversation. The extent of social interaction was observed to be quite mixed between residents and amongst the different care homes. Environmental factors such as menus, table service, interaction with staff, and mealtime themes were often a trigger for conversation. For instance, in one home it was observed that dessert was chosen from a trolley, and this gave the residents an opportunity to ask questions about the dessert selection and discuss their options with their table companions.

2. Managing competing interests with limited resources

Participants alluded to the importance of individual choice, including menu choice, and acknowledged the trade-off between catering for personal preferences and the constraints of the collective provision of meals. Whilst participants valued their autonomy, including what, when and with whom to eat, they recognised that there were competing interests between the personal preferences of residents and the ability of care home staff to accommodate these preferences, particularly given their limited resources. Moreover, the balance between allowing residents to be independent and ensuring the care home provided residents with the necessary support was challenging. Some participants felt they had enough autonomy: *"You don't have to do anything you don't want"* (RES11), whilst others acknowledged the importance of support, particularly around mealtimes, and stressed that independence is not always desirable:

> *"I think what happens in these establishments is that if people are not able, they're left to their own devices to see if they can actually do it - to encourage independence. And there can be the danger, I think, of not eating as much as you should, and then saying enough is enough, because you simply haven't got the strength or otherwise to finish off the meal or cope with it yourself."* (RES08)

There was a general acceptance that meal choice was necessarily limited by the collective provision of food and the diversity of personal preferences: *"They (care home staff) can't please everybody all the time, can they? I mean, they get to know what people like. As I say, I don't like curries, but most of them do have a curry"* (RES10). This resulted in meal options being described as "hit and miss", with participants conceding that it was difficult for collective provision to replicate the satisfaction derived from a home-cooked meal:

> *"Yes, so you look at the menu and see "ooh its sausage and mash today, oh that's alright", and another day it might be something else, and you think, "oh, I'm less keen on that", you know, but at home it'd be unusual to turn your nose up at anything."* (RES06)

Some participants expressed a preference for traditional, culturally-familiar foods, and a dislike for those that were unfamiliar: *"I said to them, in a nice way, "Look, I don't eat nothing else but English food and I'm not going to start it, I'm sorry""* (RES04). Thus, when encouraged to try new foods, individuals may sometimes resist the imposition of collective provision – a tension that can arise from competing interests. Providing residents with a choice at mealtimes helped to resolve the tension and avoid conflict:

> *"We're given a menu, two things a day, but half of it's things I never eat. So I stick to the things I know ... we had sausage and mash and beans today. Then we had something with jam on, I don't know what it was, it was quite nice. We have two things."* (RES09)

The mealtime provided individual choice in one way, but in other ways was seen as restrictive. For instance, residents were typically assigned a seat at a table on admission to the care home based on availability and on the level of assistance they required. Invariably, this became *their* seat: *"We can sit wherever we like, in theory, but we tend to end up in the same place"* (RES02).

Therefore, whilst this structure facilitated social interaction, the lack of choice over where to sit inhibited residents' opportunity to establish their own relationships. Table allocation was also an important part of the induction process for new residents and a determinant of subsequent companionship. Although this illustrates how the transition into care may be eased for new residents, in similar scenarios individuals seated together may not necessarily bond with each other:

> *"Yep, I'm always on this table. There was a lady just joined us, who was new and they asked me if I would keep her company, and said "Yeah, I can do that" because I talked to her daughter beforehand and she said, "I've been told by the head one here that you're very good with newcomers, so will you look to my Mum", and I said, "Yeah". We get on ever so well together."* (RES04)

There was a shared dissatisfaction over the delay in service, either before the meal or between courses, with participants also conveying frustration at the attitude of staff. This engendered an expression of collective disenchantment, although this had positive implications for residents' social identity:

"I think… the other day I was annoyed, um, the person on the table with me complained about waiting. And they said well go to the restaurant down the road and see if they keep you waiting so long. That was one of the girl's cheeky reply, you know, but typically speaking I would expect better service in a restaurant. In that respect, the waiting business … So we sit there waiting and waiting and the clocks on the wall saying ten minutes, twenty minutes, 30 minutes, sometimes its three quarters of an hour, you know, you're waiting." (RES06)

In addition, there was a collective sense amongst participants that delays in service were due to a shortage of staff at mealtimes, and that providing care to individual residents was limited by resource pressures: *"Well, they tell you that they're really understaffed, they really want more staff. But I suppose if they had more staff, the prices would go up even more"* (RES10). One participant remarked that staff had several responsibilities during mealtimes, including serving as waiting staff which could detract from their main responsibilities: *"(Catering Manager) said in an ideal world he would like a waiting staff, so the carers could do their caring and the waiters could do the waiting, because the carers say they're not waiters or waitresses, which is fair enough"* (RES02). Despite this, participants appreciated the staff efforts to be attentive and on-hand to deal with their individual needs.

3. Familiarity and routine

Participants inferred that habits and routine had a key influence on their experience of mealtimes, as well as their broader experience of life in a care home. Residents' habitual behaviour had developed over a lifetime, and as a result was perhaps more entrenched. Whilst they may be less inclined to deviate from habitual norms, participants appreciated the opportunity to mark special occasions, especially if this offered them a chance to reminisce. Participants discussed how they spent a typical day in the care home, and alluded to some of their personality traits and how these impacted on their experience of life in residential care. For residents who preferred to keep their own company and who were less willing to participate in other group activities (e.g., bingo or quizzes), mealtimes broke up the day and provided an opportunity to build and maintain social relations with others.

Participants appeared to find comfort in familiarity and routine, and this was often reflected in their meal choice: *"Tends to be the same breakfast each day. I don't find anything wrong with that, I'm a creature of habit anyway"* (RES08). This exemplifies how routine can represent personal preferences. Many of these preferences are based on long-standing habits and well-established rituals:

> *"At lunch by my choice I only have soup. I'll tell you why. Because all my life I've been on the run, grabbing a sandwich and so forth, so I'd never eat at lunch at all. I mean, they have a very lovely lunch, but I only have soup."* (RES07)

The ritualistic aspect of mealtimes was recognised by staff in all of the homes, which regularly focussed efforts on the marking of special occasions. Resident and staff birthdays were celebrated with a cake, and in one home, residents could mark their birthday by deciding what food options were offered on the lunch menu: *" … on birthdays you're given a cake and the menu is your choice that day. Then, they bring in the cake and it's cut up and distributed to everybody around the house"* (RES01). Other occasions such as the Queen's birthday, Easter and national sporting events were also frequently marked with a special meal and event-specific dining room decorations. The celebration of special occasions was appreciated by participants:

> *"I mean, they're very good here, because the other day we had a Wimbledon lunch, which was lunch in a basket, followed by strawberries and cream, a scone, and a Pimms No.1."* (RES08)

There was a sense that special meals or celebratory occasions offer a welcome break from routine, as well as providing an opportunity for conversation and shared ritual. Indeed, the concept of routine required that a balance be struck between the comfort gleaned from having the same breakfast every morning or sitting in the same seat, and the feelings of institutionalisation associated with perpetual routine. This theme also highlighted how special meals could evoke memories of the past, and in so doing induce a sense of familiarity. For instance, residents spoke of how the opportunity to eat fish and chips in newspaper reminded them of good times, made them feel at home, and nurtured a closeness among residents.

5.3.5. Discussion

This study has highlighted the importance of social interaction between residents, as well as the importance of accommodating personal preferences, which are often shaped by the habitual and traditional dimensions of mealtimes. Catering for individual preferences can be problematic when faced with the competing interests of residents and the limitations of collective care provision. The findings demonstrate the complexity of mealtimes as experienced by care home residents, and have revealed some of the “active ingredients” that may contribute to effective mealtime interventions(233).

The transition from independent living to life in a care home can be a stressful experience for new residents, who may feel helpless and abandoned(264), and be confused, anxious and depressed(89). This may result from a sense of discontinuity between former and present lives, and the lack of privacy and autonomy may lead to social isolation and loneliness(265). Autonomy and self-efficacy are also undermined by having key decisions made routinely for residents(266). Entrusting residents to make decisions about aspects of their care may help to ease the transition by reducing feelings of disempowerment and boosting self-efficacy. The current findings support the notion that individual choice and freedom to express personal preferences are key components of residents' experiences of care; mealtimes are a focal point of these experiences and provide a social context through which individual needs can be realised. Consistent with this view, research by Haslam et al. (2012) has shown how giving residents greater control over the decision-making process strengthens their sense of community, or shared social identity with others which, in turn, promotes social interaction, greater engagement and wellbeing(267), and also a wider sense of citizenship(268).

A Care Quality Commission (CQC) inspection programme, which audited 500 care homes in the UK in 2012, found that one in six care homes (80 homes) did not always respect the privacy and dignity of residents or involve them in their care, failing for example to provide a choice of activities and options for residents or support their independence(44). Such findings are at clear odds with the resident preferences as expressed in the current study. Mealtimes in particular are an opportunity for residents to exercise some control over part of their life in care, for example through deciding what to eat, where to eat, when to eat and with whom(231). This is acknowledged by the British Geriatrics Society (2011), which highlights the importance of involving residents in decisions about their care, including aspects of care relating to mealtimes(244). However, despite evidence that such control is positively associated with quality of life(124), it is often at odds with the routinized, communal organisation of many institutions(35, 124, 227).

Given the challenge of accommodating individual needs and preferences in a communal context, our findings highlight the importance of striking the right balance at mealtimes. On the one hand, our study shows that there is a balance to be struck between routine and novelty. For example, whilst participants described being “creatures of habit” at mealtimes, they also appreciated the break from routine effectuated by the marking of special occasions. On the other hand, there was a perennial juxtaposition between individual and group interests, as exemplified by meal options or by seating allocation. In the wider literature, mealtimes have been described as offering a sense of social normality with residents sharing food, passing condiments and pouring drinks for each other, thereby contributing to a feeling of belonging(124, 231) and possibly enhancing a sense of community. At the same time, some residents clearly prefer privacy (i.e., eating alone) at mealtimes with "homeliness" associated more closely with family than with fellow residents of staff(40). Searching for balance in this scenario might involve altering the dining room to create a more intimate atmosphere, or offering residents the opportunity to eat in their own room. Although eating alone is inconsistent with the notion of group or social dining(237), safeguarding residents' privacy may enable them to identify with the collective if being private in normatively approved(10) – satisfying individual and group interests.

The notion of balance is closely related to choice: How much choice can residents be afforded at mealtimes? Our participants described having little or no choice over where to sit in the dining room and meal-times were generally fixed. This is in contrast to normal eating behaviour (and mealtimes) which are defined by choice (or negotiated choices). Indeed, food enhances socialisation (and wellbeing) in the real world because people choose what to eat, when to eat and who to eat with(269). Despite this, there is scant research on tablemate interactions, flexible mealtimes, and on other preferences such as where to eat(18). As much of the care given to older adults in care homes is prescribed, opportunities to defer choice to residents, such as what, where and when to eat, may help to improve the dining experience.

Limitations

Care homes were sampled on the basis that they were rated as providing a good overall standard of care, and managers may have decided to participate in the study because they had a high level of confidence in their provision of care. The experiences of residents in less well performing care homes may be different. For example, it is possible that poorly-rated care homes might provide poorer quality meals or inadequate dining facilities. Resident experiences in such scenarios may be more likely reflect these deficiencies. Moreover, interviews were conducted with eleven willing participants. While there was considerable commonality in current residents' responses, other residents in these care homes might have expressed different views. Finally, all of the participant care homes were located in the South West of England, which may not reflect the cultural and ethnic diversity characteristic of other areas of the UK and beyond.

Qualitative studies may incorporate member checking or use an external auditor to improve the quality of the research result. However, due to time and resource constraints, it was not possible to use these methods in this study.

Implications for future research

The Medical Research Council (MRC) emphasises the importance of developing a cumulative understanding of how complex interventions work so that their effectiveness can be enhanced and applied across a diverse range of groups and settings(36). Previous research into mealtime interventions in care homes has tended to focus on single-component interventions and has lacked the rigour and validity merited by the complexity of the population and setting(27, 247, 248). The current study has highlighted the complexity of the mealtime experience and the need for interventions to account for this. In particular, our findings suggest that future studies should focus on resident choice at mealtimes. For instance, there may be benefits to involving residents, meaningfully and collectively, in decisions about mealtimes, from meal planning and preparation, to seating arrangements. Collective decisions about the social environment may be a simple way of making residents feel “at home”, thereby enhancing their psychological functioning(267). Collective engagement, specifically the involvement of residents in group activities, has been posited as a means of building social relations within the home, alleviating residents’ sense of confinement and gaining back some control. Mealtimes that promote a social environment and a convivial atmosphere may improve mood and appetite, add meaning and structure to the day, and contribute to a greater sense of satisfaction with life(32, 33). In addition, we found that mealtime routines were valuable, but occasional variety was necessary. On the basis of participant responses, it seems important to identify and evaluate ways to introduce variety during mealtimes. For instance, should variety be incorporated by celebrating shared holidays or by allowing choice?

5.4. Conclusions from the qualitative interview study

This research highlights the importance of understanding residents’ routines, habits and preferences from the point at which they begin life in the care home, ensuring they are empowered to make their own decisions where possible and providing a dining environment that is social, convivial, and enjoyable. Residents’ experiences of mealtimes may provide important insight into these psychosocial influences on health and wellbeing and future interventions could consider how the physical health outcomes of residents are impacted by the social and psychological components highlighted in this study.

5.5. Chapter conclusions

The importance of establishing emotional and psychological connections with others has been highlighted in other care home research(241, 270). A systematic review of qualitative studies found that social connectedness and involvement with other residents was essential to good care home life, with good social ties reinforcing acceptance of transition to care, as well a sense of belonging and of meaning something to others(241). However, in a qualitative study of residents' experiences of transitioning to care, making connections with others was found to be limited by disability and poor health(270). A lack of connectedness, whether the result of impairment or a preference for privacy, has been found to contribute to boredom, loneliness and isolation in a number of studies(241). This clearly highlights the importance of accounting for and addressing social aspects, connections and comfort of care home residents to optimise the dining experience and in turn promote improved food intake.

Another feature of the broader care home experience is the need for residents (and staff) to compromise, borne out in the current study. In relation to mealtimes, residents discussed a preference for home-cooked food or culturally-familiar food, but accepted that their choices and preferences were limited by the need to provide for everybody in the home. Meeting the mealtime expectations of residents can be challenging, given individuals' habitual role with regard to meals, their character traits, personal tastes and preferences, as well as their functional abilities(271). In searching for compromise, care homes run the risk of mealtimes becoming less enjoyable for some residents, resulting in muted acceptance, resignation, or even despondency. Resignation and acceptance can be hallmarks of institutionalisation and the connection between malnutrition and institutionalisation has previously been documented(272).

Strategies to increase resident engagement in the meal service, and connect staff and fellow residents over meals are required to ensure that the needs and preferences of all residents are managed satisfactorily. This may help to improve the wellbeing and health (e.g., nutritional status) of older adults in care homes.

Mealtimes are an obvious vehicle for improving the experiential aspects of resident care because they are the focal point of care home life, and probably the best opportunity for residents to engage with others, make choices, and even be involved in (meal-related) activities. Mealtime staff, and the infrastructure within which they work, should be the drivers of positive change because they have a pivotal impact on the mealtime experience – as evidenced in the systematic review described in Chapter 4. This study suggests that social interaction, resident choice, and independence would be good targets for an intervention, as improving connections with others, and the desire to have individual needs and preferences satisfied, were articulated by residents. There is further evidence for this, and the for the potential effectiveness of staff training and education interventions, in the wider literature(18, 24-26). A staff-focussed mealtime intervention will be proposed in the next chapter.

Chapter 6: Developing and evaluating the feasibility and acceptability of a staff-focussed mealtime training programme

6.1. Chapter overview

This chapter contains the final empirical study of this thesis, the development and delivery feasibility assessment of a staff-focussed training programme to improve social interaction, choice, and independence at mealtimes. The empirical component of the chapter is preceded by an explanation of the approach taken to developing the intervention. This study aimed to develop a mealtime intervention based on the findings from the systematic review (Chapter 4) and the qualitative interview study (Chapter 5), and test it for feasibility and acceptability amongst staff facilitators and recipients.

6.2. Background to the current research

Evidence from the empirical studies in this thesis suggests that there are significant social and psychological influences on residents' experiences of mealtimes, including social connections between residents (and staff), resident agency, and cultural aspects of meals. It is also clear that the way in which care is delivered has an overarching influence on these factors and the overall mealtime experience. Thus, mealtime staff represent a critical focus for interventions aimed at improving the dining experience. Moreover, other research also indicates a clear reason for focussing on staff.

The findings of a 2012 Care Quality Commission (CQC) report highlight the need to improve resident choice and maintain autonomy at mealtimes: Of the 500 care homes investigated, residents from one in six homes were not given the support they needed to eat and drink adequate amounts, whilst 14 percent were found to have insufficient staffing levels to meet people's needs, culminating in a failure to adequately identify and support those at risk of malnutrition(44). The investigation also revealed that some care homes failed to provide a choice of food or provide support for residents to make a choice, and that failing to respect and involve people in decisions adversely affected nutritional status(44).

Whilst a staff training programme cannot compensate for inadequate levels of staffing, there is good reason to expect that working with existing staff will yield benefits for residents. For instance, there is some evidence to suggest that understanding the mealtime from a resident's perspective may encourage a more compassionate approach from staff in comparison to the routine and mechanistic approach assumed by staff when they do not empathise with residents(254). This could be achieved by encouraging staff to take time to reflect on their work practices at mealtimes and consider making changes. After all, the willingness to be reflective and critical of care practice, and adapt practice accordingly, is a sign of professionalism(273).

Previous research also suggests that training programmes should be conducted in-home by a senior staff member, that they incorporate a variety of active learning experiences such as role-playing, that they should give staff the opportunity to contribute ideas, and that training sessions are followed up(274). In addition to the practical and cost implications of establishing an internal staff training programme, staff may benefit from the ongoing emotional and pastoral support provided by peers and the training facilitator. In other words, there may be benefit to the staff themselves, beyond the expansion of their skill set. Moreover, any benefits to residents effectuated by training are more likely to be maintained and reinforced in the long-term, as the internal management of training mitigates against benefits being lost as staff move on (and replacement staff require training).

Finally, it is important to consider that many care workers have no health or nutritional qualifications(275). Indeed, research conducted on Scandinavian health professionals concluded that insufficient nutrition knowledge was the single greatest barrier to the provision of good nutritional care(150). This is coupled with the fact that job turnover tends to be quite high in care homes, presenting a challenge to the development of education and skills amongst staff(253). According to Kelly (2008), 42 percent of care staff leave within twelve months of joining and 61 per cent leave within two years. Therefore, it is proposed that a comprehensive programme of education, staff support and continuous evaluation is required to improve care in the long-term. Although speculative and beyond the scope of this thesis, it is possible that a consolidated programme of training will help to boost morale amongst staff, as staff feel more enfranchised, more able to perform their roles, and more socially engaged with residents. This, in turn, may help to reduce staff turnover, which would have widespread benefits for care homes.

6.2.1. Developing a mealtime intervention for staff

Evidence from the systematic review (Chapter 4), the qualitative interview study (Chapter 5), and the wider literature strongly supports the notion that care provision is critical to residents’ experiences of mealtimes. In particular, research suggests that staff should empower residents to make their own decisions, that mealtimes should reflect shared values and traditions, as well as provide opportunities for social interaction. Improving the mealtime experience for residents may enhance resident health and wellbeing measured by outcomes such as nutritional status, behavioural and psychological symptoms of dementia (BPSD), and quality of life. As discussed in the previous chapter, an intervention that is aimed at staff, and which targets social interaction, resident choice, and resident independence may improve the mealtime experience (and resident health and wellbeing). The change mechanisms associated with such an intervention, described in section 3.2.3, can be illustrated in a logic model. Figure 6 illustrates the regulatory processes that underpin the current intervention, specifically how training staff to target social interaction, choice, and independence at mealtimes could yield short-term and long-term benefits.

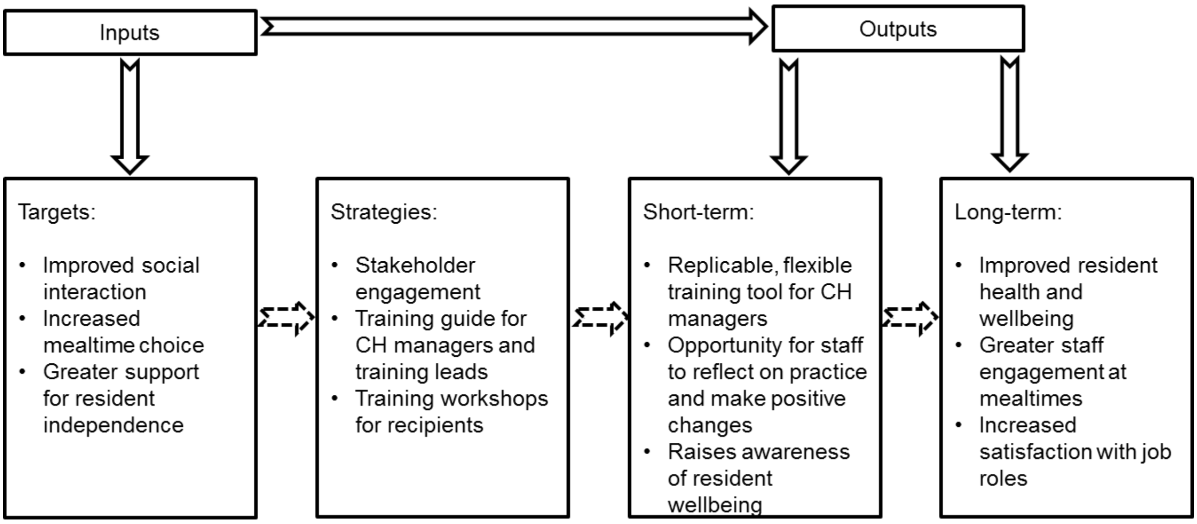

Figure 6. *Logic model for the staff training intervention*

As outlined above, the intervention is designed to be delivered to mealtime staff in workshops that focus on one of the three target areas (social interaction, choice, or independence). The findings from the systematic review (Chapter 4) and resident interview study (Chapter 5) suggest that these are good target areas for change, as summarised in section 5.5. Workshops are delivered to staff by the care home manager or training lead, who is provided with a training guide (see Appendix G), which outlines the purposes of the workshops and the instructions for delivery. The training guide and workshop materials have been developed in conjunction with stakeholders, and the current study aims to assess whether the workshops are feasible to deliver and acceptable to staff. Section 6.2.1.1 discusses the rationale behind each of the intervention targets, and section 6.2.1.3 describes how the intervention is expected to bring about positive change.

6.2.1.1. Intervention targets and mechanisms of change

6.2.1.1.1. Improved social interaction

Mealtimes represent more than just an opportunity to nourish and hydrate residents, providing a setting in which residents can develop and maintain relationships with each other(251). Mealtimes that promote a social environment and a convivial atmosphere may improve mood and appetite, add meaning and structure to the day, and contribute to a greater sense of satisfaction with life(276). More generally, social interaction may underpin the formation of social connectedness between residents, or social identity(268, 277), which may enhance self-esteem and promote a sense of personal control leading to wellbeing(95). Despite this, it is often the case that very little social interaction occurs during meals in care homes(18), potentially limiting food intake (and adversely impacting health and wellbeing). In an observational study of six nursing home residents, only 6.8 percent of resident behaviour was attributable to independent social engagement (e.g., initiating conversation or passing food), whilst only 5.7 percent of staff behaviour was perceived to be supportive of social engagement(278).

Social interaction at mealtimes is more likely to occur when it is facilitated by staff, and there are various ways in which this could be done relatively simply. For instance, staff could ensure that residents have appropriate tablemates, taking account of their personal attributes and preferences as well as their care needs (e.g., by seating a talkative resident with residents who are quieter), or social activities such as a general knowledge quiz could be integrated into the mealtime(279). Moreover, social interaction may be enhanced if staff are given the opportunity to eat, or sit down and have a drink with residents, and this may provide mutual benefit(141). A number of strategies and techniques could be developed to help staff to improve social interaction at mealtimes, and this could enhance resident health and wellbeing without significant cost. Initiatives that facilitate social interaction could be easily implemented at little or no cost. For example, social events involving staff would be a positive way to contribute to improving staff and resident relationships, inclusiveness, and a sense of belonging. Events provide an opportunity for change, new flavours, new conversations, and excitement.

6.2.1.1.2. Increased mealtime choice

Offering care home residents meal options on a menu that changes periodically is one example of building choice into the care home regimen, but the concept of personal choice extends well beyond what residents choose to eat. It may include the choice of where or when to eat, or it may include choosing to be involved in array of activities associated with mealtimes, such as choosing to be involved in planning the menu or preparing tables. In recent years, a number of questionnaires have been developed to elicit these preferences and evaluate resident satisfaction with mealtimes(280-282). However, whilst understanding residents’ preferences is important, implementing the changes required to meet these preferences can be problematic due to resource constraints and the diversity of the resident population(283).

Enabling personal choice may be particularly challenging when residents are physically or cognitively impaired and require substantial assistance. For example, residents with cognitive impairment may be unable to recognise the food options on the menu or the food on their plates, and this places the onus on staff to describe meals to these residents and support them in making a choice(18). In such circumstances, staff may adopt a paternalistic attitude and choose meals on behalf of residents, basing their choice on what they believe to be the most nutritious alternative for residents(284, 285). However, residents should be given every opportunity to choose, whether this be what to eat, in what order, or where to sit, or with whom, as this improves satisfaction and quality of life(18). This reflects a key element of person-centred health care and social care as defined by the Care Quality Commission, which advocates giving people choice and control over their own care, treatment and support(253).

6.2.1.1.3. Greater support for resident independence

A persistent issue with the provision of care at mealtimes is that residents do not always receive the appropriate support and encouragement to eat and drink(286, 287). This lack of support can threaten residents' independence, particularly as they are not given sufficient support to self-feed, and this can have a detrimental impact on residents' sense of dignity(18). Moreover, insufficient numbers of mealtime staff, as well as a lack of adequately-trained staff, can cause mealtimes to become more task-focussed and less pleasurable, with fewer opportunities for social interaction(288). This, in turn, can contribute to a poor mealtime experience for both residents and staff, and place residents at greater risk of malnutrition(287).

Care homes should aim to foster independence by providing support to residents when it is needed. However, residents are often given unnecessary support. For example, in some care homes, staff prepare tea and coffee for residents, including adding milk and sugar, despite many residents being able to perform such tasks themselves(288). Furthermore, it has been observed that staff tend to over-assume responsibility for providing feeding assistance to residents, and that this may be because promoting self-feeding is significantly more difficult, requiring a careful assessment of residents' abilities and a consensus approach over how to best support them(18, 161, 289).

There are numerous ways in which mealtime staff can promote self-feeding, with many based on ensuring residents are appropriately prepared for the meal, that they are positioned correctly that they are given plenty of time, that they are given ongoing prompts, and encouragement(18). For instance, in an education programme for staff designed to encourage resident independence at mealtimes, Bonnel used work as a metaphor for eating, asserting that the right tools and appropriate supervision facilitate the job of eating for residents(290). The training was delivered in a single one-hour meeting that incorporated methods to simplify the eating experience for residents, including resources and changes to the environment to promote self-feeding, as well as encourage supervision. The setting-specific training was found to be particularly pertinent, with staff commenting that on-site training gave more clarity to mealtime challenges(290).

6.2.1.2. Stakeholder engagement

As discussed in Chapter 3, stakeholder engagement increases the relevance and acceptance of interventions, as well as their potential to be effective(204). In the current thesis, stakeholder engagement was integral to the development of the training guide for the current intervention (Appendix G). Care home owners, managers, staff and residents were consulted on the design and content of the training guide in a series of one-to-one meetings conducted during the development process. Additionally, a consensus meeting was held with a panel of stakeholders to discuss a draft version of the training guide prior to final publication. The purpose of holding a consensus meeting was to reach a general agreement on the format and content of the training guide by taking a collaborative, co-operative and inclusive approach, and inviting feedback from all participants(291). Stakeholder engagement was also central to the feasibility and acceptability testing of the training guide (and workshop materials). Perhaps the greatest benefit of stakeholder engagement is the potential for research to be translated into practice(292), and early feedback suggests that the co-produced training guide is already being put into practice, which underscores the value of stakeholder involvement in this project.

6.2.1.3. Implementation and expected intervention outputs

The training programme was designed to be used in a diverse range of care settings. As every care home is different, strategies to improve the dining experience for residents will depend on current practice, the resources available, and the views, opinions and ideas elicited from staff participants. The training programme was also designed to be flexible, to be used as and when required to address the topic(s) of social interaction, choice, and / or independence. The workshops could be delivered to new staff or delivered on an *ad hoc* basis to enable staff to reflect on their delivery of care and refresh their approach to mealtimes if and where necessary. In the short-term, it is anticipated that this will help to raise awareness amongst staff of the importance of mealtimes, as well as reinvigorate aspects of the mealtime for residents. Longer-term, it is hoped that simple changes to mealtime care, conceived by staff, will have positive effects on resident health and wellbeing, and that certain indicators of health and wellbeing will be measurably improved (e.g., nutritional status, BSPD, and quality of life). Moreover, these changes could be brought about at little or no cost to the care home.

