Food, Aging, and Dementia: Exploring caterers' rôles in elderly care homes nourishment.

Norman Humberstone Dinsdale

A thesis submitted in partial fulfilment of the requirements of

Sheffield Hallam University

for the degree of Doctor in Business Administration

March 2022

Candidate Declaration

I hereby declare that:

1. *I have not been enrolled for another award of the university, or other academic or professional organisation, whilst undertaking my research degree.*
2. *None of the material contained in the thesis has been used in any other submission for an academic award.*
3. *I am aware of and understand the University's policy on plagiarism and certify that this thesis is my own work. The use of all published or other sources of material consulted have been properly and fully acknowledged.*
4. *The work undertaken towards the thesis has been conducted in accordance with the SHU Principles of Integrity in Research and the SHU Research Ethics Policy.*
5. *The word count of this thesis is 92,651 words (excluding abstract, tables, lists, references, appendices, and reflections).*

Name	Norman Humberstone Dinsdale
Award	Doctor in Business Administration
Date of Submission	March 2022
Faculty	College of Business Technology and Engineering – Sheffield Business School

Director of Studies	Mr. David Egan.
Doctoral Supervisor	Professor, Dr. Joseph Hegarty.

Word Count	93,754
Gross Word Count	115727
Less:	
Abstract & Openers	1,118
References	7,863
Appendices	12,992
Net Word Count	93,754

Abstract

Food is our common ground, a universal experience – James Beard

Although much of the research carried out for this thesis, both desk and field, was conducted prior to the current COVID-19 pandemic the resultant focus on care homes, and in particular the catering services, thoroughly justifies the current and future need for systematic research into care home catering. There has been a burgeoning volume of research seeking solutions for improved nutrition for people living with dementia in residential care homes.

My thesis explores how the feeding and nutrition of residents of Long-Term Care Homes living with dementia is carried out by professional caterers and catering companies and offers a contribution to knowledge but, above all, offers a contribution to improved practice. The literature review examines previous research carried out on the medical and dietetic elements of feeding and nurturing those residents. It was surprising to note there is a paucity of research related to the physical, operational, elements of food and beverage provision, or how the caterers can fulfil their rôle in the provision of nutritious and sustainable food and drink. It is important to note, however, that the majority of residential care homes are in business for profit and just as Important to appreciate that even non-profit organisations need to control their expenditures in order to minimise losses.

This completed thesis is presented as a first-person piece of work. It is often said there are no "I's" in academic writing but all that would do is remove my active voice, my distinctive self, and result in ambiguity. Qualitative researchers have, for many years, had research papers rejected because they had been written in the first person. See Chapter 1.5. Positioning myself for detail.

The qualitative case-study approach was chosen as being the most appropriate, using semi-structured interviews and questionnaires to collect rich, contextual, data. The use of multi-method, or mixed method, research has found greater favour over the last few years.

Sector participants were chosen from a database generated through the NHS **Enabling Research in Care Homes (ENRICH)** on-line directory of care homes willing to take part in research. Five care homes were selected from the database, in accordance with the pre-determined criteria for selection, reflecting the general reality of the sector, and allowing for a degree of generalisation. There was one care home response added to the list following an open invitation to participate and a further care home identified for a pilot survey, giving a total of seven participant care homes altogether.

In each of the care homes participants included all those involved in the provision of care with direct contact with residents: Resident Managers; Health Care Assistants; Nursing Staff; Chefs; Cooks and Food Service staff. None of the care homes directly employed nutritionists or dietitians.

These staff were asked to either take part in a semi-structured interview or to complete a questionnaire. Some questionnaires were distributed by hand and respondents completed the questionnaire during the visit to the care home, others completed the questionnaire remotely, on-line, via Qualtrics.

Key to the research were the additional insights obtained from individuals who were either currently working in the care home sector or the NHS catering services at a group level, or had recently retired, as well as senior executives within the foodservice supply industry. These were a key part of the research.

This research extends the boundaries of knowledge in the long-term care home sector, signalling a significant contribution to the care home catering industry knowledge, enabling practitioners to resolve many of the challenges faced at a strategic level, rather than the common, tactical, solutions often found in practice. The overarching results of the research signpost to the following:

- *There is a significant lack of education and / or training in effective Food and Beverage provision within the sector.*
- *Catering production and food service staff have indicated a desire and need for further training.*
- *There is a significant lack of funding for that education and training in the sector.*
- *There is a significant underspend on Food and Beverage provision within the publicly funded sector to ensure good, high quality, products.*
- *There are significant differences in understanding of the rôles of catering staff by nutrition and nursing staff.*
- *Catering staff do not feel valued or trusted by medical, dietetic, and nutritional staff.*
- *Several of the care homes are using antiquated and ineffective kitchen equipment.*

The above results show a commonality in direction. Each of these points will be discussed in greater depth and detail in the main body of the thesis. Each chapter will begin and end with links, via the **Golden Thread,** hopefully creating a sense of anticipation and encouraging you, the reader to keep following the narrative, referencing upcoming chapters, and piquing your curiosity to ensure a smoother flow from one section to the next.

Acknowledgements

The undertaking of a doctoral degree at a relatively late stage in my career portfolio (AKA getting on a bit!) was not a decision taken lightly and I truly wondered if I had it in me. Fortunately, I found a solid network of support which helped me through the many peaks and, many more, troughs. Thanks also for the excellent taught elements of the DBA course and to the cohort of lecturers who took me through the first two stages.

Following that, it is with great pleasure that I give my deepest thanks to my Director of Studies, Mr. David Egan, and supervisor Professor Dr. Joseph Hegarty, for their invaluable support throughout this research project. Without you I would not have made it. Both have provided invaluable advice and stimulus to complete the thesis, especially so as I entered periods of self-doubt, brought about by periods of illness, hospitalisation, and severe pain. Your investment in me, in terms of expertise, knowledge, and time has kept me grounded in realism but buoyed beyond measure.

My sincere and heart-felt love and thanks to my partner, Anne, for your unending support through good times and bad. For listening when needed, cajoling, and encouraging, especially when needed and putting up with my various mood swings.

Thanks too, to my sons, Jonathan, and Jake. For while not being at home any longer, they have made the occasional comment and I hope I can be an inspiration to them both; to Jonathan who has completed a Master's in education degree and Jake, who has completed his Foundation Degree in Physics. Good luck to them both.

I am also pleased to thank the Sheffield Business School for sponsoring me throughout, to the teaching team for their instructional sessions, and my colleagues on the taught course modules.

Finally, thanks to the participants, without who this thesis would never have got off the ground, let alone be completed.

Table of Contents

List of Tables

List of Figures

Chapter 1 - Introduction and Research Ethics

I hope I die before I get old. (Townshend, The Who, 1965)

1.1: Background, Context and Significance

Within this chapter, and the following Literature Review, I give an overview of the growing elderly population and the prevalence of dementia, including the importance of nutrition in the well-being of the elderly and dementia patients. This will also explore the significance of caterers' rôles in nourishment within elderly care homes. The following section identifies the Research Problem, The Major Research Question (MRQ) and Research Sub Questions (RSQ's).

There is no doubt that many Baby Boomers will be pleased not to have fulfilled The Who's death-wish just yet. It should though be recognised that many of the current, and near future, intake of care home residents will be from the 'Baby Boomer' generation, rather than the stoic generation who had survived the privations of war, rationing and sacrifice. The first waves of the Baby Boomer generation are already in their mid-sixties to seventies (Kahana and Kahana, 2014). The expectations of the coming generation are far higher with an ingrained sense of entitlement, with food being a major component in residents' health and happiness (Egan, 2013). This sense of entitlement may well prove to be a significant challenge, requiring a notable paradigm shift, for future care home caterers, management, and staff (Dinsdale, 2016a).