6.2.1.4. Aims of the current research

The findings from the primary and secondary research to date collectively underscore the importance of accommodating individuals' shared needs and preferences. The needs and preferences are particularly poignant at mealtimes, which are a focal point of care, and described as the highlight of the day(293) for many residents. An intervention that address this would support the Care Quality Commission's assertion that residents' needs and preferences should be identified and documented on admission and regularly reviewed, with input from the individual and their relatives(44). With regard to maintaining autonomy at mealtimes, it is clear that sufficient staffing levels are required and that the staff have the skills necessary to meet residents' identified needs. Moreover, the changing needs of residents mean that staff need to be flexible, as well as skilled, with the knowledge and experience to adapt to change, and in particular, care for individuals with dementia. Therefore, the current study aims to evaluate whether it is feasible to implement a training programme, focussed on staff, that addresses social interaction, choice, and independence at mealtimes.

Figure 7 illustrates how this intervention has evolved from identifying the evidence base (Study 1 and 2), investigating and exploring the mealtime experiences of residents (Study 2), to developing a theory-based intervention that aims to enhance the mealtime experience for residents (Study 3). It incorporates an extension of Engel's (1977) biopsychosocial model of health, intended to illustrate that mealtimes have social and psychological dimensions –

in addition to the purely physiological (biomedical) effects of eating – which have the potential to impact health and wellbeing. The systematic review (Study 1) identified the overarching role of care provision in influencing the mealtime experience, and this informed the staff-focussed nature of the intervention. The findings from Studies 1 and 2 informed the targets of the intervention, listed in the logic model at the bottom of Figure 7. As indicated to the left of the figure, the empirical work conducted in this thesis is broadly aligned with the first four steps adopted in an Intervention Mapping (IM) approach, as described in Chapter 3. Figure 7 also shows how the empirical work in this thesis is focussed on the 'development' (Studies 1, 2 and 3) and 'feasibility/piloting' (Study 3) components of the MRC framework for developing complex interventions. Future development work would incorporate an evaluation element to help establish causality (i.e.. the link between intervention and the effect), as well as an implementation phase to assess roll out and the long-term effectiveness of the intervention.

Given the integral role of mealtimes, the complex needs of residents, and the resource-stretched nature of care homes, this research aims to empower staff to improve the mealtime experience for residents within current working patterns and limited time availability. More generally, positive social identity *as a member* of the care home is more likely to occur and be reinforced when the care home meets residents' fundamental need to belong – when it enables them to interact with others, when it enables them to make choices and retain some independence, and when the transition from independence to dependence is well-managed. Consistent with social identity literature, it is hypothesised that a greater sense of personal control will increase residents' identification with staff as well as their peers, enhance their sense of citizenship (belonging), and improve wellbeing(268). The first step is to test whether in-house, self-managed training workshops are feasible and whether the content is acceptable to participants (section 6.3).

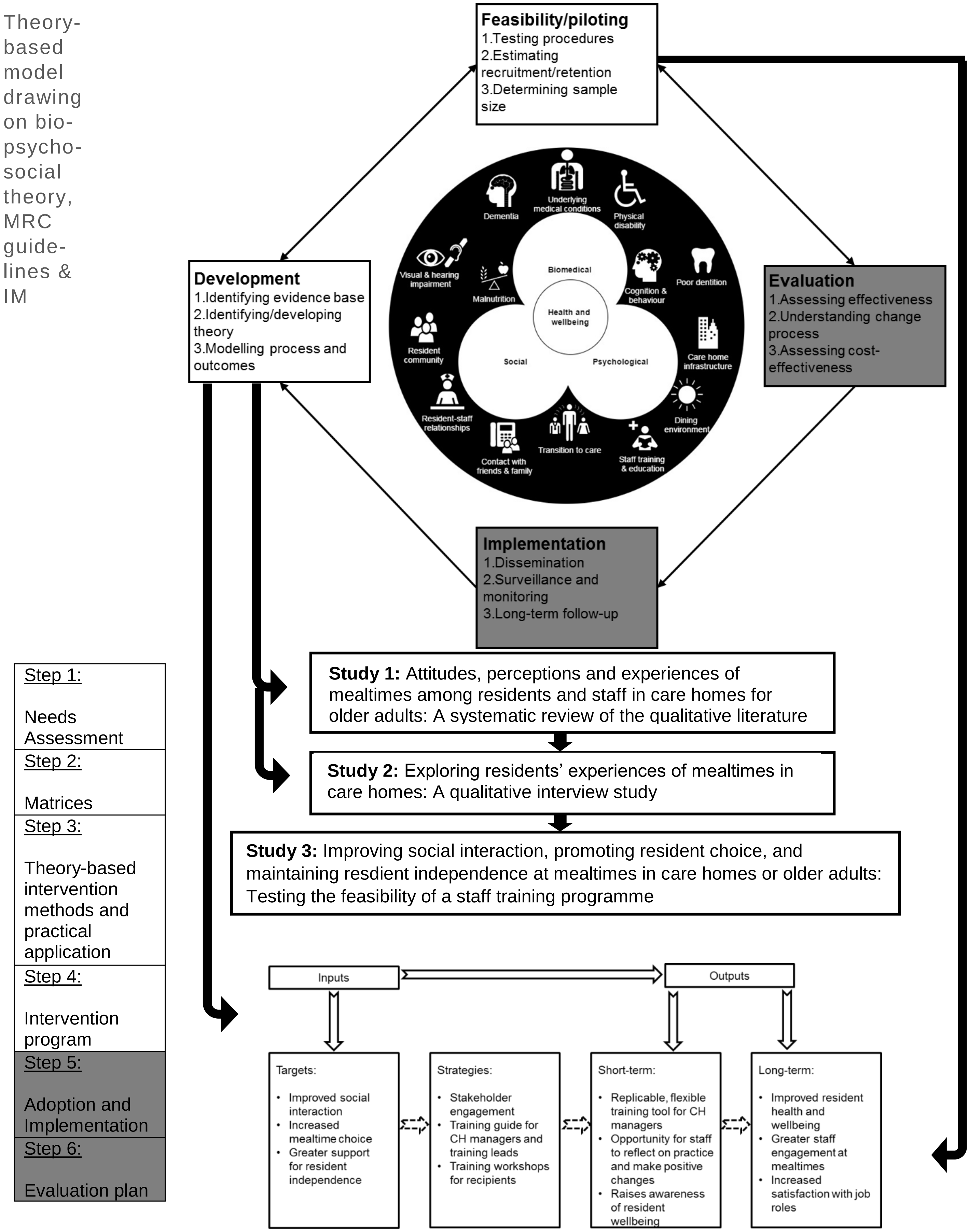

Figure 7. *Theoretical model of intervention development*

6.3. Improving social interaction, promoting resident choice, and encouraging independence at mealtimes in care homes for older adults: Testing the feasibility of a staff training programme[6]

6.3.1. Abstract

Background: The health and wellbeing of care home residents is influenced by their experience of mealtimes, which provide an opportunity for residents to socialise and exercise control over their lives, as well as providing essential sustenance. Care home staff are pivotal to this experience, responsible for the provision of meals and eating assistance, but also for establishing a positive mealtime culture valued by residents. Despite this, mealtimes can be task-focussed, as the pressure on staff to perform multiple duties in limited time, or a lack of knowledge and awareness, mean that resident needs and preferences risk being neglected.

Methods: A staff-focussed training programme aimed at improving social interaction, resident choice, and independence was developed and delivered in a workshop. Intervention feasibility was assessed using a qualitative survey and workshop observations. A combination of descriptive and content analyses were conducted on the data.

Results: Thirteen women and one man took part in the workshops, representing multiple roles within two homes in the South West UK. The workshops were found to be deliverable and practicable. Participants responded positively to the workshops, anticipating that improvements to the mealtime experience would result from their workshop outputs.

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[6] Watkins, R., Goodwin, V., Abbott, R., Hall, A. and Tarrant, M. (in preparation). Improving social interaction, promoting resident choice, and encouraging independence at mealtimes in care homes for older adults: Testing the feasibility of a staff training programme.

***Conclusion**:* This study suggests that staff training workshops based on improving the mealtime experience are feasible to deliver within the day-to-day running of a care home, and are acceptable to staff. Positive changes resulting from these workshops could improve the health and wellbeing of residents.

6.3.2. Introduction

The wellbeing of care home residents is poor in comparison to their community-dwelling peers, and is characterised by low levels of social interaction and loss of personal control(86, 87). Staff pressures, reduced resources and the ageing population all contribute to this “crisis of care” and raise urgent questions concerning how to meet the wellbeing needs of individual residents in a way that is both scalable and sustainable(18, 43). Decisions about the care of residents are commonly made based on physiological or medical needs. This deeply entrenched biomedical model has adversely affected residents’ social identity, and loneliness and depression remain a persistent problem across the spectrum of residential care(294). The need for improved psychosocial care has been widely recognised, but not adequately addressed. Residents continue to report frustration due to their lack of influence and independence(295, 296), and the paternalistic behaviour of staff(297).

Developing an intervention starts by assessing the needs of the target group at risk of one or a number of health problems and conducting an analysis of the possibilities to address these problems using an evidence-based approach(202). Two published studies by this research group established that mealtimes were a focal point of residents’ broader experiences of living in a care home, and that these experiences were framed by their social interactions, self-efficacy, and a wider “culture of care”(212, 213). This is consistent with research which shows that, for many residents, the mealtime can be the highlight of the day, providing opportunities for social interaction and developing relationships with dining companions as well as providers of care(14). Furthermore, the mealtime is recognised by some researchers as the single most accessible, manageable and effective means of delivering improved care(27), therefore providing a good staging post for interventions.

Building on the findings of our qualitative systematic review of mealtime experiences(212), a resident interview study (213) found that the socio-cultural context of mealtimes, that is, resident interactions, choice and independence, had a profound influence on the dining experience. The existing model of care provision may have a negative effect on mealtimes because resident choice is limited, independence is curbed, and social interaction stifled due to the paternalistic tendencies of staff, and time and/or resource pressures, that result in staff being task- rather than resident-focussed(18).

Inadequate staffing levels, poorly trained mealtime assistants and insufficient time for eating have been identified as barriers to maintaining health, wellbeing and good nutritional status among residents in care homes(18, 298, 299), and numerous studies have called for staff training and education programmes that prioritise the provision of care at mealtimes(18, 161, 254). As care homes face resource constraints, creative solutions are needed to improve the mealtime experience. Interventions that focus solely on the physical needs of residents, for example, through the use of oral liquid nutrition supplements to improve nutritional status, fail to address the complex issues associated with mealtimes. Rather than treating the symptoms of a poor mealtime experience, it is argued that interventions should adopt a holistic approach to mealtimes: One which recognises the biological, social, psychological, moral, and spiritual needs of residents(273). Empowering staff to facilitate a change in mealtime culture by enhancing social interaction, choice and independence may result in mutual benefit for residents and staff, and may provide a cost-effective solution to financial and time pressures. Interactive workshops could provide a flexible, replicable and convenient staff training option, as workshops could be delivered in-home by a senior member of staff, as and when required. The current study tested the delivery feasibility of a new staff-focussed workshop.

Research aims:

1. Is the training guide fit for purpose?
2. Is the proposed content acceptable to all stakeholders?
3. Are facilitator(s) able to deliver workshops as intended?
4. Can the workshops be delivered within the time allocated?
5. Are the workshops practicable? (e.g., are staff able to attend as planned? are they called away mid-training? can homes be run without significant disruption during workshops?)
6. Was the training received positively?
7. Do staff feel better equipped to address residents' needs as a result of the training workshops?

The intervention was aimed at a population of people who are often excluded from training programmes due to a lack of resources. Care home staff regularly express dissatisfaction at a lack of support(18, 35), so it was anticipated that the intervention would be received positively. Moreover, as the training was based on interactive workshops, it was anticipated that staff would feel more engaged with the training.

6.3.3. Methods

Ethical approval for the study was given by the authors' Research Ethics Committee (Reference Number: 17/04/122). Written consent was obtained from all participants prior to the study. Each participant who gave their consent to take part in the study was assigned a unique reference number (e.g., STAFF01).

The intervention was comprised of three workshops: (1) improving social interaction, (2) promoting resident choice, and (3) maintaining resident independence. Each participating care home chose one workshop topic to evaluate. The feasibility study was intended to inform the design of a potential future cluster randomised controlled trial[7] exploring the effectiveness of a staff training programme to improve social interaction, promote resident choice, and encourage resident independence. The MRC guidance suggests that a “multiple-methods” approach is essential to identify potential barriers and facilitators to delivering the intervention, therefore a qualitative component will be integral to the feasibility study(36). The multiple methods analysis sought to answer the question of *why* the intervention is (or is not) acceptable and feasible to deliver.

Intervention development

Stakeholders including two care home managers, two senior staff, and two experts in the field were consulted on the development of a mealtime training guide. This took place through a series of informal face-to-face meetings in which the mealtime experience was discussed. Once an initial draft of the training guide had been developed, a consensus meeting was then organised with four of these stakeholders to discuss the content, make amendments, and agree a standardised protocol for the delivery of training workshops to mealtime staff. The development of the training guide as part of the wider research process is illustrated in Figure 8 below.

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[7] A cluster randomised controlled trial is a type of RCT in which groups of subjects (rather than individual subjects) are randomised (e.g., a care home as opposed to individual residents). A cluster RCT design is commonly used to evaluate non-drug interventions.

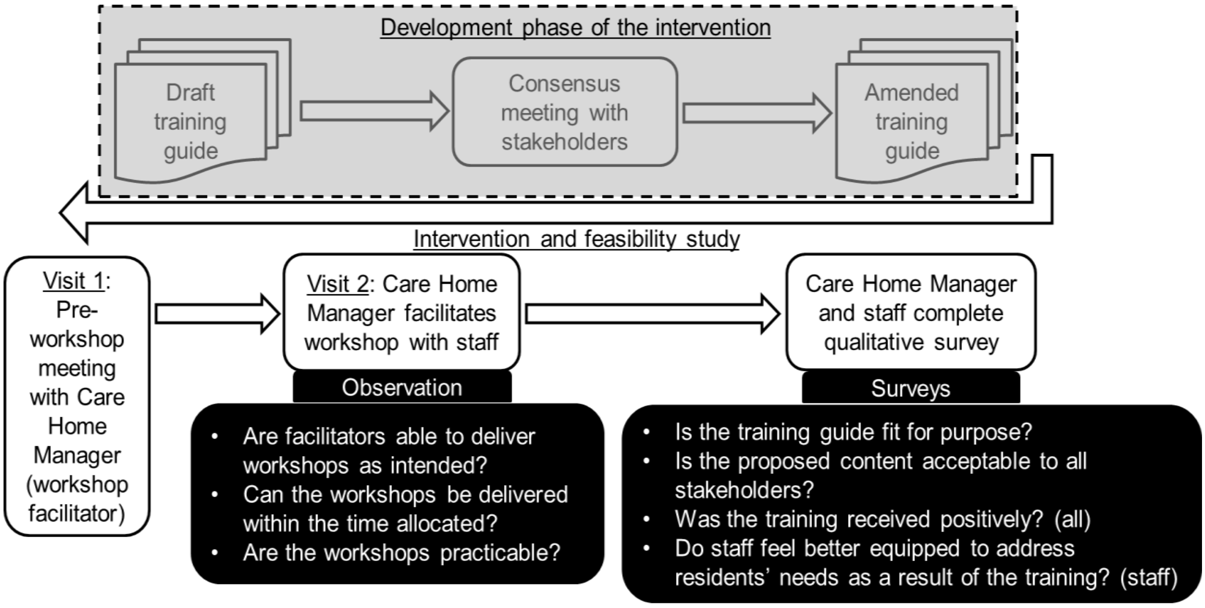

Figure 8. *Design of feasibility study*

Intervention and feasibility study

The feasibility study was conducted over two visits to each participant care home. During the first visit, the lead researcher (RW) held a meeting with the Care Home Manager, who had agreed in each case to facilitate the workshop. During the first visit, the content of the training guide was discussed, along with the protocol for delivering workshops. This is shown as Visit 1 (Figure 8). Following the pre-workshop meeting (Visit 1), a single arm, multiple methods study was undertaken with two participant care homes to assess the feasibility and acceptability of the training workshops. This included a qualitative survey which was completed by the workshop facilitator (the Care Home Manager) as well as the staff recipients, designed to evaluate their experiences of the intervention. RW observed the workshop. Data from the observations and qualitative surveys was analysed using a combination of descriptive and content analysis, an approach suitable when analysis involves triangulation of data from different sources. This approach is aligned with the methodological framework stipulated in the MRC guidance for development and evaluation of complex interventions(300).

The Care Home Managers in the two participant homes selected workshops on resident choice and social interaction: Feasibility testing of the workshop on resident independence is still needed**.** The workshops were intended to be interactive and participatory, lasting approximately one hour. Despite focussing on different aspects of the mealtime, the workshops had the same format and structure, designed to raise awareness of the mealtime experience, increase empathy for residents, and enable staff to reflect on their approach to care. The workshops were comprised of four activities (Figure 9). Activity one asked participants to consider the extent to which they agreed with a statement related to mealtime care in their home. In activity two, participants were invited to problem-solve six resident-specific scenarios. In the third activity, participants took part in role-play where one member of staff assumed the role of a resident. In the final activity, participants made some recommendations for strategies or techniques that could be adopted in their care home.

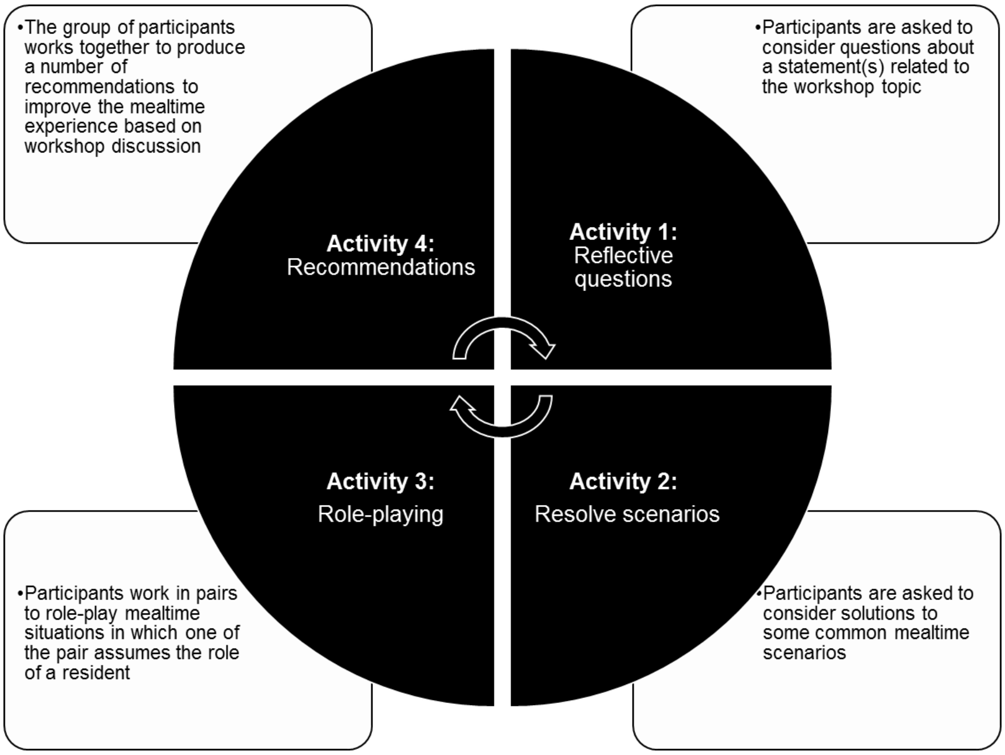

Figure 9. *Workshop components*

The training materials were designed to ensure that they required minimal explanation and could easily be replicated by facilitators. Instructions on how to conduct the workshops were detailed in the training guide. In each case, the Care Home Manager facilitating the workshop chose the topic to be covered (i.e., social interaction, choice, or independence) based on which one they believed required most attention. The flexibility of being able to run a topic-specific workshop as and when required was a key feature of the intervention design. As well as providing an opportunity to reflect on current practice, the workshops were intended to encourage staff to collaborate, share ideas, and build on existing approaches to mealtime care. In this regard, it was hoped that good practice could be sustained over the long-term.

Recruitment, setting, participants and sample size

Recruitment took place through personal and professional networks, including research networks of the UEMS and PENCLAHRC's network of contacts for patient and public involvement in research (PPI) team. Invitations to participate were emailed to care home managers and followed up with a telephone call. Consideration was given to the profile of the care homes included in the study to ensure that they were broadly representative of care homes in the South West UK. Once a care home had registered its interest, potential participants were informed that the study consisted of a workshop followed by a participant survey to be completed immediately after the workshop. Before providing consent, participants were made aware that they could withdraw from the study at any time without needing to give a reason, and could refuse to participate in workshop activities or answer any question posed in the survey.

As a feasibility study, a formal sample size calculation was not necessary. Although there is currently no guidance as to appropriate sample sizes for feasibility studies, 12-15 participants would be considered appropriate in a pilot study(301), and therefore this number was used as a guide. Participants included both the workshop facilitators and the workshop recipients (staff).

Data collection

Participant data were collected using a survey, comprised of six open and ten closed questions (Appendix D and E). The feasibility of the delivery of the training (e.g., attendance, timings) was evaluated by the workshop facilitator and through observation by the lead researcher (RW). Acceptability of the intervention was rated by all participants. Descriptive data including participant characteristics (age, job role, length of service etc.) were elicited in the survey, along with questions designed to elicit participants' experiences of facilitating or receiving training as measured on a Likert-type scale (e.g., "extremely relevant" to "not relevant at all"). In addition, the survey included open questions designed to gauge participants' opinion of the workshop, how they believed the training (or the workshop theme) might enable them to improve residents' mealtime experience, and how the workshops could be improved. These responses were intended to help guide the adaptation of the intervention for a possible future trial. This open-endedness allowed the participants to contribute as much detailed information as they wanted and express their views in their own words.

Observations

The workshops were observed by RW, but did not involve any participation. This served to help evaluate the feasibility of workshop delivery. A template for the capture of observational data was developed (Appendix F). Verbal informed consent was sought from the Care Home Manager prior to each observation. Observational data included factors that may have influenced the running of the workshop and notes on anything else that may have been helpful for data interpretation (e.g., Did the workshop run to time?, Did the workshop take place uninterrupted?).

Data analysis

Data from the closed questions was analysed descriptively. Familiarisation of the data from the open questions was undertaken first and was followed by a process of open coding(210). From this open coding, themes were collated and core categories identified. Data from the observation sheets (Appendix F) were analysed and integrated into a categorisation matrix.

6.3.4. Results

Fourteen staff members, thirteen women and one man, were recruited from two care homes in the South West UK. Table 3 below details workshop recipient responses to the closed questions. One participant from each of the two care homes performed the role of workshop facilitator, conducting respective workshops on resident choice and social interaction at mealtimes. Facilitator responses to the closed questions are detailed in Table 4. Participants represented a diverse range of staff roles including senior carers, nursing assistants, mealtime assistants, an activities co-ordinator and a chef. Further recruitment was not undertaken as participant responses were unanimously supportive of intervention feasibility. Thirteen out of the fourteen participants reported enjoying the workshop, with one participant describing the workshop as “somewhat enjoyable”. All participants agreed that the workshops enabled them to reflect on residents’ experiences, and thirteen out of the fourteen felt able to express their thoughts or contribute their ideas to the workshop. All recipients of the training described the workshops as either “extremely relevant” or “very relevant” to addressing the needs of their residents, and both workshop facilitators found the training materials “extremely useful”. In addition, all participants reported that they were “extremely likely” or “very likely” to adapt their approach to mealtimes as a result of the workshops, and both facilitators thought that it was “very likely” that mealtime practices would change as a result of the training.

Participants offered a variety of suggestions for how the workshop could be improved (Figure 10). Three participants suggest that more time be allocated for the workshop, and there were two references to the inclusion of more dementia-specific content and examples of mealtime practice in other homes. Resident involvement, a follow-up session, and a preview of the training guide were also suggested.

The workshop facilitators offered similar suggestions for improvement. One facilitator suggested that more time was allocated to the workshops in order that consensus could be reached on recommendations, and the other suggested that participants reviewed the training guide in advance so that they came to the workshop with initial thoughts or ideas.

Participant responses to the remaining open questions in the survey were analysed using a deductive approach to content analysis, where data were coded and used to develop a categorisation matrix (Figure 11). Data were pooled from all participants (i.e., both workshops). In addition to the workshop themes of choice and social interaction, participants alluded to the importance of creating a pleasant dining atmosphere, recognising that this could impact the social aspect of meals, as well as the overall mealtime experience.