I had rarely considered how captivating research, in its own right, could be, until I undertook this project. I had been expecting the research methods modules of the course to be boring, and all about numbers, the quantitative aspects, but I was so wrong. It's not just picking a method and doing the sums. What I did discover in the Methodologies teaching is that "qualitative research" is valid research, though it does need careful planning to complete correctly. What happens in a care home catering operation is incredibly complex, involving the varying movements and applied applications, just to get food on a plate, that the qualitative approach, in my opinion, seems to be the most appropriate.

1.2: The Research Problem

My intention, throughout the thesis was to create a well-structured and coherent piece of work, a testament to my dedication and expertise. In the later stages it became clear that one essential element that elevates the quality of a thesis is the creation of a "golden thread" – a seamless and interconnected narrative that weaves throughout the entire document (Malherbe. 2022). This golden thread ensures that each chapter flows naturally into the next, guiding readers

through a captivating intellectual journey, enhancing the overall readability and impact of my thesis. As part of the development stage it was critical to map out a logical structure that would align with my research progression.

Research may be defined as 'those activities that involve elements of primary investigation', that is, 'critical systematic enquiry, to provide a theory of practice, to advance knowledge, improve professional practice and increase wisdom' (Jordan, 2006). The research question first emerged from my personal interest in the subject. Both my parents died having lived with some form of dementia and both within a community care environment. That interest, coupled with my love of good food, my immersion in the culinary arts and gastronomy, led to this initial statement of the problem: **How can catering organisations, either In-House Not for Profit or Commercial operations improve the current provision of nourishing food and hydration, to people living with dementia in a care home environment.**

In this section, I initiate my exploration with a central research inquiry. Immediately following this, I introduce my MRQ, aligning it with what I refer to as the "golden thread." While from a theoretical standpoint, this connection may appear robust, it might not be readily apparent to the reader how Bottery and Wright's (2019) approach relates to this golden thread. To enhance readability without altering the content, I aim to consolidate these two sections in 1.2 as follows:

My central research focus revolves around the provision of nourishing food within an environment where individuals living with dementia can be encouraged to increase their consumption. This inquiry prompts several questions: Are the culinary arts recognised as a scientific discipline? Are those responsible for food and hydration within care homes perceived as equally integral members of the care team?

In accordance with Bottery and Wright's (2019) approach, my exploration of these questions has been instrumental in refining my MRQ and RSQs. It has become clear that a well-defined research question or problem statement is at the core of every successful thesis. This realisation marks the genesis of my "golden thread," ensuring that my research question remains tightly focused and pertinent. This coherence serves as the foundational element that binds each chapter together, culminating in my final MRQ: **What is the rôle of caterers in the provision of nutritious food and drink within elderly care homes?**

1.3: MRQ and RSQ's

The purpose of the research is to provide the means whereby both in-house and outsourced commercial catering companies, their catering managers and production and service staff can

deliver an innovative, multidisciplinary, and revolutionary approach to their systems delivery model, thereby improving the efficiency of the care home catering systems and creating a competitive and profitable edge in the market. Stemming from this, is the desire to improve the wellbeing of people living with dementia in care homes. Further exploration of the MRQ necessitates the following RSQs:

1. *What does the literature reveal about actual and optimal nourishment and food experiences for elderly care home residents including those with dementia and dysphagia?*
2. *What is an appropriate nutritious diet for people living with dementia. Including for those living with dysphagia.*
3. *What are the current practices, provision, and challenges within a selection of EMI care homes in England regarding choices and food preferences?*
4. *What is the optimal methodological approach for exploring of this topic?*
5. *What changes might lead to an improvement of the food and beverage offering within elderly care homes in terms of both nourishment and food experience of residents?*
6. *What is the potential to make better use of catering staff knowledge in improving the residents' experience?*

The above RSQ's determined what I would ask, who I would ask and how I would ask the questions of the participants. A significant part of the empirical research involved direct responses from the catering staff, those at the delivery point, rather than just the managers.