	Q1: Job role	Q2: Gender	Q3: Nationality	Q4: Length of service	Q5: Workshop attended	Q6: Enjoyed the workshop?	Q7: Able to reflect on residents' experiences?	Q8: Able to express thoughts / contribute ideas to workshop?	Q9: How relevant was the workshop to addressing needs of residents?	Q12: Likelihood of adapting approach to mealtimes as a result of the training?
STAFF1	Chef	Male	British	Fewer than 5 years	Choice	Yes	Yes	Yes	Extremely relevant	Extremely likely
STAFF2	Activities Co-ordinator	Female	British	10-15 years	Choice	Yes	Yes	Yes	Extremely relevant	Extremely likely
STAFF4	Senior Carer	Female	British	5-10 years	Choice	Yes	Yes	Yes	Very relevant	Extremely likely
STAFF5	Senior Carer	Female	British	10-15 years	Choice	Yes	Yes	Yes	Very relevant	Very likely
STAFF6	CH Manager	Female	British	Over 20 years	Choice	Yes	Yes	Yes	Extremely relevant	Extremely likely
STAFF7	Nursing Assistant	Female	British	5-10 years	Social interaction	Somewhat	Yes	Somewhat	Very relevant	Very likely
STAFF8	Nursing Assistant	Female	British	15-20 years	Social interaction	Yes	Yes	Yes	Very relevant	Very likely
STAFF9	Nursing Assistant	Female	British	Fewer than 5 years	Social interaction	Yes	Yes	Yes	Very relevant	Very likely
STAFF10	Mealtime Assistant	Female	British	5-10 years	Social interaction	Yes	Yes	Yes	Very relevant	Very likely
STAFF11	Nursing Assistant	Female	British	Fewer than 5 years	Social interaction	Yes	Yes	Yes	Very relevant	Very likely
STAFF12	Nursing Assistant	Female	British	5-10 years	Social interaction	Yes	Yes	Yes	Very relevant	Very likely
STAFF14	Mealtime Assistant	Female	British	5-10 years	Social interaction	Yes	Yes	Yes	Very relevant	Extremely likely

Table 3. *Workshop recipient responses to closed questions in survey*

	Q1: Job role	Q2: Gender	Q3: Nationality	Q4: Length of service	Q5: Workshop attended	Q6: Enjoyed facilitating the workshop?	Q7: Participants able to reflect on residents' experiences ?	Q8: Participants able to express thoughts / contribute ideas to workshop?	Q9: How useful were the training materials?	Q11: How likely do you think that mealtime practices will change as a result of the training?
STAFF3	CH Manager	Female	British	10-15 years	Choice	Yes	Yes	Yes	Extremely useful	Very likely
STAFF13	CH Manager	Female	British	Over 20 years	Social interaction	Yes	Yes	Yes	Extremely useful	Very likely

Table 4. *Workshop facilitator responses to closed questions in survey*

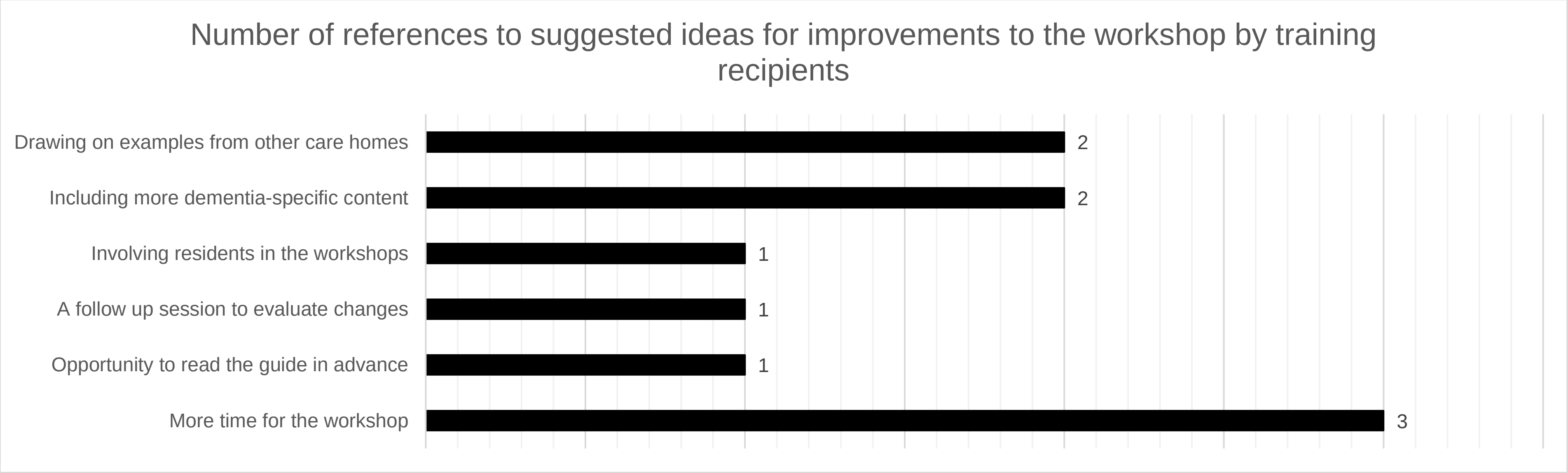

Figure 10. *Participant responses to question 13 of recipient survey*

Participants acknowledged that choice gave residents a sense of control. However, pressures on staff meant that mealtimes could become task-focussed and this could adversely impact choice, reducing staff capacity to accommodate individual needs and preferences. For example, one participant referred to serving residents appropriate portion sizes and offering them seconds, rather than adopting a “one size fits all” approach to plating meals. Dementia was also highlighted as a major barrier to choice, as residents with severe cognitive impairment lose their ability to make choices such as what to eat, or who to eat with. Choice was described by participants as “reactionary” for residents with dementia (i.e., made in the moment). They reasoned that strategies are needed to address this, such as enabling residents to make menu choices at the last minute or serving them at the table:

> *“Sometimes residents with dementia find it hard to make choices because they can't recall what the food is or they just say they'll have the last thing that you offer them because they can't remember the other options. And sometimes they see what other residents are having and want that, so it's important to show them what they can have.”* (STAFF2)

Some participants advocated the ongoing involvement of relatives to ensure that residents’ needs and preferences were being met, though it was acknowledged that the needs and preferences of cognitively impaired residents were constantly changing and that a flexible approach was required to offering choice. In addition, providing choice was regarded as integral to managing residents’ transition to care:

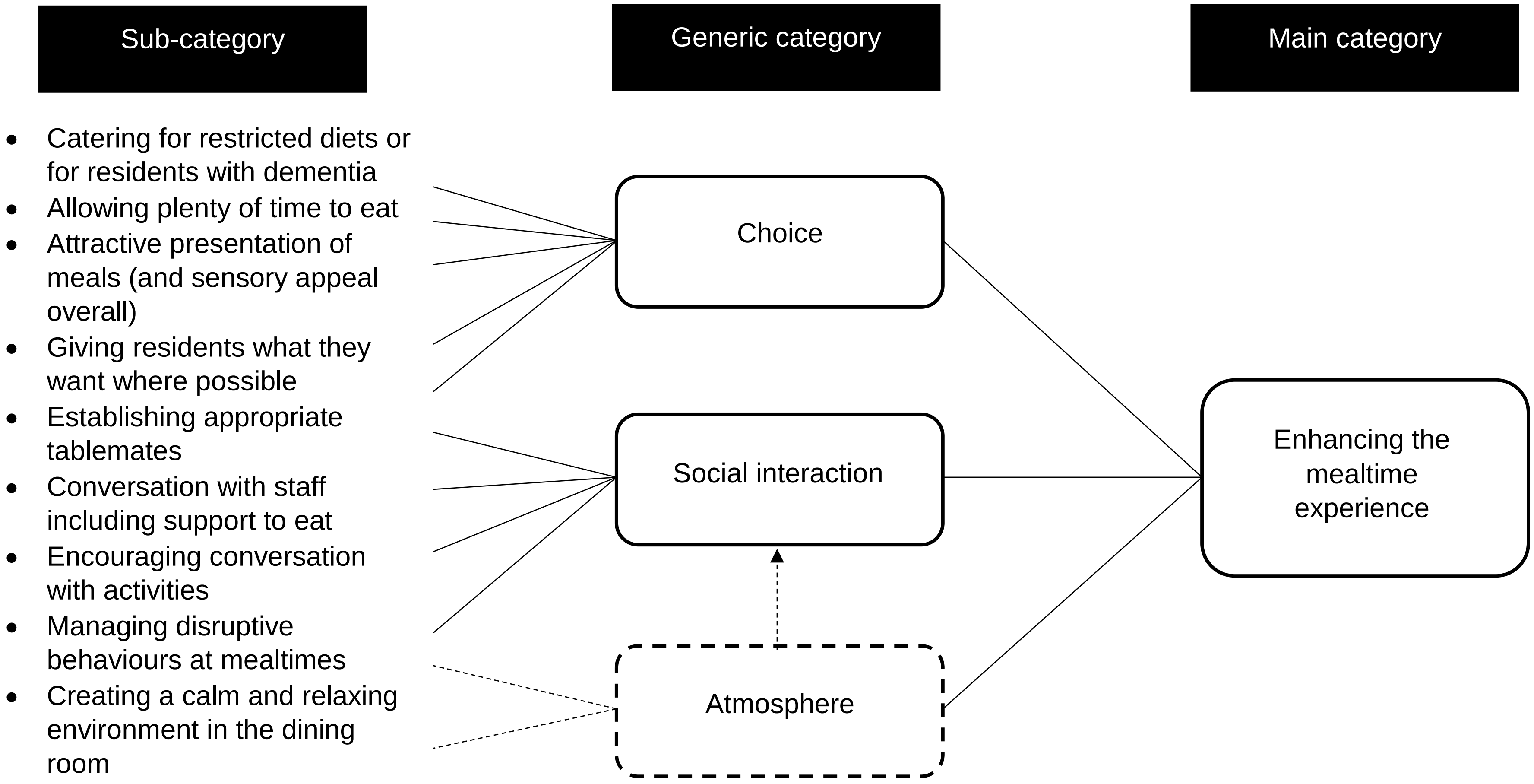

Figure 11. *Categorisation matrix of participant responses to open questions in survey*

> *“You could find out more about people's preferences before they arrive in the care home to make sure we make them feel as at home as possible and that the move is not too much of a shock for them.”* (STAFF5)

Participants also touched on the socio-cultural significance of mealtimes, recognising that they offer more than simply an opportunity to eat and drink. For example, some participants referred to ways in which residents could be involved in meal preparation, as this may have been a pivotal part of their day-to-day activity prior to moving into care. Thus, mealtime choice was seen to extend beyond menu options to having the choice to be involved in an array of meal-related activities.

> *“We discussed how we could get residents more involved in meal preparation, anything from peeling carrots to laying tables, so they feel more involved in mealtimes.”* (STAFF6)

The workshop on social interaction prompted discussion around seating allocation and the implications this had for both choice and social interaction. Participants alluded to the need to strike a balance between enabling to residents to seat themselves freely, placing residents with similar personality traits together, and managing seating according to residents’ needs. One of the challenges highlighted by participants was reconciling the tendency amongst some residents with dementia to sit anywhere at mealtimes with the preference of many residents to have the same seat at each meal. As well as managing the competing interests of residents, seat allocation was recognised as a means to manage disruptive behaviours, and improve the atmosphere in the dining room. Moreover, seating was regarded as an important catalyst for companionship, especially when residents first arrived at the care home:

> *"It helps to think about where to sit people and how this could help them to make friends with residents and feel more at home, especially when they first come into care."* (STAFF9)

In addition to seating allocation, participants acknowledged that staff played a pivotal role in facilitating social interaction during mealtimes. As well as interacting directly with residents, it was suggested that staff could initiate topics of conversation at mealtimes or put on themed meals designed to generate conversation and / or enable residents to reminisce.

> *"We thought about how to get staff to talk more to residents during mealtimes, getting them to start conversations or thinking about interesting things to talk about over meals (e.g., their past history, important days to celebrate in the year etc.)."* (STAFF8)

Increasing social interaction was also seen as associated with an improved atmosphere in the dining room, and both a pleasant dining atmosphere and social interaction were thought to improve residents' appetites. In referring to the atmosphere in the dining room, the workshop facilitator wrote: *"It promotes overall wellbeing and encourages social interaction, which has a positive impact on appetite / nutrition and hydration."* (STAFF13)

Workshop observations

Six participants took part in the workshop on choice and nine participants attended the workshop on social interaction, including the two workshop facilitators. Both workshops started on time and were completed within an hour, with approximately fifteen minutes allocated to each of the four activities. However, additional time was required at the end of each workshop to agree action points and allocate responsibilities (i.e., changes to mealtime practice – new strategies, techniques, ideas to implement – agreed by participants following the workshop). Staff showed a willingness to contribute their thoughts and ideas from the outset, and the facilitators were able to generate lively discussion. Familiarity amongst staff members and with the facilitator (i.e., the Care Home Manager) may have put participants at ease and able to offer their opinions freely. Staff did not appear to have any difficulty in understanding the instructions given by the facilitators and were largely enthusiastic in giving their responses. Facilitators adopted a similar style in eliciting responses from staff participants, ensuring that everyone had an opportunity to feedback following each activity. Where appropriate, facilitators also referred to the training guide for additional ideas and discussion points. At one stage during the workshop on social interaction, a resident expressed his irritation at the noise generated by the group. The situation was resolved by closing the door to the training room and by staff lowering their voices, but it served as a reminder that measures should be taken to avoid disruption to residents.

6.3.5. Discussion

This study demonstrates that it is feasible to deliver a package of mealtime workshops to care home staff that are facilitated and conducted in-house. Moreover, the workshops in this study were found to be practicable – deliverable within an hour, during staff working hours, and with minimal disruption to the delivery of care. Workshop content was also found to be acceptable to participants, with participants reporting the workshop to be enjoyable, interactive and relevant to addressing resident needs. The ease with which the facilitators were able to communicate activities, elicit ideas and generate discussion may have been due to their relationship with staff, who clearly felt comfortable contributing in the group. Participants also reported that they were highly likely to adapt their approach to mealtimes as a result of undertaking a training package which enabled them to reflect, discuss, and collectively develop some recommendations to improve aspects of the mealtime experience. For their part, the workshop facilitators described the training materials as “extremely useful” and were optimistic that the workshops could result in positive changes to mealtime practices.

The current study findings build on those from other studies which have similarly encouraged self-reflection on mealtime practices. For example, a study by Bonnel (1995) based on an education programme for mealtime staff, aimed to increase empathy for residents(302). Sensory experiences (e.g., activities using taste and sound) and action-oriented experiences (using specific resident situations to illustrate key points) were used to help staff imagine what it is like to be a resident at mealtimes(302). Similarly, more recent innovations such as the Virtual Dementia Tour(303), which is designed to simulate the effects of dementia and used for training purposes, can raise awareness amongst staff of some of the difficulties facing residents and enable them to reflect on their approach to caring for them. A reflective approach to care was the focus of a study by Simmons and Schnelle (2006) in which nursing staff were asked to provide weekly self-assessments on five nutritional care quality indicators(304). This process of self-auditing was found to improve performance across all indicators, suggesting that reflection is a valuable practice for changing behaviour.

In addition to raising awareness and offering an opportunity for reflection, a key aspect of the mealtime workshops is that they encourage collective engagement amongst participants, resulting in co-produced outputs or recommendations. This type of intervention likely imparts its effects partly because those ultimately responsible for delivering care do so on the basis of a commitment to shared values or ways of working(305). Moreover, this approach is intended to provide staff with a sense of empowerment, positively impacting attitudes and behaviours. Empowerment has been posited as a means of motivating staff and enabling them to find meaning in their work(306). This may be particularly pertinent in the care sector, where the work can be physically and emotionally demanding, and where staff are often poorly paid and undervalued(307). It follows that motivated staff are more likely to achieve work-related goals and empower others, and that this leads to greater organisational effectiveness(308). Thus, in the context of this study, it might be reasoned that greater staff empowerment results in increased motivation (e.g., to enhance the mealtime experience for residents), and that ultimately, this may improve resident wellbeing.

By encouraging staff to think about how they do things and how this may impact residents, it is anticipated that this type of training may be the catalyst for a culture shift within care homes. According to Schein (2010), culture is a set of shared and implicit assumptions held by individuals within an organisation, which determines how they perceive, think about and react to things(309). Collectively challenging the prevailing culture, “the way things are done around here”, can help to reshape or refocus an organisation’s values. For example, reflecting on mealtime practices may lead staff to consider promoting values such as resident agency in favour of a more paternalistic approach which currently typifies much care. As organisational culture is dynamic, regular opportunities for reflection and collaboration help to ensure that core values are maintained, and that staff old and new, feel a sense of enfranchisement.

The most important determinant of change in culture, practice, or behaviour is leadership. Leaders make choices about the organisational structure, they control resources, and they have the capacity to inspire. Moreover, good leadership is likely to result in staff behaving more co-operatively and empathetically, whilst a lack of leadership is unlikely to result in positive change(310). Thus, successful implementation of this intervention is dependent on the leadership in care homes (e.g., the Care Home Manager) recognising the value of improving the mealtime experience, engaging staff during workshops, and ensuring the any co-created recommendations are adequately trialled. With good leadership, it follows that staff will be motivated to honour their commitments to trialling measures aimed at positive change.

The process by which increased motivation results from trust in leaders is explained by transformational leadership theory, first posited by Burns in the 1970s(311). A later iteration of this theory proposed by Posner and Kouzes (1988) identifies five characteristics of successful leadership: Acting as a role model, inspiring a shared vision, facing adversity, empowering others to act, and generating enthusiasm(312). These tenets seem particularly poignant within a care home setting and integral to the efficacy of any manager-led, staff-focussed intervention. In recent years, Haslam et al. have proposed a “new psychology of leadership” which attributes effective leadership to an ability to shape what followers actually *want* to do rather than enforcing compliance through punishment and reward(313, 314). According to this view, effective leadership is based on collaboration with followers and on garnering constituent support, rather than invoking a top-down approach(314). In care homes, a co-operative relationship between management and staff may be particularly important given that staff are generally low-paid and turnover is high: In this scenario, enforcing compliance through punishment and reward may be even less effective.

Limitations

The feasibility of this training programme was tested in two care homes in South West UK amenable to participating in research and with a good track record of care provision. The care homes opted to run a workshop on social interaction and choice, but the theme of resident independence still needs to be tested for feasibility. Both training facilitators and recipients broadly recognised the importance of the mealtime experience and had already adopted a number of strategies and techniques to improve choice and social interaction. It needs to be determined whether the enthusiasm for this type of training would be replicated in care homes where less emphasis is placed on the mealtime experience. Moreover, it is possible that levels of workshop productivity may be reduced in care homes where there is less awareness of the social and psychological dimensions of mealtimes, or in which a culture of paternalism is more entrenched.

Successful implementation of this intervention is dependent on a facilitator organising workshops and delivering them as intended. Thus, further research is required to understand how this intervention could be implemented and sustained outside of a research context. Further research is also necessary to determine whether mealtime recommendations (i.e., workshop outputs) are put in place, and whether these recommendations have a positive effect on the health and wellbeing of residents. This feasibility study has answered the key questions necessary to progress to the next stage of evidence generation. A pilot study followed by a definitive trial are now needed to fully evaluate the effectiveness of this intervention before it can be recommended for use.

Given the generic approach of the workshops, it should also be recognised that more work is needed to develop specific strategies and techniques aimed at improving the experience for residents with dementia. Although improved social interaction, choice and independence are valid ideals in most circumstances, dementia requires that alternative approaches are taken, such as providing residents with opportunity to make “reactionary choices”, or creating safe environments which enable residents with dementia to maintain more of their independence.

Implications for future research

Previous research has found that mealtimes could be improved through increased social interaction, choice, and independence. It is also clear that the provision of care is pivotal to regulating these aspects of the mealtime. This study is an essential step in developing interventions that aim to enhance residents’ mealtime experiences by targeting the providers of care. Whilst it is acknowledged that mealtime staff have a profound influence on residents’ experience, the staff themselves are influenced by management and the infrastructure within which they operate. This study suggests that it is feasible to introduce a staff training programme, which is both a tool for managers, and a means by which staff are empowered to reflect on current practice and co-create strategies and techniques for improvement.

This study also demonstrates that it is possible to integrate training workshops, facilitated in-house by care home managers and delivered to staff, within the day-to-day running of the home. This has important implications for replicability and flexibility, as the training may be done in any care home setting, and at any time. Furthermore, it might be possible to carry out this training at little of no cost (though this has not been evaluated), which would be particularly pertinent for a sector which is largely under-resourced and cash-strapped. On a practical level, it may be an option to link this training to pre-existing staff performance reviews in individual care homes in order that it becomes part of the ongoing professional development of staff. This may have important implications for sustainability.

6.4. Conclusions from the feasibility study

Whilst the ultimate goal of mealtime interventions is to improve resident health and wellbeing, their experience of mealtimes is entirely dependent on staff. Care home staff, in turn, are largely dependent on good leadership. Therefore, interventions are needed that target the management and processes in care homes and equip senior staff with tools to empower and motivate staff, and inspire change. This study indicates that it is feasible to run staff workshops aimed at improving the mealtime experience of residents. It is now to be determined whether these workshops are effective at prompting behavioural changes in staff during the mealtime routine, and whether these changes lead to improved health and wellbeing outcomes for residents.

Chapter 7: Overall Discussion

7.1. Chapter overview

In section 7.2 of this final chapter, the aims of this thesis and the three studies conducted are revisited. The findings of the empirical work are summarised and discussed in relation to previous literature in section 7.3, and section 7.4 highlights the theoretical contributions of the overall findings of the thesis. Next, in section 7.5, the implications of the research (e.g., for intervention development and practice) are considered followed by a discussion of the strengths and limitations of the thesis (in section 7.6). Section 7.7 outlines suggestions for future research directions. The chapter ends with overall conclusions from the thesis in section 7.8.

7.2. Review of the thesis aims and empirical work

The overall aim of this thesis was to advance the understanding of the mealtime experience in care homes and use this evidence to inform the development of an intervention designed to effectuate positive change. Previous mealtime interventions have primarily drawn on a biomedical model to consider health outcomes such as nutritional status (Chapter 1). In contrast, this thesis adopted a biopsychosocial approach to understanding the mealtime experience as a basis by which to develop a staff-focussed training intervention that targets the social and psychological dimensions of mealtimes. Building on previous research (Chapter 2), the thesis investigated the attitudes, perceptions and experiences of mealtimes amongst stakeholders as a precursor to co-developing a staff training programme in conjunction with stakeholders.

Two pieces of empirical work were initially conducted to study the theorised relationship between mealtimes and the social and psychological factors that impact residents’ experiences of them. First, Chapter 4 presented a systematic review of the evidence in the qualitative literature pertaining to views and opinions of mealtimes amongst care home residents and staff. Since most mealtime research has been quantitative, the review's aim was to investigate experiential components of the mealtime in order to understand *how* and *why* interventions may be effective. This approach was guided by the MRC framework on developing and evaluating complex interventions, which recommends establishing a theoretical understanding of how interventions work(36).

The review highlighted a clear lack of resident-focussed research and so Chapter 5 aimed to build on the findings of the review by exploring residents' experiences first-hand in an interview-based study. In addition to gaining an insight into residents' perspectives on mealtimes, the aim was to elicit some of the important issues that shape the dining experience, such as how social interaction may affect the enjoyment of meals. The rationale for engaging with residents was also informed by previous research, which has observed that a resident-voice on mealtimes is often lacking. This may be because residents are reluctant to express views to staff for fear of causing an inconvenience or being labelled "whiners"(161), or because voicing dissatisfaction to staff is contrary to the cultural values of their generation(254). Thus, an implicit aim of this study was to unearth aspects of the mealtime not readily discussed with staff and other stakeholders.

The findings of the review and the interview study informed the development a staff-focussed training programme. The final empirical study (Chapter 6) investigated whether it is feasible to deliver mealtime training workshops to staff. The study's broad aim was to assess whether the workshops could be delivered as intended, and whether they were acceptable to staff facilitators and recipients.

7.3. Summary of the main findings

Collectively, the original research reported here showed that the residents’ experiences of mealtimes were influenced by their social connections to fellow residents and staff, and the extent to which their routines, habits and preferences could be accommodated. Critically, these experiences were largely determined by the provision of care, which shapes mealtime culture, as well as the physical environment and dining room atmosphere. As a catalyst for improved mealtime experiences, a staff training programme, centred on interactive workshops, was found to be feasible and acceptable. The following three sections briefly summarise the main findings of each piece of empirical work.

7.3.1. A review of stakeholders’ attitudes, perceptions, and experiences

Previous research suggests that mealtime interventions may be an effective means of improving the health and wellbeing of care home residents(24-26). However, many of these studies are based on small sample sizes, lack robust design, detail, and specificity, and therefore an explanation of *how* and *why* the intervention may be effective and whether it can be widely replicated. There is also a paucity of evidence related to experiential components of mealtimes, which may structure the implementation of interventions, shed light on features of the mealtime that may facilitate or limit the effectiveness of interventions, and ultimately impact health and wellbeing outcomes (section 4.3.2). Given the centrality of mealtimes in the day-to-day life of a care home resident and their role in regulating health and wellbeing, the first study sought to investigate potential social, cultural, environmental, and behavioural influences on the mealtime.

The systematic review of qualitative studies found that stakeholder perspectives on mealtimes were framed by: (1) organisational and staff support, (2) resident agency, (3) mealtime culture, and (4) meal quality and enjoyment. Physical characteristics of the mealtime such as the food service and the quality of the meal were referenced by participants, but greater emphasis was placed on the social and psychological dimensions of mealtimes. For example, participants discussed shared mealtime values and traditions, and they alluded to aspects of resident self-determination such as having choice over what and when to eat, and with whom. It was also recognised that mealtime perspectives were largely determined by how the care home and its staff provided care. For instance, paternalistic attitudes amongst staff adversely effected resident agency, which also had implications for the type of mealtime culture that existed. Thus, staff were perceived as having a pivotal role in shaping the mealtime experiences of residents. This supports previous research which suggests that institutional and staff factors including inadequate support, time / role pressure, confusion over roles and responsibilities, and poor relations with residents can be detrimental to the mealtime experience(35, 41, 151, 227). These findings also served to highlight the complexity of mealtimes, and provided useful insight into the areas where research should be focussed.

The review highlighted two principal limitations of previous research. Firstly, the majority of studies were cross-sectional. Secondly, only eight studies in the review elicited the views and opinions of care home residents. This is despite the fact that residents' perspectives are likely essential to identifying ways to improve care provision and understanding the barriers and facilitators to the implementation of future interventions. For these reasons, conclusions about the experiential components of mealtimes were restricted and needed further investigation.

7.3.2. Residents' experiences of mealtimes

Despite these limitations, the systematic review revealed that there were important psychosocial components of the mealtime (Chapter 4). This supported the hypothesis that the social and psychological dimensions of mealtimes may affect resident health and wellbeing. However, the paucity of resident-focussed research meant that the issues that impact on residents' enjoyment of meals were not well understood. To address this knowledge gap and corroborate the proposed relationship between the mealtime experience and health and wellbeing, an interview study was conducted with residents. This study had two aims. Firstly, the interviews aimed to gain greater insight into residents' perspectives on mealtimes in care homes, extending the findings of the systematic review. The second aim of the study was to elicit the issues that impact on residents' dining experiences, including how their social interactions may affect their enjoyment of meals. This second aim had not been directly investigated previously. By exploring residents' experiences of mealtimes, this study aimed to inform the development of an intervention to enhance the mealtime experience of residents.

The study found that participants' dining experiences were intrinsically linked to their broader experiences of residing in a care home, highlighting the central role of mealtimes in the lives of residents. Three themes emerged from accounts of these experiences: (1) Emotional and psychological connections with other residents, (2) managing competing interests with limited resources, and (3) familiarity and routine. This study alluded to the importance of social interaction between residents and of accommodating individual preferences, which may often be rooted in mealtime traditions or long-established habits. Accommodating the divergent needs and preferences of residents was seen as an implicit challenge for care providers.

A clear finding from the qualitative interview study was that the way in which residents perceive of mealtimes did not fit neatly within the biomedical approach typical of mealtime interventions. This finding supports previous research(18, 26) that highlights the importance of the social and psychological dimensions of mealtimes and their impact on resident health and wellbeing (discussed in Chapter 2). Biomedical approaches to improving health and wellbeing (e.g., using ONSs to improve nutritional outcomes; Simmons et al., 2006(114)) do not consider the ways that social, psychological, and behavioural factors inter-relate to shape health and wellbeing outcomes such as nutritional status and quality of life. Moreover, single component interventions, characteristic of much of the biomedical-focussed research(24, 25), fail to account for the complexity of mealtimes and the diverse outcomes associated with mealtime experiences.

As previous research has indicated, poor emotional wellbeing can result in reduced appetite and a decline in nutritional status(248), and depression and apathy have been independently linked to weight loss in care home populations(249). In addition, the mealtime experience is known to be integral to the multifactorial influences on food intake(26). According to participants in this study, mealtime interventions should take account of resident interactions and address issues of self-efficacy, particularly in relation to choice and independence. This is consistent with research that links greater control over the decision-making process with a stronger sense of community, a shared social identity, and more engagement and social interaction(267, 268). However, in this study, competing interests were recognised as a barrier to self-efficacy, with individuals' decisions constrained by collective care provision. Thus, the findings indicated that mealtime interventions should develop ways in which resident control can be expanded despite institutional limitations.

7.3.3. Feasibility of in-house staff training workshops

Reflecting the biopsychosocial approach to health, the systematic review (Chapter 4) and qualitative interview study (Chapter 5) determined that there are important social and psychological dimensions to mealtimes, and that many of these are influenced by staff and the organisational structures of the care home. It is also evident that staff training interventions to increase resident self-efficacy at mealtimes are needed. Moreover, staff education is widely acknowledged as a limitation in mealtime care(18). Given resource limitations and staff pressures (discussed in Chapters 1 and 2), creative solutions are required to overcome potential barriers (e.g., cost, time) and develop interventions that are flexible and replicable across a wide range of care settings. As the earlier empirical work in this thesis identified social interaction, choice and independence as important mealtime values, a staff-focussed intervention was developed in conjunction with stakeholders. The intervention was designed to be flexible, deliverable in-house as and when required, and widely replicable, tailored for use in most settings. The aim of this study was to assess whether such an intervention, based on the delivery of workshops, was feasible to deliver and acceptable to staff. Evaluating feasibility and acceptability is a precursor to future work to determine if this intervention promotes social interaction, satisfaction, and quality of life for residents, as well as improving health outcomes such as nutritional status.

The study found that staff workshops aimed at improving the mealtime experience are feasible to deliver and acceptable to staff. The workshops were described as enjoyable and relevant to resident needs. Participants also felt able to reflect on mealtime practice and contribute their perspectives in the workshop, which resulted in reported intentions to make changes to aspects of mealtime care. Workshop facilitators described the training materials as extremely useful and suggested that mealtime practices were very likely to change as a result of the training. Content analysis of the survey responses revealed that participants perceived the dining atmosphere as being an important determinant of social interaction during meals, as well as of the mealtime experience overall. This is consistent with research which has found that creating a pleasant ambiance, such as a family-style environment, can maintain quality of life, physical performance, and body weight amongst care home residents without dementia(32, 315).

Amongst recommendations for improvement, participants suggested increasing the length of time allocated to the workshops and drawing on examples of strategies used in other care homes. The sharing of ideas and information amongst care providers is gaining increasing traction. The Devon Care Kite Mark is an example of an organisation of care home owners and managers in South West UK who strive to improve overall quality of care by exchanging ideas and offering peer support[8]. Other organisations such as the Wiltshire Care Partnership (WCP) and the Northern Devon Healthcare NHS Trust promote networks of peer support by encouraging members to work together to improve quality standards in care homes.

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[8] The Devon Care Kite Mark was established in 2012 by a group of independent care providers. Their aim is to facilitate ongoing improvement by sharing best practice and instilling pride and positive values about life in care homes across Devon.

Participants in this study also suggested that more focus be placed on techniques and strategies that aim to enhance the experience of residents with dementia. Whilst care homes should strive to improve social interaction, choice, and independence, the extent to which this can be achieved is diminished with the increasing severity of disease. In residents with severe cognitive impairment, their capacity to interact with other residents is compromised, and mealtime choice and independence can be limited, as greater staff involvement is required to manage the mealtime process. For example, residents with dementia may be prone to wandering behaviours or have a disruptive influence on other residents. That is not to say that self-efficacy cannot be addressed amongst this cohort, rather specialist approaches may be required to enhance aspects of the mealtime in dementia settings. Two theories *Mealtimes as Active Processes in LTC*(159)*,* and the *Life Nourishment Theory*(316), developed in the context of persons living with dementia, demonstrate the importance of social and psychological influences on food intake. It is hypothesised that positive social connections and honoring individual identities (e.g., food preferences, when a resident wants to eat) at mealtimes will decrease BPSD and promote food intake and quality of life.

Therefore, the principle of striving for improved social interaction and resident self-efficacy applies universally. This study demonstrated that in-house workshops aimed at improving the mealtime experience are feasible, and that participants reported anticipated benefits as a result of the training. An implicit benefit of the proposed training programme is that it is actionable within limited time and resource parameters, and can be deployed as and when required, which also has implications for its wider feasibility.

7.4. Theoretical contributions and implications

The research presented in this thesis has advanced understanding of the role of mealtimes in care homes. First and foremost, it has highlighted the importance of the social and psychological dimensions of mealtimes. For instance, reduced self-efficacy at mealtimes emerged as a key issue in the findings. Yet, mealtimes have previously been investigated in the context of single-component interventions with biomedical or clinical outcomes (see Chapter 2, section 2.3) with little attention placed on psychosocial processes. The experiential aspects of care—relationships with staff and other residents, resident preferences and so on (manifested in perceptions of self-efficacy)—have played little part in the care pathway and have been largely neglected in the research literature.

This is in stark contrast to the wealth of research from other fields showing how, for example, social connections to others critically shapes individuals' wellbeing and general quality of life—with clear implications for physical health(317). There has been a growing interest in recent years in the social determinants of health, notably in terms of the "social cure" approach(10). This approach to research, building on principles of social identity theory and self-categorization theory, establishes how health and wellbeing is intrinsically tied to individuals' self-conceptions that are defined in relation to other people(318). For example, group memberships (and the internalisation of these) have been shown to be positively associated with a range of health and wellbeing outcomes(22, 277, 319). Several studies are now building on these foundations to design and evaluate group-based interventions(95, 267).

Thus, much of the research to date in care homes has failed to account for the complexity of mealtimes, which are influenced on multiple levels by residents, staff, and organisational factors(27). By identifying some of the key components of the mealtime experience, this thesis supports the development of multi-component interventions (e.g., food service, dining environment, staff education) that target multi-level factors (e.g., residents, staff) and measure a variety of outcomes(26). In short, the complexity of mealtimes necessitates the development of complex interventions that take full account of social and psychological processes. The current research has highlighted the translational value of an approach to care home research which fully accounts for the *psychosocial* processes inherent to this context.

Secondly, the empirical findings in this thesis elucidate some of the barriers and facilitators to the provision of optimal mealtimes, which show that a psychosocial focus is relevant to a range of factors beyond those pertaining to residents. In the systematic review (Chapter 4), residents and staff recognised the importance of care provision in setting the tone of the mealtime experience: Organisational factors (including staff attitudes) were associated with levels of resident agency, the mealtime culture, and the meal quality and enjoyment. On the other hand, resident interactions, balancing routines, and the ability of staff to manage competing interests were identified as key influences on the mealtime experience in the interview study (Chapter 5). Given the pivotal role that staff play in defining residents' experiences of mealtimes, it is important that interventions are designed that target staff behaviour.

Training for mealtime staff is a recurrent recommendation in the literature(161, 163, 254, 274). In particular, it has been suggested that staff training focus on the importance of the social aspect of meals, and that staff are encouraged to reflect on their mealtime practices: Engendering a culture of reflection and prompting staff to step into the shoes of residents may promote empathy and pave the way for improved mealtime care(18, 163). In addition, it is hypothesised that training has the potential to improve staff satisfaction. For example, it has been suggested that staff training programmes that provide ongoing emotional support, perhaps by a support group, may reduce turnover and absenteeism(18, 274).

Training also provides an opportunity for increased engagement with staff. Engagement has been defined as a psychological state associated with a sense of commitment and loyalty to one’s organisation and involvement in one’s work: It follows that certain conditions affect levels of staff engagement, which in turn affect behaviour, and consequently impact overall performance(320). In the healthcare sector, highly engaged staff have been shown to be healthier and happier, with lower sickness absence and lower staff turnover(320). For example, in the NHS, West and Dawson (2012) found that organisations with levels of engagement in the top third had absenteeism of 3.6 percent in comparison with 4.8 percent for those at the bottom(321). Engaged staff may be more likely to demonstrate empathy and compassion to residents, despite the challenges of working in a pressured environment. In hospital settings, positive correlations have been found between staff engagement and both overall patient experience and whether patients reported being treated with dignity and respect(320).

As well as engaging staff, and equipping them with the knowledge and tools to do their job better, training may convey additional benefits. Having the opportunity to have their voices heard, their grievances aired, and endowing staff with the responsibility for certain decisions, may be motivating and empowering. This has important implications for how staff training and education interventions are conceived of and designed. Front-line mealtime staff have a wealth and knowledge and experience and may have ideas that could benefit other staff and the care home in general. However, the potential effectiveness of staff education and training interventions is dependent on managers recognising their importance and supporting their implementation.

Creating the conditions for increased staff engagement and empowerment relies on good leadership. Care home providers, owners, and managers play a crucial role in supporting, motivating, and even inspiring staff in their organisations. Transformational leadership (referred to in section 6.3.5) is widely referenced in the Healthcare Sector, promoted as a style of leadership that facilitates change, increases job commitment, job satisfaction and staff wellbeing(322). Transformational leaders are described as those who “broaden and elevate the interests of their followers, generate awareness and commitment of individuals to the purpose and mission of the group, and enable subordinates to transcend their own self-interests for the betterment of the group” (Seltzer et al., 1989, p. 174)(323). The concept of transformational leadership encompasses charisma (the leader as a role model), inspirational motivation, intellectual stimulation (i.e., encouraging staff to make their own decisions and be creative and innovative) and individualised consideration (i.e., coaching and mentoring staff)(324).

It may be argued that transformational leaders have an especially important role in care homes. As care home staff have daily contact with residents, they are likely to be the first to notice changes in their health and are best placed to address their needs. Thus, leaders who encourage staff to solve problems and take responsibility may facilitate improvements in the provision of care(322). Moreover, transformational or inspirational leaders may positively impact staff wellbeing, which is particularly pertinent given the recognised pressures on staff in care homes and in the care sector more widely (section 2.3.4).

7.5. Practical implications

Whilst this research now needs taking forward to realise its practical implications, it has highlighted the strong potential of mealtime interventions to address the health and wellbeing needs of care home residents. In this section, the possible future work and necessary implications are identified and recommended. Section 7.5.1 begins by discussing how the thesis findings inform the development of interventions aimed at improving residents' mealtime experiences. Section 7.5.2 considers the implications of developing a mealtime training programme for staff and how the training programme designed in this thesis may be developed further.

7.5.1. Implications for enhancing residents' mealtime experience

Mealtimes are one of the few times during the day that a resident is involved in normal social interaction with other residents as well as staff (286, 325). Eating food can help provide comfort and pleasure(286). It can prompt memories of past experiences of mealtimes and sharing food with others, thereby enhancing feelings of wellbeing(326). They are also the ideal opportunity for residents to have an active role in the home. For example, supervised helping with the preparation of food and being involved in planning the menu may help residents feel more engaged in mealtimes(327). The need for practical solutions to promote resident (and staff) connections, as well as self-efficacy, is consistent with the findings from the empirical work carried out as part of this thesis.

Organisational focus on the physical and medical needs of residents may in part be shaped by policy, and recommendations disseminated by regulatory bodies. Regulators, such as the CQC in England, are primarily concerned with safeguarding resident welfare, and guidance is largely based on ensuring good quality of care. As the CQC's mission statement makes clear, the priority is to ensure that care homes “meet fundamental standards of quality and safety”(42). However, whilst quality of care should underpin quality of life, quality of life does not necessarily correlate with quality of care. For example, guidance on reducing the risk of falls may also reduce resident independence. Similarly, guidance on the administering soft or pureed foods to residents with dysphagia may ease swallowing difficulties, but may also restrict choice. The ability of staff to strike a balance between safeguarding and self-efficacy, and the support of management to enable this, may fundamentally impact resident wellbeing. The clear implication of the current research, then, is that staff need to explore ways of providing a social environment that promotes individual dignity and comfort, and encourages residents to enjoy mealtimes on their own terms.

Mealtime enjoyment is influenced by a complex interplay of physical, mental and psychosocial factors which becomes increasingly complicated with age and morbidity. The process within care homes of sourcing, preparing and presenting food followed by factors impacting on chewing, swallowing and digesting the meal produces many time points that can hamper a resident's eating experience. Poorly managed, any one of these time points may negatively impact resident health and wellbeing. Furthermore, the dining environment may have an important influence on the mealtime experience. For example, enhancing lighting during mealtimes (i.e., having the lights turned on and making sure there are no dark or shadowed areas) may increase functional abilities amongst residents with dementia(328). Other studies have found that the sensory-based manipulation of introducing the smell of baking bread or coffee in the dining area may increase food intake(329, 330). The broader principle of changing the style of delivery to a more “family-style” service where residents are presented with empty plates and serving bowls from which to take the food may improve both resident participation in mealtimes and communication among residents and carers(154, 162). Serving meals in this way creates a more normal, homelike environment(154). However, in order to improve mealtime participation, eating behaviour and social interaction, it has been found that staff need to be instructed to interact with residents by prompting and praising appropriate mealtime behaviours(162).

Staff education, adequate staffing levels and supervision at mealtimes, as well as an appreciation of personal and cultural preferences are integral to ensuring positive mealtime experiences(18). For many residents, their time in the care home is short: 56 percent of all care home residents die within a year of admission to the care home(331). Therefore, with mealtimes being such an important part of the social routine of living in a care home, it is important to educate staff about the possible benefits of improving the whole eating experience for residents, which may improve overall quality of life during this (often limited) time.

7.5.2. Implications for staff mealtime training

Staff have a crucial role in establishing positive social connections and in honoring individual identities (e.g., food preferences) at mealtimes. There is growing evidence that enhancing the mealtime experience for residents in this way will reduce BPSD and promote food intake and quality of life. At the same time, it is acknowledged that staff need to be sufficiently skilled to identify, and act on, issues related to the mealtime. Staff education interventions have showed promising results for improving quality of and amount of assistance, food intake, nutritional status, and quality of life of residents(135, 137, 145-148). Yet, feasibility of intensive eating assistance interventions programs demonstrate that training to improve knowledge(141, 144) and care processes(104, 144, 156, 157, 332) with audit and feedback(304) or support(104) are also effective, and potentially more sustainable than intensive eating assistance provided by staff. Staff-focussed programmes are needed because staff are front line, supported by management, and recent research has started to recognise this potential(18, 26).

Encouraging residents to eat and assisting them with feeding is time consuming and requires the carer to be empathetic to, and knowledgeable of, the difficulties that the person may be experiencing(325). Thus, training programmes that raise staff awareness of the mealtime experience and encourage empathy may help to improve care provision. This may be done by encouraging staff to imagine “being in residents’ shoes”, for example, by role-playing common scenarios or participating in other active learning experiences(18). At the same time, there is a need to build capacity at mealtimes so that staff have time to care for residents. Staggering mealtimes, extending the opening times of the dining room, or reprioritising duties in order to “protect” mealtimes may improve the resident experience, but such strategies necessitate some organisational flexibility.

The findings from the empirical work conducted in this thesis suggest that a mealtime training programme for staff is plausible and ready to be piloted and tested for effectiveness. Moreover, an adoption of this intervention may improve care provision by raising awareness of good mealtime practice. It also gives staff the opportunity to make changes relevant to their care home. Empowering staff to take responsibility for such changes is a key tenet of transformational leadership, and may help to engage and retain staff, as well as enabling them to do their job better.

7.6. Strengths and weaknesses of the research

Earlier chapters have outlined the strengths and weaknesses for each particular investigation (sections 4.3.5, 5.3.5, and 6.3.5) and are not repeated here. Rather, the current section addresses the overall strengths and weaknesses of the research within this thesis.

A key strength of this thesis is that it draws on field-based research, exploring the mealtime experiences of care home residents in an interview study (Chapter 5) and eliciting staff views and opinions of a training programme (Chapter 6). Moreover, the research has high ecological validity, that is, the extent to which it is related to or reflective of everyday life. The thesis focusses on residents in care homes and the staff that provide their care, and therefore the setting and context-specific findings may be used to inform future intervention development. This is consistent with the Intervention Mapping (IM) methodology, which asserts that designers need to be sure that interventions will work on the intended population; it cannot be assumed that findings translate to different populations or contexts(333). Furthermore, although the interview study and feasibility trial of the training programme were conducted on a small sample of care homes in the South West UK, the systematic review (Chapter 4) included participants from a range of countries. This inclusion provides a more complete view of mealtime experiences. Moreover, the interview study complemented and extended the systematic review findings.

An additional strength of this thesis is that it has been informed by stakeholders. At an empirical level, care home residents were asked about their experiences of mealtimes. This is particularly important as the resident voice is largely missing from care home research, and residents themselves have been described as the “silent recipients of care”, reluctant to express their views to staff(18). During the stage of intervention development, the mealtime training guide (Appendix G) was co-produced with stakeholders, with much of the content based on interviews with frontline staff. This helped to ensure that the content was appropriate and relevant. Finally, the feasibility study was designed to elicit feedback on the acceptability of the proposed training from care home managers and staff. Engaging stakeholders in the design and development of interventions, and subsequent feasibility testing, is vital to ensuring that interventions can be faithfully replicated and implemented(169).

Although to be applauded in one sense, the real-life context of the research did mean that there was an inevitable limited amount of control over extraneous variables. For example, care homes by their very nature are individual, and individual settings and environments have a profound influence on the residents and staff that live and work in them. This “contextual noise” can make the results of the individual studies open to other alternative explanations. This is a recognised limitation of qualitative research, often criticised for lacking generalisability and reproducibility due to confounding factors and the potential for researcher bias(255). However, the use of randomised and controlled experiments would not have been practical for this research given that the focus was on collecting contextual information about mealtimes and developing insights into residents’ experiences. Despite the observational nature of the studies, a systematic and reflective approach was taken throughout the research process to ensure rigour. By giving a detailed, descriptive and transparent account of the empirical work undertaken, it is hoped that this thesis gives a plausible and coherent explanation of the mealtime phenomenon, which would be recognisable to any other trained researcher(255).

As conclusions from for the feasibility study were based on participants' self-reported reflections on the training, this may be construed as another limitation. To address this, further research might be carried out in which the transfer of training is directly observed. It would also seem useful for future field research to supplement the insights gained from self-report data with more objective indicators of training transfer (e.g., actual changes in workplace behaviour). Assessing outcome measures such as this would also be a key component of the implementation and evaluation phases of intervention development(36). This was not possible within the scope of this thesis, as time has restricted the empirical work to exploratory research and intervention development.

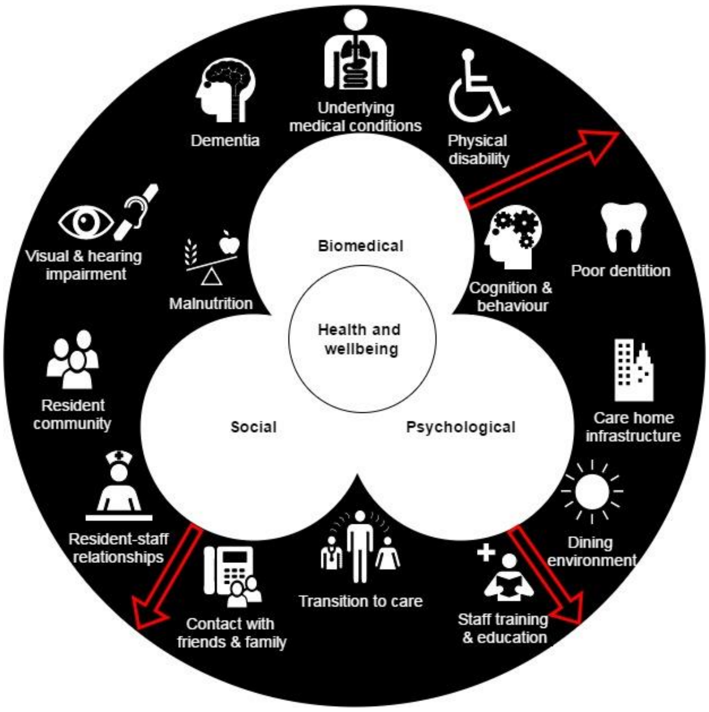
7.7. Future research directions

Although beyond the scope of this PhD, it is hoped that this thesis will lead to the evaluation and implementation of a mealtime training programme for staff. The main aim of evaluating interventions is to establish causality (i.e., the link between the intervention and the effect)(169). Further work is required to determine appropriate resident outcome measures, and a pilot trial (encompassing these outcome measures) would be recommended prior to a full study being conducted. In order to minimise the potential for selection bias or confounding, a randomised controlled trial (RCT) would usually be the best approach for determining any causal effects of an intervention(169). However, RCTs in care settings can encounter ethical and methodological difficulties (169, 334): For instance, it would not be practical for this type of intervention as it would be difficult for mealtime staff to avoid using intervention techniques on residents designated as controls. A cluster RCT, in which randomisation is applied at a group (or care home) level, may be more appropriate in order to avoid contamination and particularly given the pragmatic nature of the research(335). Approaches such as observational research, case control, or qualitative studies may also contribute to the generation of knowledge, incorporating the adoption of a mixed methods approach (using quantitative and qualitative methods).

The MRC also recommends that a process evaluation is undertaken to investigate the mechanisms by which the intervention exerts its effects(36). In addition, process evaluations can assess intervention fidelity (the extent to which the intervention was delivered as intended), as well as investigate stakeholder acceptability and explore the contexts in which the intervention was delivered(169). Thus, further development of this mealtime programme for staff should explore whether and what effect it has on resident outcomes, but also how and why any such causality occurs. For example, a process evaluation may help to unpack the meaning of social connections for residents who experience the intervention (i.e., how they perceive social connections to emerge and shape experiences of mealtimes).

7.7.1. Potential outcome measures of the staff training programme

Whilst staff outcomes could assess changes in workplace behaviour, resident outcomes would include a social and psychological dimension, as well as outcomes related solely to health (see Figure 12). For example, given the multi-component nature of the proposed intervention, it may be possible to measure the effect of changes to mealtime care on residents’ social identification with the care home (a process variable), or perceived quality of life, as well as any change to nutritional status. This would be commensurate with the rigour of a complex intervention and the principles of a biopsychosocial approach to health and wellbeing. Work with stakeholders (residents) would help to shape decisions about outcome measures that could be explored in future research.



Health outcomes (e.g., food intake, body weight, nutritional status)

Social outcomes (e.g., level of collective engagement, social identification with the care home)

Psychological outcomes (e.g., quality of life, resident behaviour)

Figure 12. *Potential outcome measures of multicomponent interventions*

7.8. Overall conclusions

Identifying effective ways of enhancing the mealtime experience for residents has proven challenging. This is because of the complex needs of residents, the inherent tension between individual needs and preferences and collective provision of care, and balancing autonomy, support and privacy with residents’ socialisation needs. Diverse outcomes are relevant to the mealtime experience. Future research needs to capitalise on structure, process, and outcome variables and diversify outcomes to include social and psychological measures such as quality of life, satisfaction, and collective engagement. Multi-component interventions are feasible and this thesis identified a variety of strategies that could be included in complex interventions to address several levels of influence on the mealtime experience. It is hypothesised that interventions which enhance the mealtime experience will improve resident health and wellbeing.

Appendices: Thesis measures and materials

Appendix A: List of search terms

Master Search Strategy in MEDLINE (OvidSP)

Database: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and

Ovid MEDLINE(R) <1946 to Present>

Search Strategy:

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1. Homes for the Aged/
2. care home*.ti,ab.
3. nursing home*.ti,ab.
4. residential care.ti,ab.
5. (residents adj5 home*).ti,ab.
6. (residents adj3 care).ti,ab.
7. residential aged care.ti,ab.
8. (care facilit* and (older or aged)).ti,ab
9. Meals exp
10. Mealtimes exp
11. 1-8 AND 9-10
12. exp qualitative research/
13. recount.ti,ab.
14. recounts.ti,ab.
15. experience.ti,ab.
16. experiences.ti,ab.
17. understanding.ti,ab.
18. interview*.ti,ab.

19. narrative*.ti,ab.
20. qualitative.ti,ab.
21. perceive*.ti,ab.
22. perception*.ti,ab.
23. (views or view or viewpoint*).ti,ab.
24. focus group.ti,ab.
25. attitude*.ti,ab.
26. beliefs.ti,ab.
27. feelings.ti,ab.
28. (meaning or meanings).ti,ab.
29. phenomenon*.ti,ab.
30. ethnograph*.ti,ab.
31. grounded theory.ti,ab.
32. hermeneutic*.ti,ab.
33. (constant adj (comparative or comparison)).ti,ab.
34. interpret.ti,ab.
35. theme*.ti,ab.
36. thematic.ti,ab.
37. discourse.ti,ab.
38. ((open or unstructured) adj questionnaire*).ti,ab.
39. observation*.ti,ab.

****

[ti,ab= title & abstract]

Appendix B: Wallace Criteria (adapted from Wallace, 2004)

Study ID (author date)	1. Is the research question clear? (Y/ Can't tell/ N)	2. Is the theoretical or ideological perspective of the author (or funder) explicit? (Y/ Can't tell/ N)	2b. Has this influenced the study design, methods or research findings? (Y/ Can't tell/ N)	3. Is the study design appropriate to answer the question? (Y/Can't tell/ N)	4. Is the context or setting adequately described? (Y/ Can't tell/ N)	5. Is the sample adequate to explore the range of subjects and settings, and has it been drawn from an appropriate population? (Y/ Can't tell/ N)	6. Was the data collection adequately described? (Y/ Can't tell/ N)	7. Was the data collection rigorously conducted to ensure confidence in the findings? (Y/ Can't tell/ N)	8. Was there evidence that the data analysis was rigorously conducted to ensure confidence in the findings ? (Y/ Can't tell/ N)	9. Are the findings substantiated by the data? (Y/ Can't tell/ N)	10. Has consideration been given to any limitations of the methods or data that may have affected the results? (Y/ Can't tell/ N)	11. Do any claims to generalisability follow logically and theoretically from the data? (Y/ Can't tell/ N)	12. Have ethical issues been address and confidentially respected? (Y/ Can't tell/ N)
Adams et al. (2013)	Y	N	CT	Y	Y	Y	Y	CT	Y	Y	N	CT	Y
Bennett et al. (2014)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bennett et al. (2015)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bundgaard (2005)	Y	Y	Y	Y	Y	CT	N	CT	Y	Y	Y	CT	CT
Chaudhury et al. (2016)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dunn & Moore (2014)	Y	N	CT	Y	Y	CT	Y	Y	Y	Y	Y	CT	CT
Harnett & Jonson (2016)	Y	Y	Y	Y	Y	CT	Y	CT	CT	Y	N	Y	Y
Hewitt et al. (2007)	Y	Y	Y	Y	Y	CT	Y	CT	Y	Y	N	CT	Y
Kenkmann & Hooper (2012)	Y	N	CT	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kofod & Birkemose (2004)	Y	N	CT	Y	Y	Y	Y	CT	CT	CT	Y	CT	N
Kofod (2012)	Y	Y	Y	Y	Y	CT	Y	CT	CT	Y	N	Y	Y
Osinga et al. (2013)	Y	N	CT	Y	Y	CT	Y	CT	Y	Y	Y	CT	CT
Palacios-Cena et al. (2012)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pasman et al. (2003)	Y	Y	Y	Y	Y	Y	Y	CT	Y	Y	N	Y	Y
Philpin et al. (2014)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Appendix C: Interview strategy

- **Set context and explain the purpose of the study**

Aim: To ensure the participants are provided with an overall introduction to the study and the information necessary to provide a context for the interview (e.g., *"as you know I'm here to talk a little bit about mealtimes – this is because I'm very interested in residents' opinions on what mealtimes are like in [care home name] – but before we talk about that, I wonder if you could tell me a little bit about yourself first"*).

  - How long have you been a resident at [care home name]?

- **Elicit background and develop narrative**

Aim: To gain an understanding of the participant's daily routine in the care home and gauge the level at which they interact socially (e.g., *"can you tell me a little bit about how you spend your day?"*).

Sample questions:

- Can you tell me a little bit about your life in general in care home?
- Do you take part in any activities? Which ones?
- Have you made some friends since you have lived here?

- **Focus on experience of mealtimes in the care home and the social relations between residents**

Aim: To elicit the participant's experiences of mealtimes in the care home and their perception of the social aspects of them (e.g., *"could I now hear a little bit about your experiences of the mealtimes in [care home name]?"*). The interview questions are designed to create a dynamic that is experienced as positive, non-threatening. The focus therefore is not on the negative (e.g. What could be better about your mealtime experiences?).

Sample questions:

- What time do you have your meals?
- Do you look forward to mealtimes? Why/ why not?
- Do you normally eat with other people?
- What do you like about mealtimes?
- What are the best and worst aspects of mealtimes here? What would you change?
- Tell me about the social occasions you've had with other people around mealtimes? (e.g., Sunday roasts with the family, birthday celebrations and Christmas dinner). What have you enjoyed most about these occasions?
- Can you remember a time when food tasted really good and you really enjoyed eating? Could you tell me a little about what it was like?

Appendix D: Qualitative survey for training recipients

Thank you for taking part in this survey. Your views and opinions are very important. Please note that some of the questions require you to give an open response. If English is not your first language, you may respond to these questions in your own language. The survey should take approximately 15-20 minutes to complete. Once again, we appreciate your time in answering the following questions.

1. Please indicate which of the following best describes your job in the care home?
   - Registered Nurse
   - Nursing Assistant
   - Mealtime Assistant
   - Dietician
   - Occupational Therapist
   - Speech and Language Therapist
   - Care Home Owner / Manager

2. What is your gender?
   - Female
   - Male
   - Prefer to self-describe (please specify) _________
   - Prefer not to say

3. What is your nationality?
   - British
   - Other (please specify) _________

4. Please indicate how long you have worked in a care home?
   - Fewer than 5 years
   - 5 – 10 years
   - 10 – 15 years
   - 15 – 20 years
   - Over 20 years

5. Which of the workshops did you attend?
   - Social interaction at mealtimes
   - Resident choice at mealtimes
   - Resident independence at mealtimes

6. Did you enjoy taking part in the workshop?
   - Yes
   - Somewhat
   - No

7. Did you feel that the workshop activities enabled you to reflect on residents’ experiences of mealtimes?
   - Yes
   - Somewhat
   - No

8. Did you feel you were able to express your thoughts and / or contribute your ideas in the workshop?
   - Yes
   - Somewhat
   - No

9. Overall, how relevant did you find the workshop to addressing the mealtime needs of residents?
   - Extremely relevant
   - Very relevant
   - Moderately relevant
   - Slightly relevant
   - Not relevant at all

10. In what ways do you feel that the topic covered in your workshop (i.e. social interaction, resident choice or resident independence at mealtimes) could help to improve the wellbeing of residents?

11. Please could you give an example of a strategy or technique discussed during the workshop that you could apply during mealtimes? (open)

12. How likely are you to adapt your approach to mealtimes as a result of the training?
    - Extremely likely
    - Very likely
    - Moderately likely
    - Slightly likely
    - Not likely at all

13. Can you tell me how the workshops could be improved to help you to address residents’ needs at mealtimes?

14. Can you tell me about what you think is the single biggest influence on residents’ experiences of mealtimes?

15. Why do you think it has such a big influence?

16. With is in mind, what would you do to improve residents’ experiences of mealtimes?

Appendix E: Qualitative survey for training facilitators

Thank you for taking part in this survey. Your views and opinions are very important. Please note that some of the questions require you to give an open response. If English is not your first language, you may respond to these questions in your own language. The survey should take approximately 15-20 minutes to complete. Once again, we appreciate your time in answering the following questions.

1. Please indicate which of the following best describes your job in the care home?
   - Registered Nurse
   - Nursing Assistant
   - Mealtime Assistant
   - Dietician
   - Occupational Therapist
   - Speech and Language Therapist
   - Care Home Owner / Manager

2. What is your gender?
   - Female
   - Male
   - Prefer to self-describe (please specify) _________
   - Prefer not to say

3. What is your nationality?
   - British
   - Other (please specify) _________

4. Please indicate how long you have worked in a care home?
   - Fewer than 5 years
   - 5 – 10 years
   - 10 – 15 years
   - 15 – 20 years
   - Over 20 years

5. Which of the workshops did you facilitate?
   - Social interaction at mealtimes
   - Resident choice at mealtimes
   - Resident independence at mealtimes

6. Did you enjoy facilitating the workshop?
   - Yes
   - Somewhat
   - No

7. Did you feel that the workshop activities enabled participants to reflect on residents’ experiences of mealtimes?
    - Yes
    - Somewhat
    - No

8. Did you feel participants were able to express their thoughts and / or contribute their ideas in the workshop?
    - Yes
    - Somewhat
    - No

9. How useful did you find the training materials?
    - Extremely useful
    - Very useful
    - Moderately useful
    - Slightly useful
    - Not useful at all

10. In what ways do you think that the topic covered in your workshop (i.e. social interaction, resident choice or resident independence at mealtimes) could help to improve the wellbeing of residents?