1.4: Outline of the Thesis

Having developed a clear set of RSQ's it was important to map out a logical structure for the thesis, with each chapter building upon the preceding one, creating a seamless transition. Subsequent chapters follow a logical sequence showcasing the evolution of my research, methods, results, and conclusions.

Chapter No.	Title	Purpose
1	Introduction and Research Ethics	Introduction, purpose, and positioning of the research.
2	Literature Review and Research Scope	In which I express the state of knowledge relating to the effective and efficient feeding of people living in care homes.
3	Methodology	A justification of the research methods used
4	Results of Interviews and Questionnaires	Display the results. What the data tells me
5	Discussion, Conclusions and Recommendations	In which I discuss the results of the collected data in relation to current knowledge in the lit.

	My conclusions following the analysis and discussion together with a set of recommendations to improve care home catering from both a business and resident perspective

1.5: Positioning myself

The voice I speak with in this research is that of a culinary arts, gastronomy, and hospitality consultancy specialist and recognised expert, currently employed as a senior lecturer at the Sheffield Business School, Sheffield Hallam University, and my voice is an important part of this story. This is because it enabled me to get close to the actors on the ground, gaining their confidence as being part of their domain and eased communication and mutual understanding of the project.

It is part of my "human-self" and how I conducted the research, it was my "ownership" of the research that brought me to where I am now, in readiness to submit my thesis. As discussed in the Abstract, I chose to write the Thesis in the first person.

Webb (1992) illustrated that writing in the third person was totally incompatible with the epistemological assumptions of critical theory. Webb (1992) argued that to write up qualitative research in the third person was a "*a form of deception in which the thinking of scientists does not appear [in which the researchers] are obliterated as active agents in the construction of knowledge."* (p.749)

Webb (1992) further contends that the use of the first person is needed in qualitative and critical paradigms. She also suggests that research students have expressed fears that their theses would get a cold reception by their external examiners for so doing. She further contends that the first person is in keeping with the epistemologies of research and in the pursuit of reflexivity. Furthermore, Greenbaum (2021), writing in the American Psychological Association (APA), 7th APA Style Blog debunks the "no first-person" myth, that the third person should always be used and in fact, suggests that writers use the first person for clarity and self-reference. And this confirms my belief that my active voice is part of the story and is difficult to separate it out as this adds value as an integral part of the analysis and synthesis of my findings.

Kimberley (2021) comments on the emergence of a reflective paradigm within the higher education community and that, critical reflexivity has become an essential skill for academic professionals and researchers. My own reflections when carrying out the research further adds significant value, being an integral part of the research findings and analysis, culminating in the synthesis of conclusions.

I found some difficulty in separating my rôle as a researcher investigating the care home foodservice experiences from my rôle as observant participant, my rôle as Senior Lecturer in Hospitality, and my prior personal experiences of familial members in similar situations. The

dilemma in which I found myself, derived from the above, was that of a researcher evaluating the foodservice provision in care homes and at the same time, advocating and promoting the foodservice process being studied and its outcomes. Such positions might be deemed incompatible with the interests of best research practice. Also, I found that, in these entwined and overlapping rôles, I had very little time to raise questions about events from different perspectives.

A DBA was suggested to me by the then Head of Department and the Subject Group Leader, when I was first encouraged to look at the possibility of completing a doctorate, rather than the traditional PhD route. It was explained that the DBA route would be an ideal vehicle to make full use of my extensive applied knowledge of the hospitality sector, and in particular, my knowledge of Food and Beverage (F&B) operations. I accepted the opportunity as I believed this would allow me to reflect on what is being done in the commercial world of practical application and of the current academic interest.

It may be useful, therefore, for the reader to understand something of my personal background, training and influences which have brought me to this research and to partially explain my position in the research and what led to the motivation for the research. Consequently, rather than placing that here, I include same in **Appendix 12: My Journey**, for more background. I am also including some formative moments within the DBA journey, here, which have impacted on my life.

1.5.a: A short, personal, reflection of the DBA journey.

When you read Appendix 12: My Journey, you will see my enthusiasm for, and experience of, F&B operations and the Culinary Arts. I have been committed to an untiring effort to improve myself through lifelong learning. With that in mind, the actual DBA taught provision came as something of a shock. The complexity of the taught modules was, at first, a confusing mix of ontologies. This soon settled as the marked assignments were tackled and the feedback given helped pave the way for a better understanding. My biggest regret, throughout the research was my ill health. Having undergone two Total Knee Replacement operations, I felt I would have difficulty completing on time. My health was further compounded during the last year when I was diagnosed with Vitamin B-12 deficiency and Piriformis Syndrome, affecting my right hip, leg, and lower back. I have been told that this is unlikely to improve. In other words, a right old crock, but I keep on.

1.6: Motivation for the Research

I have witnessed first-hand the devastating effects of under nourishment in long term care homes, and NHS hospitals, and that picture is embedded firmly in my mind. Several years have

passed since those events but it has always been in my memory, perhaps contributing to my opsimathic tendencies for late learning. In recent years my sister-in-law had also been diagnosed as having dementia and my oldest brother had been coping with her care until she finally passed away. I must also confess to a more personal interest; what if it happens to me? Will I lose my love of food and all things related to the Culinary Arts and Gastronomy? Will I lose the ability to cook for myself and my family? Will I lose the ability to discern a well-prepared meal from one on which no love has been lavished? Will I have to be spoon fed?

I fully recognise that I am at the stage of life, defined by Pythagoras as the *Senium*, after the age of 63, in which there is a decline in mental ability and body function (Berchtold & Cotman, 1998). Of further concern to me are the publications of the scholar, Aristotle, in which he states old people are useless for high administration posts because,

> … there is not much left of the acumen of the mind which helped them in their youth, nor of the faculties which served the intellect, and which some call judgment, imagination, power of reasoning and memory. They see them gradually blunted by deterioration and see that they can hardly fulfil their function (Halpert, 1983. pp 421-424).

Where then, does that place me, as a Senior Lecturer and academic Course Leader? In the closing paragraphs of Appendix 12 there is an important note about my own acuity and mental abilities.

From those initial feelings, selfish though they may be, I started on a journey to discover as much as I could, through desk research, about the attitudes of the medical, nursing and care support staff towards the business of feeding of people living with dementia - if indeed feeding and the provision of nourishing food to vulnerable people could be viewed as a business. For that matter can "care" in general ever be considered as a business, to be torn away from the sharper edge of hospitals and shorter-term restorative care? Having seen such events unfold, affecting both family and friends, and supported by reports of complaints by nursing staff (Cooper, 2003), I was determined to help find a solution.

1.7: Search for a solution

I was compelled to explore the understanding of where care home catering firm's primary responsibilities lie. Four areas emerged and degrees of responsibility were ascribed to each. These areas are directly linked to RSQ 4:

1. *economic (to generate shareholder wealth/profit or minimise expenditure),*
2. *legal (to obey laws and comply with regulations),*
3. *ethical (to recognise that the firm is part of a particular vulnerable community, and thus has obligations to, and an impact on others), and,*
4. *discretionary (to engage in philanthropy).*

As with shareholder theory, economic responsibilities appear to be the most important responsibilities of any commercial firm. Where it differs however is in the rôle of the firm outside its shareholders, where the benefits to stakeholder and shareholder are virtually interlinked, in short what is good for one is good for the other. Furthermore, by taking this broader, multi-dimensional approach that takes stakeholders into account, firms are in a better position to achieve their full potential.