11. How likely do you think that mealtime practices will change as a result of the training?
    - Extremely likely
    - Very likely
    - Moderately likely
    - Slightly likely
    - Not likely at all

12. Do you feel that there are any ways in which the workshops could be improved to help staff to address residents’ needs at mealtimes?

13. Can you give me some examples of how you might approach the workshops differently?

14. Can you tell me about what you think is the single biggest influence on residents’ experiences of mealtimes?

15. Why do you think it has such a big influence?

16. With is in mind, what would you do to improve residents’ experiences of mealtimes?

Appendix F: Workshop observation sheet

<table>
<tr><td colspan="2">Name of care home:</td><td colspan="3">Name of workshop facilitator:</td></tr>
<tr><td colspan="5">Workshop topic:</td></tr>
<tr><td></td><td>Expected</td><td colspan="3">Unable to attend / reasons for non-attendance</td></tr>
<tr><td>Number of participants</td><td></td><td colspan="3"></td></tr>
<tr><td></td><td>Yes</td><td colspan="3">No / reason(s) for the delay</td></tr>
<tr><td>Does the workshop start on time?</td><td></td><td colspan="3"></td></tr>
<tr><td></td><td>Yes</td><td colspan="3">No / description of missing items</td></tr>
<tr><td>Have all the workshop materials been prepared in advance?</td><td></td><td colspan="3"></td></tr>
<tr><td></td><td>Yes</td><td colspan="3">If not, why not?</td></tr>
<tr><td>Is the setting appropriate? (e.g., quiet, comfortable, adequate size)</td><td></td><td colspan="3"></td></tr>
<tr><td rowspan="2"></td><td rowspan="2">Duration of activity (mins)</td><td colspan="2">Is this sufficient time for the activity and feedback?</td><td rowspan="2">Comments</td></tr>
<tr><td>Yes</td><td>No</td></tr>
<tr><td>Activity 1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Activity 2</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Activity 3</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Activity 4</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Yes</td><td colspan="3">No / reason(s) for lack of understanding</td></tr>
<tr><td>Are the participants able to understand the facilitator’s instructions?</td><td></td><td colspan="3"></td></tr>
<tr><td></td><td>Yes</td><td colspan="3">No / for what reason(s)?</td></tr>
<tr><td>Does the workshop finish on time? (i.e., after 60 minutes)</td><td></td><td colspan="3"></td></tr>
<tr><td>Additional observations</td><td colspan="4"></td></tr>
</table>

Appendix G: Mealtime training guide

On eating well:

A guide for mealtime staff in care homes

UNIVERSITY OF EXETER | MEDICAL SCHOOL

Funded by NHS National Institute for Health Research

Appendix H: Ethics application forms (including participant information sheets, consent forms, and recruitment letters, and safeguarding policy)

UNIVERSITY OF EXETER MEDICAL SCHOOL RESEARCH ETHICS COMMITTEE

APPLICATION FORM
FOR
RESEARCH ETHICS APPROVAL

Name of Applicant:	Ross Watkins
Project Title:	Exploring residents' experiences of mealtimes in care homes
Date:	29/09/15
Version Number: *(1 for first time applications)*	3
Application Number: (For Ethics Committee use only)	

SECTION A: GENERAL

1 Title of the Study:	Care home residents' experiences of mealtimes		
Project Start Date:	1st September 2015	Project End Date:	31st December 2015

2 Full name of applicant:					
Position Held:	PhD student in the PAtH Research Group				
Institution:	Exeter University	Course Title (if student):			
Location:	College House, St Lukes Campus, Heavitree, Exeter EX1 2LU.				
Email:	Ross.Watkins@exeter.ac.uk	Telephone:	07767 725 222	Fax:	
Please provide details of any and all other researcher(s) who will work on the research project: (if more than three researchers please extend table as appropriate)					
Name(s):	Dr Mark Tarrant				
Position Held:	Senior Lecturer in Human Sciences				
Location:	College House, St Lukes Campus, Heavitree, Exeter EX1 2LU.				
Contact details (e-mail/ telephone/fax):	M.Tarrant@exeter.ac.uk/ 01392 725921				
Name(s):	Dr Vicki Goodwin				
Position Held:	Senior Research Fellow				
Location:	South Cloisters, St Lukes Campus, Heavitree, Exeter				
Contact details (e-mail/ telephone/fax):	V.Goodwin@exeter.ac.uk/ 01392 722745				
Name(s):	Dr Rebecca Abbott				
Position Held:	Research Fellow				
Location:	South Cloisters, St Lukes Campus, Heavitree, Exeter				
Contact details (e-mail/ telephone/fax):	R.A.Abbott@exter.ac.uk/ 01392 726098				

3 Is this proposal part of a PhD?	Yes	X	No	
If yes, please complete the remainder of this section.				
Year of Study:	First year			
Name of Primary Supervisor/Director of Studies:	Dr Mark Tarrant	Position held:	Senior Lecturer in Human Sciences	
Location:	College House, St Lukes Campus, Heavitree, Exeter EX1 2LU.			
Contact details (email/telephone/fax):	M.Tarrant@exeter.ac.uk/ 01392 725921			
Name of Second Supervisor:	Dr Vicki Goodwin	Position held:	Senior Research Fellow	
Location:	South Cloisters, St Lukes Campus, Heavitree, Exeter			
Contact details (email/telephone/fax):	V.Goodwin@exeter.ac.uk/ 01392 722745			

4 Declaration to be signed by the Applicant or the supervisor in the case of a student:

I confirm that the research will be undertaken in accordance with the University Ethical Framework, Good Research Practice Policy, and Code of Research Ethics.

I will undertake to report formally to the relevant University Research Ethics Committee for continuing review approval.

I shall ensure that any changes in approved research protocols are reported promptly for approval by the relevant University Ethics committee.

I shall ensure that the research study complies with the appropriate regulations and relevant University of Exeter policies on the use of human material (if applicable) and health and safety.

I shall ensure that any external permissions necessary for the research to be undertaken are obtained prior to the research taking place.

I am satisfied that the research study is compliant with the Data Protection Act 1998, and that necessary arrangements have been, or will be, made with regard to the storage and processing of participants' personal information and generally, to ensure confidentiality of such data supplied and generated in the course of the research.

(Note: Where relevant, further advice is available from the University of Exeter Medical School (UEMS) Data Protection Officer).

I will ensure that all adverse or unforeseen problems arising from the research project are reported in a timely fashion to the Chair of the relevant University Research Ethics Committee.

I will undertake to provide notification when the study is complete and if it fails to start or is abandoned.

I have met and advised the student on the ethical aspects of the study design and am satisfied that it complies with the current professional (*where relevant),* School and University guidelines.

I have read this application and believe it to be scientifically and ethically sound

Signature of Applicant: **Date: 12th June 2015**

Signature of Supervisor: **Date: 12th June 2015**

Departmental Approval

- I give my consent for the application to be forwarded to the University of Exeter Medical School Research Ethics Committee with my recommendation that it be approved.
- I confirm that this submission has been appropriately peer reviewed.

Signature of Head of Research Institute/Centre or Vice Dean (Education) (or approved nominee)

Signature: Stuart Logan **Date: 5th June 2015**

Printed Name: Professor Stuart Logan

5 Name and affiliation of Peer Reviewer(s)			
Name:	Dr Jo Day	Position held:	Research Fellow
Institution:	University of Exeter Medical School		
Contact details (email/telephone/fax):	J.K.Day@exeter.ac.uk/ 01392 726089		

SECTION B: FUNDING

6 If the research is externally funded, what is the source of the funding?					
Not applicable.					
6.1 What is the value of the grant?					
6.2 Are there any conditions attached to the funding which could have an impact on this application?					
YES			**NO**		
If yes, please specify.					

SECTION C: THE RESEARCH

7 In lay terms, please provide an outline of the proposed research, including:

background
objectives / hypothesis
research methodology
contribution of research
justification of benefit
be specific about focus groups
state whether this is forming part of a PhD

(*max 1000 words)*.

This study will form part of a PhD thesis concerned with developing and testing the feasibility of a mealtime intervention to improve the health, wellbeing and quality of life of older adults in residential care. The thesis is informed by two recently published systematic reviews by PenCLAHRC (Abbot et al., 2013, and Whear et al., 2014), which evaluated the effectiveness of mealtime interventions on nutritional outcomes for care home residents, and on the behavioural and psychological symptoms of dementia (BPSD). Whilst these reviews provide valuable insight into the types of interventions that might improve health outcomes, very little qualitative research has been conducted to understand *how* and *why* mealtime interventions might be effective, and in particular, what effect the mealtime experience has on health outcomes. Investigating residents' perspectives on the mealtime experience is an important first step in the context of understanding current care provision, as this will inform future research into intervention development, the crux of this thesis.

According to the Office for National Statistics (2014), almost 300,000 older people lived in a care home in 2011, 60 percent of whom were aged 85 or over. Malnutrition (undernutrition) is one of the greatest threats to the health, wellbeing and autonomy of older people, particularly those living in care homes, adversely impacting quality of life and increasing the prospect of morbidity and mortality. It is thought that over half the people admitted to hospital from care homes in the UK are malnourished (Age UK, 2015). This reflects the findings of a recently published study from the US which reported that almost 50 percent of care home residents were moderately to severely malnourished (Gaskill et al., 2008), compared with a relatively low 4.3 percent prevalence of undernutrition amongst ≥65 year old community-dwelling adults (Cuervo et al., 2009). Ominously, the rate of malnutrition in long-term residents is estimated to be as high as 85 percent (Adolphe & Dahl, 2007), suggesting that living in a care home may be bad for your health.

Nutritional status depends, to some extent, on enjoyment of mealtimes, yet residents often express dissatisfaction with the food and food service in care homes (Crogan & Evans, 2001; Katzman, 1999). A number of studies have suggested that residents prefer mealtimes to be as natural and independent as possible, comparable to eating in one's own home and analogous to a 'family-style' dining environment (Sidenvall, Fjellstrom, & Ek, 1994; Njis, 2006). Moreover, they want the food, and the manner in which it is served, to reflect their preferences (Evans, Crogan, & Shultz, 2003). Unfortunately, care home policy may not always reflect the preferences of residents and whilst ‘enjoying food and being able to eat food’ are central to the UK Government’s nutrition action plan, it is acknowledged that there are physical, cognitive, behavioural and cultural barriers (including those of staff) that impact on this (Dunn & Moore, 2014).

Mealtimes represent more than just the simple provision of nutrition; they may offer the opportunity for residents (and staff) to form and sustain important social relationships. Food is used to provide comfort, express feelings, celebrate or reward success, and nurture companionship (Grodner et al., 2000) and eating occasions are integral to tradition, to family life, to who we are and where we come from, providing a powerful link to our identity. In stressful situations or in unfamiliar environments, or indeed when the concept of identity is challenged, food (and the social connections to it) may have a significant influence on quality of life (Evans et al., 2005). In care homes, there is a high prevalence of reported depression, loneliness, and depleted quality of life (Patrick et al., 2000). As mealtimes are an integral part of day-to-day life in a care home, the mealtime experience may be an important catalyst for the health, wellbeing and quality of life of residents.

Research aims:

1. To gain an insight into residents’ perspectives on mealtimes in care homes and inform later intervention development.

2. To understand how residents’ social interactions effect their enjoyment of meals.

3. To elicit some of the barriers and facilitators to providing the optimal mealtime experience.

The proposed study will involve semi-structured one-to-one interviews with care home residents with a focus on the experience of mealtimes, including the social environment in which these take place. Participants will be free to say as much as they wish. As important issues or themes emerge, they will be included in subsequent interviews and structure further questioning in order to facilitate the development of a theory. This approach is based on Grounded Theory (Glaser & Strauss, 1967) in which a theory emerges and develops through the analysis of data. As data is collected, repeated ideas (e.g. views and opinions) are tagged with codes, which can then be grouped into concepts and/or categories. It is an iterative, emergent process, which will help to conceptualise the mealtime experience of care home residents. The interviews will be audio recorded in order that the conversation can be transcribed, which will facilitate analysis and the development of theory. During an interview, nonverbal expressions and gestures will be recorded in the researcher’s field notes in order to enable a more detailed description of the conversation and give further insight into a participant’s perspective. The field notes will also contain the researcher’s observations and thoughts about the interaction, contributing to a “thick description” of the data (Geertz, 1973). Additionally, these notes will add transparency to the researcher’s thought processes as the core themes emerge, and track the influence of any preconceived ideas on the emerging theory.

Building on the recognition that mealtimes have a critical socio-cultural role in the care of older people, both in terms of ensuring adequate nutrition and promoting broader health and wellbeing (Evans et al., 2005), this study aims to gain an insight into the mealtime experience of residents in care homes. This will provide important foundations for future intervention development, which may focus for example, on involving residents, meaningfully and collectively, on decisions concerned with meal planning and preparation, dining room décor and seating arrangements. Collective decisions about the social environment would be a simple way of making residents feel “at home”, thereby enhancing their psychological functioning (Haslam et al., 2011). Collective engagement, specifically the involvement of residents in group activities, has been posited as a means of building social relations within the home, alleviating residents’ sense of confinement and gaining back some control. Mealtimes that promote a social environment and a convivial atmosphere may improve mood and appetite, add meaning and structure to the day, and contribute to a greater sense of satisfaction with life (Nijs et al., 2006).

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Include any questionnaires, psychological tests, etc. at the end of your application.

8 Location of study

8.1 Where will the study take place?

A number of residential care homes in the Devon and Somerset regions will be invited to participate in the study.

8.2 If the study is to be carried out overseas, what steps have been taken to secure research and ethical permission in the country of study? (Please attach evidence of approval if available.)

Not applicable.

9 Multi-centre and off-campus studies

If this is a multi-centre or off-campus study, please answer the appropriate questions below; otherwise, go to Question 11.

9.1 Does this project involve a consortium (other research partner organisations)?

No

If yes, please complete the details below in Question 9.2.

9.2 Who has overall responsibility for the study?

The lead researcher, Ross Watkins, and his supervisor, Dr. Mark Tarrant.

Please provide details of the contractual agreement between UEMS and the other organisation(s).

9.3 Is this an off-campus study?

Yes

If yes, please provide signed, written permission from an appropriate level of management within the relevant organisation(s).

We intend to secure ethical approval before approaching care homes. The UEMS has a good relationship with a number of care homes across the region, several of which have indicated an interest in the study. The UEMS is also closely affiliated with Somerset Care, which manages 31 care homes across the South West.

10 Has approval been sought from other Ethics Committees and LRECs?

No

Please enclose copies of approval letters, where applicable.

11 Who will have overall control of the data generated?

The lead researcher, Ross Watkins, and his supervisor, Dr Mark Tarrant.

12 How do you propose to disseminate the results of your research?

The findings of this study may be submitted in the form of academic papers to targeted peer-reviewed journals such as *Age & Ageing* and the *Journal of*

Gerontological Nursing, as well as disseminated through conference presentations and other talks/seminars. The research is expected to be of interest to a range of end users involved in the management of care homes (e.g., health professionals, intervention designers), and will therefore be available to care home networks such as ENRICH http://www.enrich.nihr.ac.uk/ and Somerset Care. A summary of the study findings will also be sent to participating care homes, as well as to any individual participants who express an interest in receiving the report.

13 METHODS AND PROCEDURES

Describe the nature of the task required of participants and the various precautionary measures to be taken to avoid harm or discomfort if appropriate. If the study is likely to cause discomfort or distress to subjects, estimate the degree and likelihood of discomfort or distress.
(Include a copy of any questionnaire / survey form to be used at the end of your application)

The interviews will be conducted face-to-face in a private setting in the participant's care home. In order to provide context to the participants and the main researcher, it may be possible to conduct the interviews in the dining room between meals. In any case, the main researcher will ask to observe a mealtime prior to conducting the interviews, as this will provide useful background, familiarization, and context to participants' experience of mealtimes.

Participants will be informed that the project involves an open-questioning technique where the precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops. All participants will be made aware that they can withdraw from the study at any time without needing to give a reason and can refuse to answer any question during the course of the interview. After the interview, participants will be asked if there was anything they said that they do not want included in the final transcript for analysis.

Given research showing that the transition to a care home is, for some people, associated with higher levels of depression and loneliness (Patrick et al., 2000), special care will be taken to ask questions in ways which will likely minimise distress to participants. For example, the researcher will remain sensitive to the fact questions about residents way of life prior to entering the care home may evoke feelings of nostalgia and a longing for the past. If the researcher detects that the participant is experiencing a high level of stress or emotional distress, the interview will be stopped and a nominated member of the care home staff will be contacted immediately to provide support. The interview strategy (provided in the appendix) is designed to put the participant at ease and facilitate a natural discussion. Furthermore, research based on reminiscence therapy, which focuses on discussions of the past, often with stimuli such as pictures and music, may promote psychological wellbeing (Chiang et al., 2010) rather than cause distress.

No medical or legal problems are anticipated as a result of this study. However, participants will be able to contact the researchers if they have any concerns, using the contact details provided on the information sheet. Additionally, participants will be directed to sources of support (e.g. Age UK and Somerset Care) if they experience any distress as a result of the interview.

The data collated from the interviews will be analysed using a combination of Thematic Analysis (Attride-Stirling, 2001; Braun & Clarke, 2004) and Grounded Theory (Strauss & Corbin, 1990). The aim of the analysis will be to organise the data in a meaningful way so as to be able to develop a theory of the forms, functions and consequences of mealtime experiences in the care home environment.

The organisation and analysis of the data will follow the steps outlined below:

1. **Familiarisation with the data** – Listening and reading through the data. The first coder will also be the interviewer.

2. **Generation of initial codes** – Naming key features of the data.

3. **Searching for themes** – Grouping codes into potential themes.

4. **Reviewing themes** – Ensuring that the themes are distinct from other themes and internally coherent and consistent.

5. **Defining and naming themes** – Interpreting and giving the themes analytically meaningful names. Extracts that represent the essence of the respective themes are identified in this step.

6. **Generating a thematic network** – Mapping interconnection between the themes

7. **Producing Theory and Report** – Interpretation and reporting the themes and the interconnections between them beyond description and ensuring that all analytical claims are congruent with the extracts.

In order to ensure that the qualitative research is rigorous, trustworthy and credible (Cutcliffe & McKenna, 1999), two researchers will analyse the transcripts independently and compare analyses. Any differences will be resolved through discussion of the themes and the interpretations placed on them. In order to ensure that potential biases do not occur on behalf of the researcher he will also keep a research diary. This will enable a reflexive approach to data collection and analysis (Marrow, 1998; Koch & Harrington, 1998), and insight from this process will inform data analysis, the final research report and subsequent publications.

If there are elements of the data (or residents' experiences) that do not support emerging themes and explanations, they will nevertheless be discussed as part of a descriptive narrative that will accompany the structured analyses.

Provisional timetable for study
It is estimated that the proposed study will take approximately eight months to complete. Each of the project stages is outlined below:

1. Following approval from the REC, a number of care homes will be contacted by letter initially, and then by phone. Interested care homes will be sent further information, and this may be followed by the scheduling of interviews. The recruitment process is expected to last two months, from the beginning of August to the end of September.
2. If the recruitment process is successful, interviews will take place in October and November.
3. Audio recordings of interviews will be transcribed and analysed in November and December and a preliminary summary of findings will be written up towards the end of December 2015.
4. The formal study will be written up over the three subsequent months to the end of March 2016.

Finally, as this study involves one researcher working away from the University and visiting people in care homes, some lone worker guidance is required. Therefore, prior to commencing any fieldwork, the researcher will carry out a lone worker risk assessment to ensure that any risks or hazards associated with the study are identified and an appropriate procedure is in place to address them.

13.1 Does the study include any of the following interventions / invasive procedures?

	YES	NO		YES	NO
Participant-observation / non participant-observation	☐	☒	Self-completion questionnaires	☐	☒
Interviews	☒	☐	Video / audio recording	☒	☐
Focus Groups	☐	☒	Administration of substance / drug (e.g. caffeine / doubly labeled water etc)	☐	☒
Physical examination	☐	☒	Manipulation of diet	☐	☒
Arterial puncture*	☐	☒	Venepuncture*	☐	☒
Urine sample*	☐	☒	Fingertip blood sample*	☐	☒
Body Imaging (e.g. MRI, DEXA, X-rays)	☐	☒	Saliva sample*	☐	☒

* if yes, will samples be retained for subsequent testing for factors other than described in this proposal?	☐	☐
If yes, will samples be 211anonymized?	☐	☐

If you are using human tissue in your project, you must complete section E.

14 Products and devices					
14.1 Does the research involve the testing of a product or device?					
YES			**NO**	X	
If yes, please describe it.					
Not applicable.					
14.2 If this research involves a drug, is it being used in accordance with its licensed uses?					
YES			**NO**		
If no, please explain why:					
Not applicable.					

SECTION D: THE PARTICIPANTS

For the purposes of this section, "participants" include human subjects, their data, their organs and/or tissues. For participants to be recruited to the research, please state:

15 Number of participants:	10 – 15 participants		
16 If data are to be collected on different sites, please state the number of participants at each site:			
Site 1:	tbc	Number of participants:	3-4
Site 2:	tbc	Number of participants:	3-4
Site 3:	tbc	Number of participants:	3-4
(insert additional sites if necessary)			

17 How have you arrived at this number? Please state proposed inclusion/exclusion criteria. If appropriate has the protocol been reviewed by a Statistician?

Both male and female residents 65 years of age and older will be invited to participate in this study, providing they are able to give their consent independently. As almost 60 percent of care home residents are 85 years of age or older (Office for National Statistics, 2014), the average age of participants is expected to be somewhat higher than 65.

Between ten and 15 participants should give a sufficient range of experiences and depth of data to reach theoretical saturation (Guest, Bunce & Johnson, 2006; Mays & Pope, 1995).

The purposive sampling of care homes will be based on ‘typical case sampling’ (Given, 2008), that is, we are interested in care homes simply because they are *not* unusual in anyway. This is the preferred approach for eliciting the mealtime experiences of residents in typical care homes.

18 Age group or range *(e.g., under 60s*):	65 years of age or older

18.1 Sex:	Male			Female		

19. Is this a single sex study?					
	YES		**NO**	X	
If yes, please justify the reason(s) for gender selection					

While some studies explicitly focus on gender specific experiences, care should be taken to ensure that women or men are not unnecessarily excluded from participating in research.

20 Do participants belong to any of the following vulnerable groups?					
Children:	**YES**		**NO**	X	
Participants unable to give informed consent in their own right *(e.g., people with learning difficulty)*:					
	YES		**NO**	X	
Other vulnerable groups (please specify)					
	YES	X (older adults in care homes)	**NO**		

Care will need to be taken to formulate inclusion/exclusion criteria that clearly justify why certain individuals are to be excluded, to avoid giving the impression of unnecessary discrimination. On the other hand, the need to conduct research in “special” or “vulnerable” groups should be justified and it needs generally to be shown that the data required could not be obtained from any other class of participant.

If the answer to any of the above is yes, please complete Questions 21 to 25; otherwise proceed to Question 26.

21 Please explain why it is necessary to conduct the research in such vulnerable participants and whether required data could be obtained by any other means.

This research is part of a wider PhD project aimed at developing a mealtime intervention to improve the health and wellbeing of older people in residential care. It is essential that first hand experiences of existing care provision are sought, in order that they may inform subsequent stages of research, in particular the development of an intervention itself. Prior research has indicated that residents feel disenfranchised in the care home, manifested in a perceived loss of control (Bradshaw et al., 2012). A more resident-centric approach is therefore needed, starting with an understanding of their views and opinions of the mealtime experience.

22 Please state what special or additional arrangements have been made to deal with issues of consent and the procedures to safeguard the interests of such participants.

All participants must be able to give their own independent and informed consent. An individual's ability to give consent will be determined in the first instance by senior care home staff who oversee residents on a day-to-day basis and are best placed to decide whether an individual has any cognitive impairment that precludes them from consenting. The researcher will also ensure that the issue of consent is carefully considered by following the NIHR guidelines on consent. In addition, the lead researcher will attend 'Good Clinical Practice' (GCP) training on 26th June 2015 to include training on obtaining consent from vulnerable populations.

A safeguarding policy for participants, which outlines the procedure for dealing effectively and sensitively with any safeguarding issues that may arise during the study, has also been created (see appendix). If the researcher is concerned about negligent care, or inappropriate behaviour from a member of staff, he will immediately inform his supervisory team and compile an incident report detailing the circumstances of misconduct, abuse or neglect. In most circumstances, the incident will then be reported to the Care Home Manager, who will be able to deal with the matter internally using existing disciplinary procedure. However, if the incident is deemed to be serious, or where safeguarding issues appear to be endemic within the care home, the researcher and his supervisory team will refer the matter to the Care Quality Commission (CQC) or the social care department at the appropriate local authority for further investigation. If it is clear that a crime has been committed, the researcher will contact the police in the first instance. Detailed information on exactly what constitutes misconduct is contained within the attached safeguarding policy. In circumstances of potential misconduct, negligent care or abuse, participant confidentiality may be broken.

An additional safeguarding procedure will also be followed as the main researcher will be working alone. Prior to every visit to a care home, the main researcher, Ross Watkins, will inform each of the other researchers of his intended movements, including providing the location of each care home and the timings planned for each visit. At the end of every visit, the main researcher will contact Dr Mark Tarrant by telephone, informing him that he has left the interview location. If Dr Mark Tarrant cannot be contacted, contact will be made with either Dr Vicki Goodwin or Dr Rebecca Abbott, or a nominated other individual with UEMS.

23 Please describe the procedures used to ensure children (i.e., persons under 18 years) are able to provide consent/assent to participation.

Not applicable.

24 If appropriate, please state whether and how parental consent, or the consent of the legal guardian and/or order/declaration of the court, will be sought in relation to the participation of children in the research.					
Not applicable.					
25 If the participant is unable to consent in their own right, will you seek the prior approval of an informed independent adult and any other person or body to the inclusion of the participant in the research?					
	YES		**NO**		
State precisely what arrangements will be put in place.					
Not applicable.					

Recruitment and Selection
The Research Ethics Committee will need to be satisfied with the effectiveness and propriety of recruitment and selection procedures given the participant involved, e.g., that the participant will not feel in any way obliged to take part, that advertisements do not appear to offer inducements. The Committee will be particularly interested in cases where a participant's relationship with the investigator could raise issues about the voluntary status or motive of the participant's involvement in the research (e.g., students).
26 How will the participants in the study be selected, approached and recruited (please indicate the inclusion and exclusion criteria)?
Both male and female care home residents aged 65 years or older will be included in the study. Residents who cannot give consent independently due to severe cognitive impairment will be excluded. Sampling will cease once theoretical saturation is reached (i.e. when no new themes are emerging from the data). It is expected that this will be between 10-15 older adults, based on previous research (e.g. Hammar et al., 2014). Participants will be informed that the project involves an open-questioning technique where the precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops. All participants will be made aware that they can withdraw from the study at any time without needing to give a reason and can refuse to answer any question during the course of the interview. After the interview, participants will be asked if there was anything they said that they do not want included in the final transcript for analysis.

Recruitment will take place through existing research networks at the UEMS, including ENRICH, Somerset Care, and PENCLAHRC's network of contacts for patient and public involvement in research (PPI). These organisations and contacts will essentially act as gatekeepers for the research, ensuring that care homes are not over-sampled and that information is appropriately disseminated. These gatekeepers will also help to ensure that this study does not detract from the provision of other areas of care in any care homes that are deemed to be under improvement.

Due to the type of study being undertaken, care homes will be approached on the basis that they are not registered as dementia care homes (often referred to as 'nursing homes'). The ability of participants to articulate their experience of mealtimes in integral to this research, and therefore residential care homes (rather than nursing homes) will be targeted. Whilst residential care homes also accommodate residents with mild to moderate dementia, care home staff will assist in the recruitment of participants who are suitable for interview and who are able to give independent and informed consent.

The recruitment procedure will be as follows:

1. The main researcher will send a letter to care home managers inviting care homes to take part in the study. The letter (see appendix) will provide managers with some details about the study (i.e. time commitment, eligibility, and project aims). The letter will be followed up one to two weeks later with a phone call to the manager of each care home.
2. The main researcher will make an initial visit to interested care homes to discuss the study in more detail and go through the participant information sheet (see appendix) with the Care Home Manager and any staff who may be involved in the recruitment process. Each care home will also be provided with a recruitment poster (see appendix) intended to raise awareness of the study amongst staff and encourage them to identify suitable potential participants. Care home staff will have copies of the participant information sheet, which they can give to prospective participants or go through with them.
3. Once potential participants have been identified by care home staff, members of staff will be able to contact the research team using the contact details provided on both the participant information sheet and the recruitment poster. Once any queries or questions about the study have been addressed, the main researcher will liaise with the member of the care home staff about a suitable date and time to conduct the interview(s).
4. Each participant will then be sent a consent form (see appendix) in advance to be completed at least one day before the interview takes place.

Careful consideration will be given to the profile of the care homes included in the study to ensure that they are a representative sample of care homes in the South West Peninsula. At least one care home in an urban setting and one in a rural setting will be included in the study.

If you are proposing to advertise, please include a copy of the advert to be used at the end of your application.

27 Where are you recruiting the participants?

Participants will be recruited from a number of care homes in the South West through existing networks such as ENRICH, Somerset Care, and PENCLAHRC’s network of contacts for patient and public involvement in research (PPI). At least two care homes will be included in the study to ensure that it represents care homes from both an urban and rural setting. However, more than to two care homes will be included if additional participants are required.

28 Relationship of participant to investigator:	

29 Will the participants take part on a fully voluntary basis?

	YES	X	**NO**		

30 Will students (e.g. PCMD, UEMS, other Schools or Colleges) be involved as participants in the research project?

	YES		**NO**	X	

If yes, please provide full details.

31 Will payments or other inducements be made to participants?

	YES		**NO**	X	

If yes, give amounts, type and purpose.

Information to Participants and Consent

32 Will participants be informed of the purpose of the research?

	YES	X	**NO**		

If no, please explain why.

33 Will the participants be given a written information sheet?

	YES	X	**NO**		

If yes, please use the sample at Appendix 1

If no, please explain why and delete Appendix 1.

34 Will written consent be obtained?

	YES	X	**NO**		

If yes, please use the sample at Appendix 2

If no, please explain why and delete Appendix 2.

35 Where potential participants will/may suffer from any difficulties of communication, state the methods to be employed both to present information to the participants and achieve consent. *If written, please include a copy at the end of your application.*

It is possible that some participants will have communication difficulties (e.g. some may have difficulties with hearing, problems with sight, or post-stroke aphasia). We will try to include residents with communication difficulties in the study by putting measures in place to allow for this. For example, we will allow extra time for interviews and offer participants the opportunity to split their interview across different days to minimise burden, participants will be encouraged to use communication aids (e.g. lightwriters, voice amplifiers) as desired, and the researcher will rephrase questions or write them down to aid understanding. If necessary, participants will also be invited to have a relative or another resident present to support them in giving their answers. Interview assistance from care home staff will not be invited, as this may compromise participants' ability to speak freely.

36 Ensure that the Information Sheet includes details of the participants' right to withdraw from the study at any time without penalty.

Where relevant (should incidental significant findings emerge during the course of a study)

36.1 Will any information be given to the participants' GP (if deemed necessary)?

	YES		**NO**	X	

36.2 Have the participants consented to having their GP informed?

	YES		**NO**	X	

37 Please state what measures will be taken to protect the confidentiality of the participant's data (i.e., arising out of the research and contained in personal data).

All personal information obtained about participants used for the purposes of recruitment and data collection (including names, contact details) will remain confidential and held in accordance with the Data Protection Act 1998. Each participant will be allocated a unique study identification number at the outset of the research study. The document matching the participants' unique study identification numbers with their personal details will be kept separately from all research materials. Contact details and consent forms will always be stored separately from the research surveys and interview recordings/transcriptions. All transcribed interviews will be anonymised and the digital recordings deleted after accuracy checks have been completed. All research data will only be identified by the unique study identification number. Full confidentiality and anonymity will thus be guaranteed.

Anonymity will also be extended to participant care homes. All data collected will be attributed solely to the unique study identification number allocated to each participant. As stated in the letter to the Care Home Managers (see attached), the care homes involved in the research will not be named in any of the study literature.

38 How will the data be stored during the life of the project?

Electronic data will be held on a secure database on a password-protected computer at the University of Exeter, and paper-based information (including user contact details) will be held in a locked filing cabinet in the office of the lead supervisor. The University of Exeter routinely backs up all electronic files on secure, encrypted servers. Access to data will be restricted to the University research team. The details of the users taking part in the study will not be passed on to any third parties and no named individuals will be included in the research outputs.

39 University of Exeter Guidelines state that primary data generated in the course of research must be kept securely in paper or electronic format, as appropriate and held normally for a period of five years (or as required by the funding body) after the completion of a research project.
http://www.exeter.ac.uk/research/toolkit/throughout/ethics/goodpractice/
Please provide details of how data will be stored, how long the data will be retained following completion of the study and how the data will be disposed of once this period has ended

The data will be held by the research team for five years after the completion of a research project (in line with Exeter University recommendations).

40 Who will be ultimately responsible for data storage and disposal for this project?

Ross Watkins and his supervisor (Mark Tarrant) will have the responsibility of disposing of the data.

41 How will participants be informed of the results of the study if they so wish?

Participants will be informed that the study will be written up as part of the applicant’s PhD thesis and disseminated through publications and conference presentations, and to other educational audiences (e.g. PenCLAHRC, ENRICH, Age UK Devon and Somerset, and other special interest groups). The researcher will also prepare a summary sheet to disseminate the findings to the participants involved in the study (and the care homes at which they reside).

42 Risk to research participants

42.1 do you think there are any ethical problems or special considerations/hazards with the proposed Study? If so, please describe

We do not anticipate any medical or legal problems arising as a result of this study. However, if participants have any concerns, or experience any distress, they will be able to speak to their carers in the first instance. If the researcher becomes aware of any behaviours that suggest that the discussion is too stressful during the interview, for example, uncontrolled crying and/or shaking, the interview will be stopped immediately and a nominated member of the care home staff will be summoned to provide support. The interview will only be continued if both the participant and his or her carer are happy for it to do so, either after a short break or at a later date.

Important consideration will be given to the location of participant interviews. As an additional safeguarding measure, the door to the room in which the interviews take place will remain open. As such, the room will be readily accessible, and the researcher/participant viewable, but remain sufficiently private for participants to be interviewed in confidence. The main researcher will suggest that the interviews take place in the dining room between mealtimes, as this will be a relatively open and accessible location, and an environment which provides both context and familiarity. However, interview location will be at the discretion of the Care Home Manager and participant. As a further support mechanism for participants, and as stated in the information sheet, participants will be offered the opportunity to be accompanied by a relative or another resident during the interview. Although interview questions will be directed at the participant, it is anticipated that any accompanying residents may also respond to questions or participate in the interview. In this instance, consent will be sought from these participants. They will also have the opportunity to have their responses removed from the interview transcript and excluded from the study.

Participants will also be able to contact the researchers about their concerns, or access sources of support (e.g. Age UK and Somerset Care). In any case, they will be reminded of the voluntary nature of their participation and their right to withdraw from the study at any time without prejudice.

43 Does your proposed study require a Health and Safety risk assessment and if so, has this been carried out?

YES			**NO**	X	

44 Are there any potential conflicts of interest arising from the project, deriving from relationships with collaborators/sponsors/participants/interest groups?

	YES			**NO**	X	

Please disclose all relevant personal and commercial interests.
There are no personal or commercial interests associated with this study.

UNIVERSITY OF EXETER | MEDICAL SCHOOL

University of Exeter Medical School Research Ethics Committee

Reviewer Form

Name of Reviewer:	Jo Day
Employing Organisation:	University of Exeter
Qualifications and area of expertise:	BA(Hons) Social Psychology, MSc Applied Criminological Psychology, PhD Sports and Health Sciences. BPS Chartered Psychologist and Associate Fellow. HCPC Registered Psychologist. Experience in qualitative research and evaluation in social and health care and criminal justice settings.
Details of any potential conflict of interest:	Colleague of Mr Watkins' supervisors who are based within UEMS but I have not had direct involvement in this area of work.
Name of Researcher:	Ross Watkins
Project Title:	Exploring residents' experiences of mealtimes in care homes

	Yes	**No**	**N/A**
Is there a clear research question?	✓	☐	☐
Has the development and design of data collection methods (quantitative and qualitative) been adequately outlined?	✓	☐	☐
Is the statistical/data analysis methodology appropriate?	✓	☐	☐
Have ethical issues been addressed appropriately?	✓	☐	☐
Have the limitations of the study been addressed?	✓	☐	☐

Please grade each feature (where appropriate) from excellent to very poor:
Evaluation Scale: (5) Excellent (4) Very Good (3) Good (2) Fair (1) Poor

Originality	Very good
Reliability	Good
Importance	Very good

Do you have any ethical issues you would like to bring to the attention of the Committee? Please make your comments for the University of Exeter Medical School Research Ethics Committee in the box below.

General:
This study will be particularly useful in terms of understanding the personal experiences of people who live in care homes as well as the broader context to inform meaningful intervention development to enhance mealtimes and improve health and wellbeing. The voice and experience of residents (and their relatives) is absent from

much of the empirical research in this area and this study will make a contribution to addressing this need by gaining insights into their mealtime experiences. The methodology, method, approach to analysis and attention to rigour are appropriate to the aims and objectives of the study.

Points for consideration:

Section 12 and 41: Potential for other forms of dissemination such as verbal reports back to the care homes, possibly attend resident/relatives meetings, produce a leaflet of the findings.

Section 13: Within the analysis also consider searching for and discussing where elements of the data, and residents' experience, do not support emerging themes and explanations.

Section 13: Useful to provide some idea of the timetable for the study that includes time for liaising with care home staff to gain access and undertake the study.

Section 13: As involves one researcher working away from the university and visiting people refer to University's lone worker guidance and incorporate into the study.

Section 15 and 27: Further information on the likely number of care homes visit would be useful in terms of variety and to ensure get 10-15 participants.

Section 16: Could give more information on the approach to sampling (which links to above point on how many care homes may need to include) i.e. purposeful, opportunistic, or maximum variation etc.

Section 22: Useful to consider how address any safeguarding issues that may arise when undertaking the study (e.g. a safeguarding policy) to ensure protection of participants and outlines the actions to take in case there is an allegation made or a concern that needs to be dealt with and includes how to communicate on this with the care home.

Section 26: Worth bearing in mind if a care home is under improvement and if so whether appropriate to undertake interviews so that the study does not distract from attention to other areas of care.

Section 26 and 42: Clarify further how deal with informed consent and issues of cognitive impairment, frailty and potential distress (even if latter is unlikely) of resident during interview e.g. discussion with care home manager or responsible individual. Helpful to develop a distress protocol in case a resident does recall an experience that had a negative impact on them that leads to discomfort/distress.

Section 35: May want to consider how could still include residents who like to take part but have difficulties with reading and writing e.g. read out the information sheet and record verbal consent and use of a verbal consent protocol.

Letter: Could add to the letter the broad areas that will be covered in the interview and that will seek to undertake the interviews as times that will be least disruptive to residents and the care home and most convenient for them.

Information sheet and consent form: larger font size and wider spacing be helpful for ensuring easy to read (e.g. Ariel 14 and 1.5).

Signed: JDay
(Electronic signature required)
Date: 4th June 2015

FAO: UEMS Research Ethics Committee
12th June 2015

Response to Peer Review Recommendations [Version 3]

Please see below amendments made to the ethics application form following peer review by Dr Jo Day.

Points for consideration:

1. Section 12 and 41: Potential for other forms of dissemination such as verbal reports back to the care homes, possibly attend resident/relatives meetings, produce a leaflet of the findings.

The application has been amended as follows:
Section 12: “A summary of the study findings will also be sent to participating care homes, as well as to any individual participants who express an interest in receiving the report.”
Section 41: “The researcher will also prepare a summary sheet to disseminate the findings to the participants involved in the study (and the care homes at which they reside).”

2. Section 13: Within the analysis also consider searching for and discussing where elements of the data, and residents’ experience, do not support emerging themes and explanations.

The application has been amended as follows:
“If there are elements of the data (or residents’ experiences) that do not support emerging themes and explanations, they will nevertheless be discussed as part of a descriptive narrative that will accompany the structured analyses.”

Section 13: Useful to provide some idea of the timetable for the study that includes time for liaising with care home staff to gain access and undertake the study.

The application has been amended as follows:
“It is estimated that the proposed study will take approximately eight months to complete. Each of the project stages is outlined below:
1. Following approval from the REC, a number of care homes will be contacted by letter initially, and then by phone. Interested care homes will be sent further information, and this may be followed by the scheduling of interviews. The recruitment process is expected to last two months, from the beginning of August to the end of September.
2. If the recruitment process is successful, interviews will take place in October and November.
3. Audio recordings of interviews will be transcribed and analysed in November and December and a preliminary summary of findings will be written up towards the end of December 2015.

4. The formal study will be written up over the three subsequent months to the end of March 2016."

Section 13: As involves one researcher working away from the university and visiting people refer to University's lone worker guidance and incorporate into the study.

The application has been amended as follows:
"Finally, as this study involves one researcher working away from the University and visiting people in care homes, some lone worker guidance is required. Therefore, prior to commencing any fieldwork, the researcher will carry out a lone worker risk assessment to ensure that any risks or hazards associated with the study are identified and an appropriate procedure is in place to address them."

Section 15 and 27: Further information on the likely number of care homes visit would be useful in terms of variety and to ensure get 10-15 participants.

The application has been amended as follows:
Section 27: "At least two care homes will be included in the study to ensure that it represents care homes from both an urban and rural setting. However, more than to two care homes will be included if additional participants are required."

Section 17: Could give more information on the approach to sampling (which links to above point on how many care homes may need to include) i.e. purposeful, opportunistic, or maximum variation etc.

The application has been amended as follows:
"The purposive sampling of care homes will be based on 'typical case sampling' (Given, 2008), that is, we are interested in care homes simply because they are *not* unusual in anyway. This is the preferred approach for eliciting the mealtime experiences of residents in typical care homes."

Section 22: Useful to consider how address any safeguarding issues that may arise when undertaking the study (e.g. a safeguarding policy) to ensure protection of participants and outlines the actions to take in case there is an allegation made or a concern that needs to be dealt with and includes how to communicate on this with the care home.

The application has been amended as follows:
"A safeguarding policy, which outlines the procedure for dealing effectively and sensitively with any safeguarding issues that may arise during the study, has also been created (see appendix)."

Section 26: Worth bearing in mind if a care home is under improvement and if so whether appropriate to undertake interviews so that the study does not distract from attention to other areas of care.

The application has been amended as follows:
"These gatekeepers will also help to ensure that this study does not detract from the provision of other areas of care in any care homes that are deemed to be under improvement."

Section 26 and 42: Clarify further how deal with informed consent and issues of cognitive impairment, frailty and potential distress (even if latter is unlikely) of resident during interview e.g. discussion with care home manager or responsible individual. Helpful to develop a distress protocol in case a resident does recall an experience that had a negative impact on them that leads to discomfort/distress.

The application has been amended as follows:
Section 42: "We do not anticipate any medical or legal problems arising as a result of this study. However, if participants have any concerns, or experience any distress, they will be able to speak to their carers in the first instance. If the researcher becomes aware of any behaviours that suggest that the discussion is too stressful during the interview, for example, uncontrolled crying and/or shaking, the interview will be stopped immediately and a nominated member of the care home staff will be summoned to provide support. The interview will only be continued if both the participant and his or her carer are happy for it to do so, either after a short break or at a later date."

"Participants will also be able to contact the researchers about their concerns, or access sources of support (e.g. Age UK and Somerset Care). In any case, they will be reminded of the voluntary nature of their participation and their right to withdraw from the study at any time without prejudice."

Section 35: May want to consider how could still include residents who like to take part but have difficulties with reading and writing e.g. read out the information sheet and record verbal consent and use of a verbal consent protocol.

The application has been amended as follows:
"It is possible that some participants will have communication difficulties (e.g. some may have difficulties with hearing, problems with sight, or post-stroke aphasia). We will try to include residents with communication difficulties in the study by putting measures in place to allow for this. For example, we will allow extra time for interviews and offer participants the opportunity to split their interview across different days to minimise burden, participants will be encouraged to use communication aids (e.g. lightwriters, voice amplifiers) as desired, and the researcher will rephrase questions or write them down to aid understanding. If necessary, participants will also be invited to have a carer present to support them in giving their answers."

Letter: Could add to the letter the broad areas that will be covered in the interview and that will seek to undertake the interviews as times that will be least disruptive to residents and the care home and most convenient for them.

Letter has been amended as follows:
"In practice, the study will involve one-to-one interviews with care home residents lasting approximately 30 minutes each, to be arranged at a time of convenience and least disruption to the care home routine."

Information sheet and consent form: larger font size and wider spacing be helpful for ensuring easy to read (e.g. Arial 14 and 1.5).

Information sheet and consent form has been amended as follows:
Font size has been increased to Arial 14 and line spacing to 1.5.

Exploring residents' experiences of mealtimes in the care home: Interview strategy [Version 3]

1. Set context and explain the purpose of the study

Aim: To ensure the participants are provided with an overall introduction to the study and the information necessary to provide a context for the interview (e.g., *"as you know I'm here to talk a little bit about mealtimes – this is because I'm very interested in residents' opinions on what mealtimes are like in [care home name] – but before we talk about that, I wonder if you could tell me a little bit about yourself first"*).

- How long have you been a resident at [care home name]?

2. Elicit background and develop narrative

Aim: To gain an understanding of the participant's daily routine in the care home and gauge the level at which they interact socially (e.g., *"can you tell me a little bit about how you spend your day?"*).

Sample questions:

- Can you tell me a little bit about your life in general in care home?
- Do you take part in any activities? Which ones?
- Have you made some friends since you have lived here?

3. Focus on experience of mealtimes in the care home and the social relations between residents

Aim: To elicit the participant's experiences of mealtimes in the care home and their perception of the social aspects of them (e.g., *"could I now hear a little bit about your experiences of the mealtimes in [care home name]?"*). The interview questions are designed to create a dynamic that is experienced as positive, non-threatening. The focus therefore is not on the negative (e.g. What could be better about your mealtime experiences?).

Sample questions:

- What time do you have your meals?
- Do you look forward to mealtimes? Why/ why not?
- Do you normally eat with other people?
- What do you like about mealtimes? What could be better?
- What are the best and worst aspects of mealtimes here? What would you change?
- Tell me about the social occasions you've had with other people around mealtimes? (e.g., Sunday roasts with the family, birthday celebrations and Christmas dinner). What have you enjoyed most about these occasions?
- Can you remember a time when food tasted really good and you really enjoyed eating? Could you tell me a little about what it was like?

Research in care homes: Safeguarding policy

Version: [3]

Date: [29th September 2015]

Who is this policy aimed at?

Researchers involved in data collection in care homes.

What is the purpose of this document?

The aim of this document is to outline a procedure for dealing effectively and sensitively with safeguarding issues uncovered in care homes during the project procedure.

What constitutes concerns about safeguarding?

Any concerns that a member of the project team has relating to a care home that could impact on the wellbeing of care home residents or staff. The project team will be concerned with issues of a serious nature, more specifically (i) forms of abuse such as neglect, physical, psychological/emotional, sexual, financial, discriminatory or institutional – these may occur at the same time (ii) unethical practice and (iii) serious misconduct. It is essential for the project team to focus on factual information, refraining from becoming emotionally involved in a given situation.

What action should be taken when concern about safeguarding is observed and identified?

For those issues considered by the project team as a safeguarding issue or bad practice, initial discussions will take place with the Project Supervisor, Dr Mark Tarrant. Together a judgement can be made about whether an issue constitutes bad practice and whether action to pursue further is necessary.

Informal complaints procedure

If after careful consideration it is established that there concerns about safeguarding or bad practice has taken place, an informal complaint to the care home manager can be made. The complaint can be issues in either of the following ways:

- A letter to the care home manager (for which a copy will be retained)
- Delivered verbally by the project team either in person or over the phone to the care home manager. In this case it must be requested that the care home manager formally writes to the project team acknowledging the complaint has been verbally received, and providing information concerning who is investigating the matter.

The project team must also request that the care home manager provides feedback, stipulating how the issue has been resolved. However the project team must not allow the organisation to delay or detract them from making a formal complaint if necessary.

Formal complaints procedure

If the project team are dissatisfied with the way that their concerns have been dealt with they must move to a formal stage. *The Care Quality Commission (CQC)* handles formal complaints concerning national minimum standard issues. If the complaint concerns abuse (for example, theft, negligence, physical or emotional abuse) the local adults social services protection of vulnerable adults co-ordinator should be informed. In this case the CQC should again be contacted initially to ascertain the contact details of the appointed co-ordinator in social services.

A record of telephone conversations must be kept concerning formal complaints and information provided to project team members verbally should also be requested in a written format.

Form of abuse	Possible indications of abuse
Financial	• Unexplained loss of money • Inability to pay bills, overdue rent • Person unable to access their own money or check their own accounts • Deterioration in standard of living, for example an inability to purchase items that they could normally afford • Unusual activity in bank accounts • Cheques being signed or cashed by other people without someone’s consent • Inappropriate granting and/or use of a Power of Attorney • Sudden change or creation of a will to benefit an individual significantly • Missing personal belongings such as art, jewellery and silverware.
Neglect	• Dirt, urine or faecal smell in a person’s environment • Pressure sores • Prolonged isolation or lack of stimulation • Depression • Person has dishevelled appearance or is dressed inappropriately • Person has an untreated medical condition • Under or over medication • Home environment does not meet basic needs, for example no heating • Signs of malnourishment or dehydration • Person who is not able to look after him or herself is left unattended and so put at risk • Not being helped to the toilet when assistance is requested.
Physical	• Cuts, scratches • Oval or crescent shaped bite marks over 3cm across • Lacerations, weal marks, puncture wounds, finger marks, burns and scalds

	• Fractures and sprains • Bruises (particularly if there is a lot of bruising of different ages) and discolouration • Any injury that has not been properly cared for such as untreated pressure sores • Poor skin condition or poor skin hygiene • Loss of hair, loss of weight and change of appetite • Insomnia or unexplained behaviour, fearfulness, unexplained paranoi anxiety.
Sexual	• Emotional distress • Itching, soreness, bruises or lacerations • Certain types of soiling on clothing • Mood changes • Change in usual behaviour • Expressions of feelings of guilt or shame • Difficulty in walking or sitting • Disturbed sleep patterns.
Psychological & emotional	It is important to also be aware that there may be many other reasons for any of these indicators in any given situation. • Untypical changes in mood, attitude and behaviour • Changes in sleep pattern • Loss of appetite • Anger • Excessive fear or anxiety • Helplessness or passivity • Confusion or disorientation • Implausible stories • Denial • Hesitation to talk openly • Low self-esteem • Unclear or confused feelings towards an individual.
Institutional	• Inappropriate approaches to continence issues such as toileting ‘by the clock’ as opposed to when a person wishes to go to the toilet • Set times for refreshments with no opportunity to have a snack, or to make alternative arrangements outside these hours • No evidence of care plans that focus on an individual’s needs • Staff not following care plans when they are in place • Lack of privacy, for example a failure to close doors when attending to a person’s personal care needs • Failure to knock on a door before entering, for example a bedroom or bathroom • No access to personal possessions or personal allowance • Failure to promote or support a person’s spiritual or cultural beliefs • A culture of treating ‘everyone the same’ which is different from treating everyone ‘equally’ • A couple being prevented from living together • Abuse of medication • Dehumanising language • Infantilising older people –speaking to or treating them like a child • Locking people in their rooms.
Institutional - cultural and management	There are ways in which an organisation can be run that lead to practices which, if left unaddressed, can contribute to an environment where abuse is tolerated. These indicators may be contributory factors in a care setting but do not always lead to abuse.

	• The absence of a clear complaints process • The absence of an Equal Opportunities policy • Failure to promote advocacy when it is locally available • Inadequate staff training and supervision • Premises that are regularly understaffed • Inflexible visiting procedures • A culture of interaction between staff that habitually runs counter to recognised best practice • High staff turnover • Low staff morale.
Discriminatory	This is where a person is abused or treated less favourably without a proper justification because of their: gender, race (including skin colour), ethnicity or culture, religion or belief, preferred language, sexual orientation, political views or age. Discriminatory beliefs and practices limit the lives of the people upon whom they are imposed. Discriminatory abuse could involve withholding services from an older person without a proper justification. It could be the absence of an equal opportunities policy in an organisation or presumption of a particular sexual orientation. There could be a presumption of a lack of capacity without proper investigation of this. There could be a failure to take account of religious practices, for example by expecting someone to eat food that is not acceptable to their faith. It could also include a failure to take into account the spiritual welfare of the person, for example when providing palliative care.

Policy based on:

(i) Model protocol for researchers encountering bad practice by Claire Goodman, University of Hertfordshire available at: http://www.enrich.dendron.nihr.ac.uk/downloads/DeNDRoN-ENRICH-Model-protocol-for-researchers-encountering-poor-practice.pdf

(ii) Age UK (2013) Safeguarding people older people from abuse. Factsheet 78. August 2013.

Care home residents' experiences of mealtimes

INFORMATION SHEET FOR PARTICIPANTS

VERSION NUMBER [3] : DATE [29/09/15]

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part we thank you for considering our request.

What is the aim of the project?

This research study explores care home residents' experiences of mealtimes. The purpose of this study is to gain a better understanding of residents' experiences of mealtimes and their impact on health and wellbeing. The study forms part of my PhD thesis and is intended to inform the development of a mealtime intervention to improve the health, wellbeing and quality of life of care home residents. The results may also be used by other interested parties, such as care home networks and organisations responsible for managing the care of older people.

Why have I been chosen?

You are being invited to take part in this research study because you are 65 years of age or older and a care home resident. We plan to interview residents in a number of care homes in Devon and Somerset.

Do I have to take part?

No – it is entirely up to you. Your participation is completely voluntary. If you do decide to take part you will be given this information sheet to keep. You will also be asked to sign a consent form, a copy of which you will also be given to keep. If you decide to take part you are still free withdraw at any time without giving a reason. If you do not wish to take part, we will respect your decision and will not contact you again. Whatever your decision, please be assured, the care that you currently receive will not be affected in any way.

What will happen to me if I take part?

You will be asked to take part in an interview with a member of the University research team. The interview will last about 30 minutes and will take place in a private room in the care home. Your interview will be audio-recorded for later analysis. If needed, your interview can be split into shorter sessions, for example two 15-minute interviews.

We will begin the interview by asking you questions about yourself and how long you have been living in a care home. We will then talk about your experiences of mealtimes in the care home, including a focus on your interactions with other people in the care home during mealtimes.

While you may not directly benefit from taking part in this study, you will have your opportunity to have your say about your experiences of mealtimes and this may help to improve the experiences of others in the future. Unfortunately, we are unable to provide any payment to you for taking part in the research study. We will be interviewing people until December 2015, at which point we will send you a brief report summarising the findings of the research, if you are interested.

What about privacy and confidentiality?

All information collected during this study will be kept strictly confidential and only the University research team will have access to the audio/transcribed records. Confidentiality will only be broken if the research team believe the health of a participant to be a risk or if the team is concerned about negligent care, or inappropriate behaviour from a member of staff. In such instances, the researcher may also immediately speak to the Care Home Manager.

All interviews will be analysed by the University research team and the audio/transcribed records will be stored at the University of Exeter Medical School in a locked filing cabinet and on a password protected computer. You will be given a unique study identification number at the beginning of the research study that will be used to identify you throughout the research. Because of this, it will not be possible for people outside of the University research team to link your personal details with your audio/transcribed records. All research materials will be securely destroyed after the end of the research study, or on your withdrawal from the research study. The confidential handling, storage and disposal of data are compliant with the Data Protection Act of 1998.

What are the potential risks and benefits of taking part?

We do not anticipate there being any significant risks to your health by taking part in the study. Although it is unlikely, there is a small possibility that some of the interview topics may be sensitive or distressing. If this is the case, the researcher will offer you a break from the interview and, if you want, will seek the support of a member of staff in the care home for you.

What if there is a problem?

The University research team will be happy to discuss any concerns with you: our contact details are provided at the end of this information sheet. However, if you have concerns or complaints arising from your experience of participating in this research study that you do not wish to discuss with the University research team directly, please speak to a member of the care home staff. You can also contact the Chair of the University of Exeter Medical School Ethics Committee, Professor Foxall (Tel: 01392 722989, Email: P.J.D.Foxall@exeter.ac.uk)

What will happen to the results of the research study?

The results from the research study will form part of a PhD thesis which aims to develop a new mealtime intervention to improve the health, wellbeing and quality of life of older adults in residential care. The results from the study will also be published and although quotes from the interviews may be included in our publications, your personal identification details will never be revealed.

Who is organising and funding the research study?

The research study is supported by the University of Exeter Medical School as part of a PhD. The research study is funded by The National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health (CLAHRC).

Who has reviewed the research study?

The research study has been reviewed by an independent group of people called a Research Ethics Committee (REC) to protect your safety, rights, wellbeing and dignity. This research study has been reviewed and given a favourable opinion by the University of Exeter Medical School Research Ethics Committee (REC Reference Number: 15/07/075).

Who can I contact for further information?

If you would like more information, please feel free to contact a member of the University research team:

Ross Watkins Tel: 01392 726338 Email: Ross.Watkins@exeter.ac.uk
Dr Mark Tarrant Tel: 01392 725921 Email: M.Tarrant@exeter.ac.uk

Thank you for taking the time to read this information sheet and considering taking part in this research study.

UNIVERSITY OF EXETER | MEDICAL SCHOOL

Care home residents' experiences of mealtimes

CONSENT FORM FOR PARTICIPANTS

VERSION NUMBER [3]: DATE [29/09/15]

I have read the Information Sheet Version Number [3] Dated [******] concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

1.	my participation in the project is entirely voluntary;	Y/N
2.	I am free to withdraw from the project at any time without any disadvantage;	Y/N
3.	the data [audio tapes and transcripts] will be retained in secure storage;	Y/N
4.	I will be asked some questions that are not pre-set and will depend on how the interview develops	Y/N
5.	there is a small possibility that some of the interview topics may be sensitive or distressing;	Y/N
6.	I will receive no payment for taking part in this study	Y/N
7.	the results of the project may be published but my anonymity will be preserved.	Y/N

I agree to take part in this project.

.... ………………………..
....
(Printed name of participant) (Signature of participant)
(Date)

.... ………………………..
....
(Printed name of researcher) (Signature of researcher)
(Date)

I would like to receive a report summarising the findings of the study
Y/N

This project has been reviewed and approved by the University of Exeter Medical School Research Ethics Committee

UEMS REC REFERENCE NUMBER: **15/07/075**

Ross Watkins
PhD Researcher
University of Exeter Medical School
College House,
St Lukes Campus,
Heavitree Road,
Exeter EX1 2LU.

[Date]
[Version 3]

Dear [Name of Care Home Manager],

Research study into care home residents' experiences of mealtimes

I am interested in mealtimes in care homes and their relation to wellbeing. As part of my PhD, I would like to speak with care home residents about their preferences and experiences of mealtimes. This would require minimal involvement from the care home itself, namely the provision of a room in which the interviews can take place and liaising with residents who may be interested in taking part in the study.

In practice, the study will involve interviews with care home residents lasting approximately 30 minutes each, to be arranged at a time of convenience and least disruption. The interviews are not intended to assess residents' beliefs about the quality of care provided in the care home or evaluate the quality of the food or food service. They are intended solely to gain an insight into residents' perspectives on mealtimes. Of particular interest, is whether and how mealtimes contribute to social relations within the care home. Although the interviews will be audio recorded to enable the conversation to be written up for analysis purposes, all personal information obtained about participants (including names, contact details) will remain confidential, and the care home itself will not be named in any resulting publicity.

I would be more than happy to come to your care home and discuss my research with you, with a view to conducting part of the study in your care home. If you would like your care home to be involved in this research, or think your residents may be interested in taking part, then I would be very interested to hear from you. Alternatively, if you would like more information about the study, then please feel free to email me Ross.Watkins@exeter.ac.uk.

Yours sincerely,

Exploring residents' experiences of mealtimes in care homes

Version Number [3]

- We are doing research to improve the health, wellbeing and quality of life of older adults in residential care
- We are interested in the views and opinions of residents regarding their experiences of mealtimes
- We would like to interview some residents. This would last approximately 30 minutes.
- For further information about the study, or interest in taking part, please contact Ross Watkins by phone on 01392 726 338 or email Ross.Watkins@exeter.ac.uk or Dr Mark Tarrant M.Tarrant@exeter.ac.uk

N.B. The above is a screenshot version of the recruitment poster, and not actual size.

UNIVERSITY OF EXETER MEDICAL SCHOOL
RESEARCH ETHICS COMMITTEE

APPLICATION FORM
FOR
RESEARCH ETHICS APPROVAL

Name of Applicant:	Ross Watkins
Project Title:	Developing and testing a mealtime intervention to improve the health and wellbeing of care home residents.
Date:	09/06/17
Version Number: *(1 for first time applications)*	2
Application Number: (For Ethics Committee use only)	

SECTION A: GENERAL

1 Title of the Study:	Testing the feasibility of a staff-focussed training programme to improve social interaction, promote resident choice, and safeguard resident independence at mealtimes in care homes for older adults		
Project Start Date:	1st March 2015	Project End Date:	28th February 2018

2 Full name of applicant:					
Position Held:	PhD student in the PAtH Research Group				
Institution:	University of Exeter	Course Title (if student):			
Location:	College House, St Lukes Campus, Heavitree, Exeter EX1 2LU.				
Email:	Ross.Watkins@exeter.ac.uk	Telephone:	07767 725 222	Fax:	
Please provide details of any and all other researcher(s) who will work on the research project: (if more than three researchers please extend table as appropriate)					
Name(s):	Dr Mark Tarrant				
Position Held:	Senior Lecturer in Psychology Applied to Health				
Location:	College House, St Lukes Campus, Heavitree, Exeter EX1 2LU.				
Contact details (e-mail/ telephone/fax):	M.Tarrant@exeter.ac.uk/ 01392 725921				
Name(s):	Dr Vicki Goodwin				
Position Held:	Senior Research Fellow				
Location:	South Cloisters, St Lukes Campus, Heavitree, Exeter				
Contact details (e-mail/ telephone/fax):	V.Goodwin@exeter.ac.uk/ 01392 722745				
Name(s):	Dr Rebecca Abbott				
Position Held:	Senior Research Fellow				
Location:	South Cloisters, St Lukes Campus, Heavitree, Exeter				
Contact details (e-mail/ telephone/fax):	R.A.Abbott@exter.ac.uk/ 01392 726098				

3 Is this proposal part of a PhD?	Yes	X	No	
If yes, please complete the remainder of this section.				
Year of Study:	Third year			
Name of Primary Supervisor/Director of Studies:	Dr Mark Tarrant	Position held:	Senior Lecturer in Psychology Applied to Health	

Location:	College House, St Lukes Campus, Heavitree, Exeter EX1 2LU.		
Contact details (email/telephone/fax):	M.Tarrant@exeter.ac.uk/ 01392 725921		
Name of Second Supervisor:	Dr Vicki Goodwin	Position held:	Senior Research Fellow
Location:	South Cloisters, St Lukes Campus, Heavitree, Exeter		
Contact details (email/telephone/fax):	V.Goodwin@exeter.ac.uk/ 01392 722745		

4 Declaration to be signed by the Applicant or the supervisor in the case of a student:

- I confirm that the research will be undertaken in accordance with the University Ethical Framework, Good Research Practice Policy, and Code of Research Ethics.

- I will undertake to report formally to the relevant University Research Ethics Committee for continuing review approval.

- I shall ensure that any changes in approved research protocols are reported promptly for approval by the relevant University Ethics committee.

- I shall ensure that the research study complies with the appropriate regulations and relevant University of Exeter policies on the use of human material (if applicable) and health and safety.

- I shall ensure that any external permissions necessary for the research to be undertaken are obtained prior to the research taking place.

- I am satisfied that the research study is compliant with the Data Protection Act 1998, and that necessary arrangements have been, or will be, made with regard to the storage and processing of participants' personal information and generally, to ensure confidentiality of such data supplied and generated in the course of the research.

  (Note: Where relevant, further advice is available from the University of Exeter Medical School (UEMS) Data Protection Officer).

- I will ensure that all adverse or unforeseen problems arising from the research project are reported in a timely fashion to the Chair of the relevant University Research Ethics Committee.

- I will undertake to provide notification when the study is complete and if it fails to start or is abandoned.

- I have met and advised the student on the ethical aspects of the study design and am satisfied that it complies with the current professional (*where relevant),* School and University guidelines.

- I have read this application and believe it to be scientifically and ethically sound

Signature of Applicant: **Date:** 29th March 2017

Signature of Supervisor: **Date:** 29th March 2017

Departmental Approval

- I give my consent for the application to be forwarded to the University of Exeter Medical School Research Ethics Committee with my recommendation that it be approved.
- I confirm that this submission has been appropriately peer reviewed.

Signature of Head of Research Institute/Centre or Vice Dean (Education) (or approved nominee)

Stuart Logan

Signature: **Date: 30/03/17**

Printed Name: Professor Stuart Logan

5 Name and affiliation of Peer Reviewer(s)			
Name:	Dr Raff Calitri	Position held:	Research Fellow
Institution:	University of Exeter Medical School		
Contact details (email/telephone/fax):	r.calitri@exeter.ac.uk / 01392 726 047		

SECTION B: FUNDING

6 If the research is externally funded, what is the source of the funding?				
Not applicable.				
6.1 What is the value of the grant?				
6.2 Are there any conditions attached to the funding which could have an impact on this application?				
YES			**NO**	
If yes, please specify.				

SECTION C: THE RESEARCH

7 In lay terms, please provide an outline of the proposed research, including:

- background
- objectives / hypothesis
- research methodology
- contribution of research
- justification of benefit
- be specific about focus groups
- state whether this is forming part of a PhD

(*max 1000 words)*.

This study will form part of a PhD thesis concerned with developing and testing the feasibility of a mealtime intervention to improve the health and wellbeing of care home residents. It is the third stage of empirical work, and is informed by: (1) a qualitative systematic review evaluating the attitudes, perceptions and experiences of mealtimes in care homes, and (2) a qualitative interview study exploring the mealtime experiences of care home residents. Key themes to emerge in both precedent studies include the social and psychological connections between residents (and residents and staff), resident choice and autonomy, and the impact that care provision has on these factors. This has implications for resident health and wellbeing, which is known to be poorer in the care home population, manifested in higher rates of depression and malnutrition (Godfrey and Denby, 2004: Guigoz et al., 2006).

The existing model of care provision may have a negative effect on mealtimes because resident choice is limited, independence is curbed, and social interaction stifled due to the paternalistic tendencies of staff, and time and/or resource pressures, that result in staff being task- rather than resident-focussed. Inadequate staffing levels, poorly trained mealtime assistants and insufficient time for eating have been identified as barriers to maintaining good nutritional status among residents in care homes (Crogan and Shultz, 2000: Crogan et al., 2001), and numerous studies have called for staff training and education programmes that prioritise the provision of care at mealtimes (Pearson et al., 2003: Sidenvall, 1999: Reimer and Keller, 2009). As care homes face resource constraints, creative solutions are needed to improve the mealtime experience. Interventions that focus solely on the physical needs of residents, for example, through the use of oral liquid nutrition supplements to improve nutritional status, fail to address the complex issues associated with mealtimes. Rather than treating the symptoms of a poor mealtime experience, interventions should adopt a holistic approach to mealtimes; one which recognises the biological, social, psychological, moral, and spiritual needs of residents (Gastmans, 1998). Empowering staff to facilitate a change in mealtime culture by enhancing social interaction, choice and independence may result in mutual benefit for residents and staff without the need for significant investment. A suite of interactive workshops would provide a flexible, replicable and low cost staff training option, as workshops could be delivered in-home by a senior member of staff, as and when required.

Research questions:

1. Can the workshops be delivered within the time allocated?
2. Is the proposed content acceptable to different stakeholders?
3. Is the training manual fit for purpose?
4. Are facilitator(s) able to deliver workshops as intended?
5. Are the workshops practicable? (e.g., are staff able to attend as planned?, are they called away mid-training?, can homes be run without significant disruption during workshops?)
6. Is the training received positively?
7. Do staff feel better equipped to address residents' needs as a result of the training workshops?

The proposed feasibility study will consist of a training programme, presented in a training manual, comprised of three workshops: (1) improving social interaction, (2) promoting resident choice, and (3) safeguarding resident independence. Only one of the workshops will be tested in each of the participant care homes, but the format of each workshop will be the same. Prior to the study, the lead researcher (RW) will facilitate a stakeholder meeting with the Care Home Owner of the participant homes along with one or two members of staff who will be recipients of the training. The content of the training manual will be discussed, and any changes to it made once a consensus has been reached. RW will then conduct a pilot workshop for the stakeholders to ensure that it can be delivered within the time allocated. Feedback from this workshop will inform any final amendments to the training manual ahead of the main component feasibility study. Participants will take part in workshops during their normal working hours, and will not be expected to attend workshops in their own time.

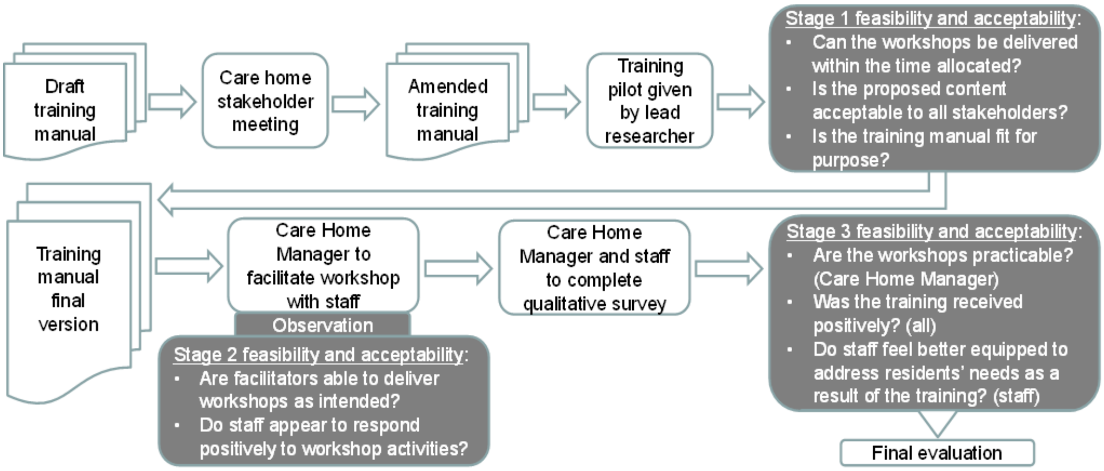

Figure 1: Feasibility study outline

Following the pre-study testing, a single arm, mixed and multiple methods study will be undertaken with the participant care homes to assess the feasibility and acceptability of the intervention. This will include an online qualitative survey to be completed by the workshop facilitator (i.e., the Care Home Owner) as well as one for staff recipients, designed to evaluate their experiences of the intervention. Although most surveys are not ordinarily described as qualitative, these surveys will include open questions. An ethnographic observation of the workshops will also be undertaken by RW. Data from the observations and qualitative surveys will be analysed using framework analysis, an approach suitable when analysis involves triangulation of data from different sources. This approach is aligned with the methodological framework stipulated in the Medical Research Council (MRC) guidelines for development and evaluation of complex interventions (MRC, 2000).

The proposed feasibility study will inform the design of a potential future randomised controlled trial exploring the effectiveness of a staff training programme to improve social interaction, promote resident choice, and safeguard resident independence. The MRC guidance suggests that a ‘multiple-methods’ approach is essential to identify potential barriers and facilitators to delivering the intervention, therefore a qualitative component will be integral to the feasibility study. A mixed methods analysis will seek to combine qualitative and quantitative data to help answer the question of ‘why’ the intervention is (or is not) acceptable and feasible to deliver (Craig et al., 2008).

References:

- Godfrey M, Denby T. Depression and older people: towards securing well-being in later life: Policy Press; 2004.
- Guigoz Y, Jensen G, Thomas D, Vellas B. The Mini Nutritional Assessment (MNA®) Review of the Literature – What does it tell us? / discussion. The journal of nutrition, health & aging. 2006;10(6):466.
- Crogan NL, Shultz JA. Nursing assistants’ perceptions of barriers to nutritional care for residents in long-term care facilities. Journal for Nurses in Professional Development. 2000;16(5):216-21.
- Crogan NL, Shultz JA, Adams CE, Massey LK. Barriers to nutrition care for nursing home residents. Journal of gerontological nursing. 2001;27(12):25-31.
- Pearson A, FitzGerald M, Nay R. Mealtimes in nursing homes: the role of nursing staff. Journal of gerontological nursing. 2003;29(6):40-7.
- Sidenvall B. Meal procedures in institutions for elderly people: a theoretical interpretation. J Adv Nurs. 1999;30(2):319-28.
- Reimer HD, and Keller, H.H. Mealtimes in Nursing Homes: Striving for Person-Centred Care. Journal of Nutrition For the Elderly. 2009;28(4):22.
- Gastmans C. Meals in nursing homes. Scandinavian journal of caring sciences. 1998;12(4):231-7.
- Services MRCH, Board PHR. A framework for development and evaluation of RCTs for complex interventions to improve health: Medical Research Council; 2000.
- Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. Bmj. 2008;337:a1655.

Include any questionnaires, psychological tests, etc. at the end of your application.

8 Location of study

8.1 Where will the study take place?

In two care homes in the Exeter area.

8.2 If the study is to be carried out overseas, what steps have been taken to secure research and ethical permission in the country of study? (Please attach evidence of approval if available.)

Not applicable.

9 Multi-centre and off-campus studies

If this is a multi-centre or off-campus study, please answer the appropriate questions below; otherwise, go to Question 11.

9.1 Does this project involve a consortium (other research partner organisations)?

YES			X	

If yes, please complete the details below in Question 9.2.

9.2 Who has overall responsibility for the study?

The lead researcher, Ross Watkins, and his supervisor, Dr. Mark Tarrant.

Please provide details of the contractual agreement between UEMS and the other organisation(s).

9.3 Is this an off-campus study?

YES	X			

If yes, please provide signed, written permission from an appropriate level of management within the relevant organisation(s).

We will secure ethical approval before approaching care homes. The lead researcher has a good relationship with a number of care homes across the region, including the owner of two care homes in the Exeter area who has expressed an interest in the study.

10 Has approval been sought from other Ethics Committees and LRECs?

YES			X	

Please enclose copies of approval letters, where applicable.

11 Who will have overall control of the data generated?

The lead researcher, Ross Watkins, and his supervisor, Dr Mark Tarrant.

12 How do you propose to disseminate the results of your research?

The findings of this study may be submitted in the form of academic papers to targeted peer-reviewed journals such as *Age & Ageing* and the *Journal of Gerontological Nursing*, as well as disseminated through conference presentations and other talks/seminars. The research is expected to be of interest to a range of end users involved in the management of care homes (e.g., health professionals, intervention designers), and will therefore be available to care home networks such as ENRICH http://www.enrich.nihr.ac.uk/ and Somerset Care. A summary of the study findings will also be sent to participating care homes, as well as to any individual participants who express an interest in receiving the report.

13 METHODS AND PROCEDURES

Describe the nature of the task required of participants and the various precautionary measures to be taken to avoid harm or discomfort if appropriate. If the study is likely to cause discomfort or distress to subjects, estimate the degree and likelihood of discomfort or distress.
(Include a copy of any questionnaire / survey form to be used at the end of your application)

The training workshop will be delivered to care home staff in a private setting in the participant care homes. In order to provide context to the participants (staff) and the lead researcher (RW), it may be possible to conduct the workshop in the dining room between meals – but this will depend on the individual care home recruited.

Consent will be obtained from participant staff prior to each workshop. Participants will be informed that the workshop involves an interactive technique where the focus is on eliciting ideas from the participant group and developing concepts collectively. All participants will be made aware that they can withdraw from the study at any time without needing to give a reason and can refuse to answer any question or participate in any activity during the course of the workshop.

No medical or legal problems are anticipated as a result of this study. However, participants will be able to contact the researchers if they have any concerns, using the contact details provided on the information sheet. Additionally, staff will be directed to sources of support (e.g. Age UK and Somerset Care) if they experience any distress as a result of the workshop.

The online qualitative survey (see Appendix) will be made available to participants immediately after the workshop. RW will collect participants' email addresses prior to the start of the workshop and email all participants a link to the survey. A paper version of the survey will available to any participants who cannot, or do not want to, access the online version. After the workshop, RW will thank the participants for their involvement in the study and ask them to complete the survey as soon as possible. The survey will be open for seven days following the workshop, and a reminder email will be sent to all participants who have not responded within 48 hours. RW will work closely with the Care Home Owner and Manager to ensure that participants are given ample opportunity to complete the survey, including if possible the provision of a computer on site for staff to complete the survey at work if possible.

The data collated from the online qualitative surveys will be analysed using thematic analysis (Attride-Stirling, 2001; Braun & Clarke, 2004). The aim of the analysis will be to organise the data in a meaningful way so as to be able to develop a theory of the forms, functions and consequences of staff-focussed training to improve social interaction, choice, and independence at mealtimes.

The organisation and analysis of the data will follow the steps outlined below:

1. Familiarisation with the data – Reading through the data. The first coder will also be the lead researcher (RW).

2. Generation of initial codes – Naming key features of the data.

3. Searching for themes – Grouping codes into potential themes.

4. Reviewing themes – Ensuring that the themes are distinct from other themes and internally coherent and consistent.

5. Defining and naming themes – Interpreting and giving the themes analytically meaningful names. Extracts that represent the essence of the respective themes are identified in this step.

6. Generating a thematic network – Mapping interconnection between the themes.

7. Producing Theory and Report – Interpretation and reporting the themes and the interconnections between them beyond description and ensuring that all analytical claims are congruent with the extracts.

In order to ensure that the qualitative research is rigorous, trustworthy and credible (Cutcliffe & McKenna, 1999), two researchers will analyse the surveys independently and compare analyses. Any differences will be resolved through discussion of the themes and the interpretations placed on them. In order to ensure that potential biases do not occur on behalf of the researcher he will also keep a research diary. This will enable a reflexive approach to data collection and analysis (Marrow, 1998; Koch & Harrington, 1998), and insight from this process will inform data analysis, the final research report and subsequent publications.

Study timetable
The study will be conducted over six months. Each of the project stages is outlined below:

1. Following approval from the REC, potential participant care homes will be contacted by letter and then by phone. The recruitment process is expected to last one month, beginning in June.
2. Workshops will be planned for July and August.

3. Responses to the online qualitative surveys will be analysed in August and September and a preliminary summary of findings will be written up towards the end of October 2017.
4. The formal study will be written up over the two subsequent months to the end of December 2017.

Finally, as this study involves one researcher working away from the University and visiting staff in care homes, an additional safeguarding procedure will be implemented. Prior to every visit to a care home, the main researcher, Ross Watkins, will inform each of the other researchers of his intended movements, including providing the location of each care home and the timings planned for each visit. At the end of every visit, the main researcher will contact Dr Mark Tarrant by telephone, informing him that he has left the interview location. If Dr Mark Tarrant cannot be contacted, contact will be made with either Dr Vicki Goodwin or Dr Rebecca Abbott, or a nominated other individual with UEMS. If Dr Mark Tarrant (or nominated other individual) has not been contacted by Ross Watkins by a pre-agreed time, then Mark will attempt to contact Ross, followed by the care home if there is no answer, and finally the police if contact cannot be made. This is the procedure that was followed in a previous study conducted by RW involving interviews with care home residents, which was approved by the UEMS REC.

13.1 Does the study include any of the following interventions / invasive procedures?

	YES	**NO**		**YES**	**NO**
Participant-observation / non participant-observation	☒	☐	Self-completion questionnaires	☒	☐
Interviews	☐	☒	Video / audio recording	☐	☒
Focus Groups	☐	☒	Administration of substance / drug (e.g. caffeine / doubly labeled water etc)	☐	☒
Physical examination	☐	☒	Manipulation of diet	☐	☒
Arterial puncture*	☐	☒	Venepuncture*	☐	☒
Urine sample*	☐	☒	Fingertip blood sample*	☐	☒

Body Imaging (e.g. MRI, DEXA, X-rays)	☐	☒	Saliva sample*	☐	☒
* if yes, will samples be retained for subsequent testing for factors other than described in this proposal?				☐	☐
If yes, will samples be anonymised?				☐	☐

For the purposes of this section, "participants" include human subjects, their data, their organs and/or tissues. For participants to be recruited to the research, please state:

15 Number of participants:	12 – 15 care home staff N.B. We have a target number of staff participants, rather than care homes. It is anticipated that at least two care homes will need to be recruited in order to achieve the requisite number of participants. If we unable to recruit a total of twelve participants from two care homes, we will invite a third care home to take part in the study.

16 If data are to be collected on different sites, please state the number of participants at each site:

Site 1:	Care home 1	Number of participants:	6-8
Site 2:	Care home 2	Number of participants:	6-8

(insert additional sites if necessary)

17 How have you arrived at this number? Please state proposed inclusion/exclusion criteria. If appropriate has the protocol been reviewed by a Statistician?

As a feasibility study, a formal sample size calculation is not necessary. Although there is currently no guidance as to appropriate sample sizes for feasibility studies, 12-15 participants would be considered appropriate in a pilot study (Julious, 2005) and therefore this number will be used as a guide. Participants will include both the workshop facilitators (e.g., the Care Home Manager) and the staff that take part in the workshops. Note that all participants are care home staff, not residents.

18 Age group or range *(e.g., under 60s)*:	Over 18s

18.1 Sex:	Male			Female		

19. Is this a single sex study?

	YES		**NO**	X	

If yes, please justify the reason(s) for gender selection

While some studies explicitly focus on gender specific experiences, care should be taken to ensure that women or men are not unnecessarily excluded from participating in research.					
20 Do participants belong to any of the following vulnerable groups?					
Children:	**YES**		**NO**	X	
Participants unable to give informed consent in their own right *(e.g., people with learning difficulty)*:					
	YES		**NO**	X	
Other vulnerable groups (please specify)					
	YES		**NO**	X	

14 Products and devices				
14.1 Does the research involve the testing of a product or device?				
YES		**NO**	X	
If yes, please describe it.				
Not applicable.				
14.2 If this research involves a drug, is it being used in accordance with its licensed uses?				
YES		**NO**		
If no, please explain why:				
Not applicable.				

SECTION D: THE PARTICIPANTS

Care will need to be taken to formulate inclusion/exclusion criteria that clearly justify why certain individuals are to be excluded, to avoid giving the impression of unnecessary discrimination. On the other hand, the need to conduct research in “special” or “vulnerable” groups should be justified and it needs generally to be shown that the data required could not be obtained from any other class of participant.

If the answer to any of the above is yes, please complete Questions 21 to 25; otherwise proceed to Question 26.

21 Please explain why it is necessary to conduct the research in such vulnerable participants and whether required data could be obtained by any other means.

22 Please state what special or additional arrangements have been made to deal with issues of consent and the procedures to safeguard the interests of such participants.

23 Please describe the procedures used to ensure children (i.e., persons under 18 years) are able to provide consent/assent to participation.

24 If appropriate, please state whether and how parental consent, or the consent of the legal guardian and/or order/declaration of the court, will be sought in relation to the participation of children in the research.

25 If the participant is unable to consent in their own right, will you seek the prior approval of an informed independent adult and any other person or body to the inclusion of the participant in the research?

	YES		**NO**		

State precisely what arrangements will be put in place.

Recruitment and Selection

The Research Ethics Committee will need to be satisfied with the effectiveness and propriety of recruitment and selection procedures given the participant involved, e.g., that the participant will not feel in any way obliged to take part, that advertisements do not appear to offer inducements. The Committee will be particularly interested in cases where a participant's relationship with the investigator could raise issues about the voluntary status or motive of the participant's involvement in the research (e.g., students).

26 How will the participants in the study be selected, approached and recruited (please indicate the inclusion and exclusion criteria)?

Careful consideration will be given to the profile of the care homes included in the study to ensure that they are broadly representative of care homes in the South West Peninsula. The purposive sampling of care homes will be based on 'typical case sampling' (Given, 2008), that is, we are interested in recruiting a care home simply because it is not unusual in anyway. This is the preferred approach for testing the feasibility of a mealtime training programme for staff in order that it may be replicated in a diverse range of care settings. In this instance, a 'typical case' care home is characterised as being privately-run, of medium-size, offering some publically-funded places, and employing a multicultural and multi-lingual staff. It will be essential that non-native English speaking staff are included in this study in order that the feasibility of this training programme can be adequately assessed. The care homes that have expressed an interest in this study meet this criterion.

Participants will be informed that the study consists of a workshop followed by a participant survey to be completed online. All participants will be made aware that they can withdraw from the study at any time without needing to give a reason, and can refuse to participate in workshop activities or answer any question posed in the survey.

The recruitment procedure will be as follows:

1. RW will send a letter to Care Home Managers inviting care homes to take part in the study. Initially, RW will send a letter to the owner of two care homes in Exeter who has already expressed an interest in this study. If he declines, a number of other cares homes in the South West region will be contacted by letter in the first instance, followed by a telephone call. The letter will provide managers with details about the study (incl. time commitment and project aims). The letter will be followed up one week later with a phone call to the manager of each care home.

2. RW will make an initial visit to interested care homes to discuss the study in more detail and go through the participant information sheet with the Care Home Manager and any staff who may be involved in the training. Each care home will also be provided with participant information sheets to disseminate to staff. In order for the feasibility testing to be viable, at least four staff participants will need to be identified in each care home. RW will liaise closely with Care Home Managers to ensure that this number is attainable and that shift patterns allow for these participants to take part in the training simultaneously.
3. When the participant care homes have been identified, members of staff will be able to contact the research team using the contact details provided on the participant information sheet. Once any queries or questions about the study have been addressed, RW will liaise with the Care Home Owner and/or Manager(s) about suitable dates and times to conduct the stakeholder meeting and subsequent training.
4. Each participant will then be sent a consent form in advance to be completed prior to the main study.

If you are proposing to advertise, please include a copy of the advert to be used at the end of your application.

27 Where are you recruiting the participants?

Participants will be recruited from two care homes in the South West through existing networks. In the first instance, this will be via RW's existing network of contacts. However, participants may also be recruited from care homes affiliated with organisations such as ENRICH and Somerset Care, as well as PENCLAHRC's network of contacts for patient and public involvement in research (PPI).

28 Relationship of participant to investigator:	

29 Will the participants take part on a fully voluntary basis?

	YES	X	**NO**		

30 Will students (e.g. PCMD, UEMS, other Schools or Colleges) be involved as participants in the research project?

	YES		**NO**	X	

If yes, please provide full details.

31 Will payments or other inducements be made to participants?

	YES		**NO**	X	

If yes, give amounts, type and purpose.

Information to Participants and Consent

If your study involves the collection and storage of human samples, please refer to the University Human Tissue Act Management Handbook and follow the guidelines for obtaining informed consent.					
32 Will participants be informed of the purpose of the research?					
	YES	X	**NO**		
If no, please explain why.					
33 Will the participants be given a written information sheet?					
	YES	X	**NO**		
If yes, please use the sample at Appendix 1					
If no, please explain why and delete Appendix 1.					
34 Will written consent be obtained?					
	YES	X	**NO**		
If yes, please use the sample at Appendix 2					
If no, please explain why and delete Appendix 2.					
35 Where potential participants will/may suffer from any difficulties of communication, state the methods to be employed both to present information to the participants and achieve consent. *If written, please include a copy at the end of your application.*					
It is possible that some participants will have a limited grasp of English, particularly as many care home workers are not native English speakers. Therefore, particular attention will be given to formulating survey questions which are easy to comprehend. RW will consult with Care Home Managers to ensure that surveys will be comprehensible to staff. As the Care Home Manager is used to communicating with his or her staff, he or she will be well placed to assess the lexical suitability of the survey questions. In addition, participants will be given the option of answering the open questions in their own language. This will be made clear on the qualitative survey. Any surveys containing non-English responses will be translated by a University-affiliated translator who will be remunerated for the work using the lead researcher’s research grant. If a University-affiliated translator cannot be found, the work will be outsourced. For example, Exeter-based Sure Languages are global language specialists able to translate all major world languages.					
36 Ensure that the Information Sheet includes details of the participants’ right to withdraw from the study at any time without penalty.					

Where relevant (should incidental significant findings emerge during the course of a study)					
36.1 Will any information be given to the participants' GP (if deemed necessary)?					
	YES		**NO**	X	
36.2 Have the participants consented to having their GP informed?					
	YES		**NO**	X	

37 Please state what measures will be taken to protect the confidentiality of the participant's data (i.e., arising out of the research and contained in personal data).

Personal and demographic data about the participants will remain confidential and held in accordance with the Data Protection Act 1998. Unique study identification numbers will be allocated to each participant prior to the study commencing. Survey responses will be anonymised and identified only by the unique identification number. Once survey responses have been completed and checked, any identifying digital records, such as email addresses, will be deleted. Hard copies of data relating to the study and participant information will be stored in a locked filing cabinet in the office of RW.

38 How will the data be stored during the life of the project?

Electronic data will be stored on a University of Exeter computer which is password protected. Electronic databases will be further password protected and any data analysis/storage files that may be used (such as Nvivo) will also be password protected. The University of Exeter regularly creates back-ups of files, but in addition a secure memory stick will be used to back up data which will also be password protected and stored in a locked filing cabinet in a separate location to the hard copies of data. No data about the participants of the studies will be passed to any third parties and no individuals (care home managers or staff) will be named in the study outputs.

39 University of Exeter Guidelines state that primary data generated in the course of research must be kept securely in paper or electronic format, as appropriate and held normally for a period of five years (or as required by the funding body) after the completion of a research project.
http://www.exeter.ac.uk/research/toolkit/throughout/ethics/goodpractice/
Please provide details of how data will be stored, how long the data will be retained following completion of the study and how the data will be disposed of once this period has ended

The data will be held by the research team for five years after the completion of a research project (in line with Exeter University recommendations).

40 Who will be ultimately responsible for data storage and disposal for this project?

Ross Watkins and his supervisor (Mark Tarrant) will have the responsibility of disposing of the data.

41 How will participants be informed of the results of the study if they so wish?

Participants will be informed that the study will be written up as part of the applicant's PhD thesis and disseminated through publications and conference presentations, and to other educational audiences (e.g. PenCLAHRC, ENRICH, Age UK Devon and Somerset, and other special interest groups). The researcher will also prepare a summary sheet to disseminate the findings to the participants involved in the study (and the care homes at which they reside).

42 Risk to research participants

42.1 do you think there are any ethical problems or special considerations/hazards with the proposed Study? If so, please describe

We do not anticipate any medical or legal problems arising as a result of this study. However, if participants have any concerns, or experience any distress, they will be able to speak directly to the researchers, and will be entitled to unconditional withdraw from the study at any time.

43 Does your proposed study require a Health and Safety risk assessment and if so, has this been carried out?

YES			**NO**	X	

44 Are there any potential conflicts of interest arising from the project, deriving from relationships with collaborators/sponsors/participants/interest groups?

	YES		**NO**	X	

Please disclose all relevant personal and commercial interests.

There are no personal or commercial interests associated with this study.

SECTION E: USE OF HUMAN TISSUE (as defined in the Human Tissue Act 2004)
http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4103686.pdf

*** Please contact Jackie Whatmore (DI, St. Lukes's and Streatham Campuses) J.L.Whatmore@exeter.ac.uk , Gillian Baker (DI, Research Innovation and Learning Development Centre) g.c.baker@exeter.ac.uk or Nick Church n.j.church@exeter.ac.uk for further information.**

If you wish to store any human samples you must inform the relevant Designated Individual (DI) and you will need to complete an Application to Store Human Samples Form. You will also need to read the University of Exeter Human Tissue Act Management Handbook .

University of Exeter Medical School Research Ethics Committee

Reviewer Form

Name of Reviewer:	Dr Raff Calitri
Employing Organisation:	University of Exeter
Qualifications and area of expertise:	PhD Social Psychology. Trial methodology & trial management
Details of any potential conflict of interest:	None
Name of Researcher:	Ross Watkins
Project Title:	Developing and testing a mealtime intervention to improve the health and wellbeing of care home residents.

	Yes	**No**	**N/A**
Is there a clear research question/aim?	☒	☐	☐
Are the methods of data collection adequately described?	☒	☐	☐
Are the methods of data collection appropriate?	☒	☐	☐
Are the methods of data analysis adequately described?	☒	☐	☐
Are the methods of data analysis appropriate?	☒	☐	☐
Have ethical issues been addressed appropriately?	☒	☐	☐

Please grade each feature (where appropriate) from excellent to very poor:
Evaluation Scale: (5) Excellent (4) Very Good (3) Good (2) Fair (1) Poor

Originality	Excellent
Reliability	Good
Importance	Very Good

What is your overall assessment of the **quality of the study**? (please continue overleaf)

- *Originality*: does the work add to what is already in the published literature? If so, what does it add?

The proposed research outlines some important pilot work towards developing a robust intervention to improve the health and wellbeing of care home residents. Building on the applicants' findings from his earlier development work he will develop manualised training workshops which will focus on (1) improving social interaction, (2) promoting resident choice, and (3) safeguarding resident independence. Previous work has often neglected the psychosocial factors that might contribute to wellbeing. This study is an important development and will extend the current knowledge base and theorising about care provision within residential care homes. Should the workshops be feasible and acceptable, a 'big' trial will provide important answers that will have the potential to positively impact care home residents and employees.

The research aims are clear and the general design is very good. Following the delivery of three workshops in one selected care home, Ross will provide an online qualitative survey to care home employees. The design is appropriate and there is a comprehensive analysis plan in place. Ross has also considered data issues and has a satisfactory plan for the management and storage of data.

What specific improvements would you like to see the applicant make in relation to the **quality of the study**?

The quality of the study is good. However, I would like to see a few minor clarifications:

1) A clearer outline of which care home will be selected – how will you ensure it is representative? Ross notes that a large number of employees might be non-native English speakers. There are obvious feasibility issues around whether an online survey would be accessible or appropriate for such individuals. It is acceptable to employ this method but it would be beneficial to ensure that the care home selected has a representative workforce to allow adequate feasibility assessment.

The application has been amended as follows:

Section 26: "Careful consideration will be given to the profile of the care homes included in the study to ensure that they are broadly representative of care homes in the South West Peninsula. The purposive sampling of care homes will be based on 'typical case sampling' (Given, 2008), that is, we are interested in recruiting a care home simply because it is not unusual in anyway. This is the preferred approach for testing the feasibility of a mealtime training programme for staff in order that it may be replicated in a diverse range of care settings. In this instance, a 'typical case' care home is characterised as being privately-run, of medium-size, offering some publically-funded places, and employing a multicultural and multi-lingual staff. It will be essential that non-native English speaking staff are included in this study in order that the feasibility of this training programme can be adequately assessed. The care homes that have expressed an interest in this study meet this criterion."

Section 35: "It is possible that some participants will have a limited grasp of English, particularly as many care home workers are not native English speakers. Therefore, particular attention will be given to formulating survey questions which are easy to comprehend. RW will consult with Care Home Managers to ensure that surveys will be comprehensible to staff. As the Care Home Manager is used to communicating with his or her staff, he or she will be well placed to assess the lexical suitability of the survey questions. In addition, participants will be given the option of answering the open questions in their own language. This will be made clear on the qualitative survey. Any surveys containing non-English responses will be translated by a University-affiliated translator who will be remunerated for the work using the lead researcher’s research grant. If a University-affiliated translator cannot be found, the work will be outsourced. For example, Exeter-based Sure Languages are global language specialists able to translate all major world languages.”

2) It would be useful to understand when the qualitative survey will be administered/available. For example, will it be after each workshop? After all three workshops? Immediately after them or a week later? It will also be helpful to understand whether there will be a fixed time period in which the survey will be open for (i.e., how long do employees have to respond?)

The application has been amended as follows:

Section 13: “The online qualitative survey will be made available to participants immediately after the workshop. The lead researcher will collect participants’ email addresses prior to the start of the workshop and email all participants a link to the survey. After the workshop, the lead researcher will thank the participants for their involvement in the study and ask them to complete the online survey as soon as possible. The survey will be open for seven days following the workshop, and a reminder email will be sent to all participants who have not responded within 48 hours. The lead researcher will work closely with the Care Home Manager to ensure that participants are given ample opportunity to complete the survey, including the provision of a computer for staff to complete the survey at work if possible.”

3) Ross notes that non-native English speakers will be invited to have another member of staff support them in giving their answers. Please could you clarify whether this is during the workshops or during the online survey or both? If it is during the survey I would be concerned that there would be increased risk of bias in responding and that non-naïve speakers may not be able to report their own personal views (which may be at odds to the supporting/supervising member of staff).

The application has been amended as follows:

Section 35: “It is possible that some participants will have a limited grasp of English, particularly as many care home workers are not native English speakers. Therefore, particular attention will be given to formulating survey questions which are easy to comprehend. RW will consult with Care Home Managers to ensure that surveys will be comprehensible to staff. As the Care Home Manager is used to communicating with his or her staff, he or she will be well placed to assess the lexical suitability of the survey questions. In addition, participants will be given the option of answering the open questions in their own language. This will be made clear on the qualitative survey. Any surveys containing non-English responses will be translated by a University-affiliated translator who will be remunerated for the work using the lead researcher’s research grant. If a University-affiliated translator cannot be found, the work will be outsourced. For example, Exeter-based Sure Languages are global language specialists able to translate all major world languages.”

4) Some examples of the questions to be asked in the online survey would be helpful.

The application has been amended as follows:

The questions that will be asked in the online qualitative surveys have been appended to this application.

Lastly, are there any potential **ethical issues/risks** you would like to bring to the attention of the Committee?

Ross highlights a risk to himself as a lone worker. He will conduct a risk-assessment to ensure care homes are safe to conduct the research. This is good practice. However, I would like to see the development of a standard operating procedure that specifically outlines how his safety will be monitored during visits. The University may have specific ‘buddy’ systems policy that he could follow. For example, he should let a colleague (or PhD supervisor) know when his visit(s) is (are) scheduled and their anticipated length. He should call the ‘buddy’ on arrival at the care home and on departure. If the contact (‘buddy’) has not heard from Ross after an agreed time has elapsed following the anticipated visit duration then they should enact the agreed safety procedure (e.g., try to contact Ross, then the care home if no answer, then the police if no answer).

The application has been amended as follows:

Section 13: “Finally, as this study involves one researcher working away from the University and visiting staff in care homes, an additional safeguarding procedure will be implemented. Prior to every visit to a care home, the main researcher, Ross Watkins, will inform each of the other researchers of his intended movements, including providing the location of each care home and the timings planned for each visit. At the end of every visit, the main researcher will contact Dr Mark Tarrant by telephone, informing him that he has left the interview location. If Dr Mark Tarrant cannot be contacted, contact will be made with either Dr Vicki Goodwin or Dr Rebecca Abbott, or a nominated other individual with UEMS. If Dr Mark Tarrant (or nominated other individual) has not been contacted by Ross Watkins by a pre-agreed time, then Mark will attempt to contact Ross, followed by the care home if there is no answer, and finally the police if contact cannot be made. This is the procedure that was followed in a previous study conducted by RW involving interviews with care home residents, which was approved by the UEMS REC.”

Signed:

(Electronic signature required)
Date: 21/03/2017

Care home staff experiences of receiving a training programme

INFORMATION SHEET FOR TRAINING RECIPIENTS

VERSION NUMBER [2]: DATE [09/06/17]

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part we thank you for considering our request.

What is the aim of the project?

This research explores care home staff experiences of a training programme. The purpose of the study is to understand the views and opinions of staff towards interactive workshops which aim to improve social interaction, resident choice and independence at mealtimes. The study forms part of my PhD thesis and is intended to inform the development of a mealtime intervention to improve the health and wellbeing of care home residents. The results may also be used by other interested parties, such as care home networks and organisations responsible for managing the care of older people.

Why have I been chosen?

You are being invited to take part in this research study because you work in a care home and provide assistance to residents at mealtimes. We plan to conduct this study in at least one care home in Devon or Somerset, involving a number of mealtime staff.

Do I have to take part?

No – it is entirely up to you. Your participation is completely voluntary. If you do decide to take part you will be given this information sheet to keep. You will also be asked to sign a consent form, a copy of which you will also be given to keep. If you decide to take part you are still free withdraw at any time without giving a reason. If you not wish to take part, we will respect your decision and will not contact you again. You will not be expected to take part in the training workshops outside of your normal working hours. You may choose to discuss a change in your working hours with your manger in order to take part in the training, but you are not expected to participate in your own time.

What will happen to me if I take part?

You will be asked to take part in a training workshop that will be facilitated by a senior staff member. The workshop will last about 60 minutes and will take place in a private room in the care home. Your participation in the workshop will be observed by a researcher. However, the researcher will take no part in the workshop. You may also be asked to attend a stakeholder meeting prior to the workshop to discuss the training material. After the workshop, you will be asked to complete an online survey, which should take 15-20 minutes to complete.

The workshop will focus either on improving social interaction, or promoting resident choice, or safeguarding resident independence at mealtimes. The topic (i.e., focus of the workshop) will be chosen in advance by the Care Home Manager. Each workshop has the same format, comprised of four fifteen-minute activities: (i) reflection on your experiences; (ii) discussion of some common mealtime scenarios (iii) role-play of some scenarios; (iv) developing some recommendations along with other colleagues based on your thoughts and experience.

While you may not directly benefit from taking part in this study, you will have your opportunity to have your say about your experiences of mealtimes and this may help to improve the experiences of residents in the future. We are unable to provide any payment to you for taking part in the research study. We will be running the study until September 2017, after which we will send you a brief report summarising the findings of the research, if you are interested.

What about privacy and confidentiality?

All information collected during this study will be kept strictly confidential and only the University research team will have access to the survey responses. All surveys will be analysed by the University research team. You will be given a unique study identification number at the beginning of the research study that will be used to identify you throughout the research. Because of this, it will not be possible for people outside of the University research team to link your personal details with your survey responses. All research materials will be securely destroyed after the end of the research study, or on your withdrawal from the research study. The confidential handling, storage and disposal of data are compliant with the Data Protection Act of 1998.

What are the potential risks and benefits of taking part?

We do not anticipate there being any risks to taking part in this study.

What if there is a problem?

The University research team will be happy to discuss any concerns with you: our contact details are provided at the end of this information sheet. However, if you have concerns or complaints arising from your experience of participating in this research study that you do not wish to discuss with the University research team directly, please speak to a member of the care home staff. You can also contact the Chair of the University of Exeter Medical School Ethics Committee, Dr Ruth Garside (Tel: 01872 258148, Email: uemsethics@exeter.ac.uk)

What will happen to the results of the research study?

The results from the research study will form part of a PhD thesis which aims to develop a new mealtime intervention to improve the health and wellbeing life of older adults in residential care. The results from the study will also be published and although quotes from the interviews may be included in our publications, your personal identification details will never be revealed.

Who is organising and funding the research study?

The research study is supported by the University of Exeter Medical School as part of a PhD. The research study is funded by The National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health (CLAHRC).

Who has reviewed the research study?

The research study has been reviewed by an independent group of people called a Research Ethics Committee (REC) to protect your safety, rights, wellbeing and dignity. This research study has been reviewed and given a favourable opinion by the University of Exeter

Medical School Research Ethics Committee (REC Reference Number: 17/04/122).

Who can I contact for further information?

If you would like more information, please feel free to contact a member of the University research team:

Ross Watkins Tel: 07767 725222 Email: Ross.Watkins@exeter.ac.uk
Dr Mark Tarrant Tel: 01392 725921 Email: M.Tarrant@exeter.ac.uk

Thank you for taking the time to read this information sheet and considering taking part in this research study.

Care home staff experiences of receiving a training workshop

CONSENT FORM FOR PARTICIPANTS

VERSION NUMBER [2]: DATE [09/06/17]

I have read the Information Sheet Version Number [02] Dated [******] concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

1. my participation in the project is entirely voluntary; Y/N
2. I am free to withdraw from the project at any time without any disadvantage; Y/N
3. the data [survey responses] will be retained in secure storage; Y/N
4. there is a small possibility that some of the survey questions may be sensitive; Y/N
5. I will receive no payment for taking part in this study Y/N
6. the results of the project may be published but my anonymity will be preserved. Y/N

I agree to take part in this project.

.... ……………………….. ....
(Printed name of participant) (Signature of participant) (Date)

.... ……………………….. ....
(Printed name of researcher) (Signature of researcher) (Date)

I would like to receive a report summarising the findings of the study Y/N

This project has been reviewed and approved by the University of Exeter Medical School Research Ethics Committee

UEMS REC REFERENCE NUMBER: 17/04/122

Care home staff experiences of receiving a training programme

INFORMATION SHEET FOR TRAINING FACILITATORS

VERSION NUMBER [2]: DATE [09/06/17]

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part we thank you for considering our request.

What is the aim of the project?

This research explores care home staff experiences of delivering and receiving a training programme. The purpose of the study is to understand the views and opinions of staff towards interactive workshops which aim to improve social interaction, resident choice and independence at mealtimes. The study forms part of my PhD thesis and is intended to inform the development of a mealtime intervention to improve the health and wellbeing of care home residents. The results may also be used by other interested parties, such as care home networks and organisations responsible for managing the care of older people.

Why have I been chosen?

You are being invited to take part in this research study because you have been identified as a training lead in your care home. We plan to conduct this study in at least one care home in Devon or Somerset, involving a number of mealtime staff.

Do I have to take part?

No – it is entirely up to you. Your participation is completely voluntary. If you do decide to take part you will be given this information sheet to keep. You will also be asked to sign a consent form, a copy of which you will also be given to keep. If you decide to take part you are still free withdraw at any time without giving a reason. If you not wish to take part, we will respect your decision and will not contact you again.

What will happen to me if I take part?

You will be asked to facilitate a training workshop using a training manual provided by the lead researcher, and following a pilot training session conducted by the lead researcher during which you be free to ask any questions or queries that you have about the workshop. The workshop will last about 60 minutes and will take place in a private room in the care home. Your participation in the workshop will be observed by a researcher. However, the researcher will take no part in the workshop. You will also be asked to attend a stakeholder meeting prior to the workshop to discuss the training material. After the workshop, you will be asked to complete an online survey, which should take 15-20 minutes to complete.

The workshop will focus either on improving social interaction, or promoting resident choice, or safeguarding resident independence at mealtimes. The topic (i.e., focus of the workshop) will be chosen in advance by the Care Home Manager. Each workshop has the same format, comprised of four fifteen-minute activities. Each workshop has the same format, comprised of four fifteen-minute activities: (i) reflection on your experiences; (ii) discussion of some common mealtime scenarios (iii) role-play of some scenarios; (iv) developing some recommendations along with other colleagues based on your thoughts and experience.

While you may not directly benefit from taking part in this study, you will have your opportunity to have your say about your experiences of mealtimes and this may help to improve the experiences of residents in the future. Unfortunately, we are unable to provide any payment to you for taking part in the research study. We will be interviewing people until September 2017, at which point we will send you a brief report summarising the findings of the research, if you are interested.

What about privacy and confidentiality?

All information collected during this study will be kept strictly confidential and only the University research team will have access to the survey responses. All surveys will be analysed by the University research team. You will be given a unique study identification number at the beginning of the research study that will be used to identify you throughout the research. Because of this, it will not be possible for people outside of the University research team to link your personal details with your survey responses. All research materials will be securely destroyed after the end of the research study, or on your withdrawal from the research study. The confidential handling, storage and disposal of data are compliant with the Data Protection Act of 1998.

What are the potential risks and benefits of taking part?

We do not anticipate there being any risks to taking part in this study.

What if there is a problem?

The University research team will be happy to discuss any concerns with you: our contact details are provided at the end of this information sheet. However, if you have concerns or complaints arising from your experience of participating in this research study that you do not wish to discuss with the University research team directly, please speak to a member of the care home staff. You can also contact the Chair of the University of Exeter Medical School Ethics Committee, Dr Ruth Garside (Tel: 01872 258148, Email: uemsethics@exeter.ac.uk)

What will happen to the results of the research study?

The results from the research study will form part of a PhD thesis which aims to develop a new mealtime intervention to improve the health and wellbeing life of older adults in residential care. The results from the study will also be published and although quotes from the interviews may be included in our publications, your personal identification details will never be revealed.

Who is organising and funding the research study?

The research study is supported by the University of Exeter Medical School as part of a PhD. The research study is funded by The National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health (CLAHRC).

Who has reviewed the research study?

The research study has been reviewed by an independent group of people called a Research Ethics Committee (REC) to protect your safety, rights, wellbeing and dignity. This research study has been reviewed and given a favourable opinion by the University of Exeter

Medical School Research Ethics Committee (REC Reference Number: 17/04/122).

Who can I contact for further information?

If you would like more information, please feel free to contact a member of the University research team:

Ross Watkins Tel: 07767 725222 Email:
Ross.Watkins@exeter.ac.uk
Dr Mark Tarrant Tel: 01392 725921 Email:
M.Tarrant@exeter.ac.uk

Thank you for taking the time to read this information sheet and considering taking part in this research study.

Care home staff experiences of delivering a training workshop

CONSENT FORM FOR PARTICIPANTS

VERSION NUMBER [2]: DATE [09/06/17]

I have read the Information Sheet Version Number [2] Dated [******] concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

1. my participation in the project is entirely voluntary; Y/N
2. I am free to withdraw from the project at any time without any disadvantage; Y/N
3. the data [survey responses] will be retained in secure storage; Y/N
4. there is a small possibility that some of the survey questions may be sensitive; Y/N
5. I will receive no payment for taking part in this study Y/N
6. the results of the project may be published but my anonymity will be preserved. Y/N

I agree to take part in this project.

.... ……………………….. ....
(Printed name of participant) (Signature of participant) (Date)

.... ……………………….. ....
(Printed name of researcher) (Signature of researcher) (Date)

I would like to receive a report summarising the findings of the study Y/N

This project has been reviewed and approved by the University of Exeter Medical School Research Ethics Committee

UEMS REC REFERENCE NUMBER: 17/04/122

Ross Watkins
PhD Researcher
University of Exeter Medical School
College House,
St Lukes Campus,
Heavitree Road,
Exeter EX1 2LU.

Date] [Version 2]

Dear [Name of Care Home Manager],

Research study into care home staff experiences of a mealtime training programme

I am a PhD researcher at the University of Exeter Medical School and I am investigating care home residents' experiences of mealtimes. As part of this research, I would like to test a new training programme with staff, which is aimed at improving social interaction, resident choice and independence. The longer-term aim of this research is to develop initiatives which ensure that mealtime experiences contribute positively to the health and wellbeing of residents.

I am asking you whether your care home would be interested in taking part in the research. This would require minimal involvement from the care home itself, such as the provision of a room in which the training can take place and liaising with staff who may be interested in taking part in the study. In practice, the study will involve two sessions: (1) a stakeholder meeting in which I will discuss the training programme with the nominated training lead in your care home and one or two staff members, followed by (2) a training session (to be scheduled at a later date) in which the training lead will facilitate a training workshop with staff. Each session should last no longer than an hour. Staff participation in the study is voluntary and they will need to consent to take part. They will also be free to withdraw from the study at any time without needing to give a reason.

Following their participation in the training workshop, both the training lead and staff recipients of the training will be asked to complete an online survey. All personal information obtained about participants (including names, contact details) will remain confidential, and the care home itself will not be named in any resulting publicity. However, we would be happy to share the findings of the study with the care home on completion of the project.

If you would like your care home to be involved in this research, then we would be very interested to hear from you. I will follow up this letter with a phone call in a week's time. However, if you would like more information about the study in the meantime, then please feel free to email me Ross.Watkins@exeter.ac.uk.

Yours sincerely,
Ross Watkins

Glossary

Activities of daily living (ADL) – An ‘activity of daily living’ is defined as a basic task of everyday life. These are split into *instrumental* which are less fundamental such as doing housework, taking medication and preparing meals and *basic* activities of daily living which include more fundamental tasks such as eating, toileting and washing.

Behavioural symptoms of people with dementia (BSPD) – A collection of non-cognitive symptoms of disturbed perception, thought content, mood, or behaviour (such as wondering, agitation, sexually inappropriate behaviours, depression, anxiety and delusions), also known as neuropsychiatric symptoms.

The Cochrane Collaboration – Cochrane produces reviews that summarise the best available evidence generated through research to inform decisions about health.

Cohen-Mansfield Agitation Inventory (CMAI) – A 29-item scale which systematically assesses agitation. Individuals are rated by a primary caregiver regarding the frequency with which they manifest physically aggressive, physically non-aggressive and verbally agitated behaviours.

Consumers Health Forum of Australia (CHF) – Australia’s leading advocate on consumer health care issues.

Disability-Free Life Expectancy (DFLE) – A health expectancy, which adds a quality of life dimension to longevity. It is an estimate of the length of lifetime free from a limiting persistent illness or disability.

Gottfries-Brane-Steen (GBS) scale – An assessment tool for evaluating dementia symptoms based on a semi-structured interview and observation. The scale consists of subscales measuring intellectual (12 items), emotional (3 items) and activities of daily living, primarily items of self-care (6 items); as well as 6 items of behavioural and psychological symptoms of dementia.

The Health Technology Assessment (HTA) – The HTA Programme funds research about the clinical and cost effectiveness and broader impact of healthcare treatments and tests for those who plan, provide or receive care in the NHS.

Intervention Mapping (IM) – A protocol for developing effective behaviour change interventions. IM describes the iterative path from problem identification to problem solving or mitigation.

Mini-Nutritional Assessment (MNA) – The MNA is designed to provide a single, rapid assessment of nutritional status in older adults. It is composed of simple measurements and brief questions that can be completed in about ten minutes.

National Cancer Research Institute (NCRI) – A strategic UK-wide partnership which works to promote communication, coordination, and collaboration in cancer research between cancer research funders.

National Institute for Health Research (NIHR) – The NIHR funds health and care research and translates discoveries into practical products, treatments, devices, and procedures, involving patients and the public in their work.

Office for National Statistics (ONS) – The UK's largest independent producer of official statistics and the recognised national statistical institute of the UK.

Randomised Controlled Trial (RCT) – Often considered the gold standard for a clinical trial, RCTs are often used to test the efficacy or effectiveness of interventions by randomly allocating participants to an intervention group or the control group. Randomisation minimises selection bias, and though complex to implement in *real* trials, conceptually the process is like tossing a coin.

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