Again, there is a dearth of research on Foodservice Catering in Care Homes for people living with dementia and there is very limited literature on catering in care homes from the demand perspective. On the other hand, there is considerable literature on the demand side, especially so in regard to dietetics and nutrition. In particular, Milte et al. (2018), described food service practice in care homes, and Murphy (2022) commenting on improving nutrition and hydration in EMI care homes.

1.8: Care Home and Hospital Catering – General Media Interest

Only a small proportion of the published research has dealt specifically with Foodservice Catering within care homes, particularly those accommodating older people living with dementia (Killett et al., 2013), and particularly those in the For-Profit Sector. In England there has been a preponderance of research into the quality of care and food within NHS hospitals, including some aspects tangentially related to the caterer's focus on making a profit (Altan, 2009), and, for example the objective of dignity in dining among patients (Tadd et al. 2011), yet there has been surprisingly little rigorous research into Foodservice Catering in care homes for older people. As Davies et al., (2009) assert, a suspicion of outsiders on the part of care home staff has tended to render them hard for researchers to penetrate, particularly those in the for-profit sector. This links from my earlier assertion that my active voice and research position would enhance communication with the culinary and service staff. Harris and Benson (2006) found that research in such settings is made more difficult because potential participants are likely to be concerned that such studies might reveal information that reflects poorly upon them. I firmly believe that my active voice as a chef / caterer, allows me to be seen as someone who talks their language.

Yet the catalogue of accounts that have been reported in the media would seem to confirm the persistence of poor Foodservice Catering for older adults living with within care homes. See further discussion in Chapter 2, Literature Review and Research Scope.

Proven occurrences of poor Foodservice Catering at Aranmore Care Home in Manchester (1986), Nye Bevan Lodge in London (1987), Beech House in London (1999), The Maypole in Birmingham (2002), Laurel Bank Nursing Home in Yorkshire (2003), Parkfields in Somerset (2007), Hillcroft in Lancashire (2012), Merok Park in Banstead (2014), and The Old Village School in Bedfordshire (2015) for example, are augmented by recent recorded footage of abuse following covert filming (technology not readily available in the 1980's and 1990's) at Winterbourne View in Bristol (2011), Ash Court in Kentish Town (2011), Oban House in Croydon (2012), The Granary in Bristol (2012), The Old Deanery in Sussex (2012), Bethshan Nursing Home in Powys (2013), Orchid View in Essex (2013), Keldgate Manor in Yorkshire (2015) and an unnamed care home in south Devon (2015).

These occurrences, and the Serious Case Reviews that have followed some of those more recent, for example, Orchid View (West Sussex Adults Safeguarding Board 2014), provide immutable evidence of the abuse of older people, including physical violence, psychological torment, and sexual abuse, within these institutions that exist purportedly to primarily 'provide care'. All of the occurrences listed above involved abuse of older people by multiple staff members, with the exception of Winterbourne View that involved the abuse of both younger and older people with a learning disability, and the unnamed care home that involved a single perpetrator.

Furthermore, frequent reports in the media expose consumer dissatisfaction with care and catering services and standards, especially for elderly patients, not only in general hospitals but increasingly in nursing and long-term care homes (ageuk.org.uk). In view of these reports many care homes are reviewing their standards, causing senior managers to examine their strategies in relation to patient or customer satisfaction. What needs to be done?

1.9: Consumer confidence

Reference is repeatedly made in the media to dissatisfaction with the catering industry in general, and with hospital, and by extension, care home catering, in particular. Care home clients' (and their families') awareness of, and exposure to new and varied foods has raised client expectations in relation to dish quality and perceived value for money. My hunch is that this has created a demand for traditional standards to be raised and has placed an onus on catering management to examine its catering quality strategy in relation to client satisfaction. Loss of

customer confidence caused by a poor-quality food product and service has serious consequences for any catering enterprise, especially one with such a close relationship with clients.

My further hunch is that the care home catering or food service industry is today finding that it costs much more to correct poor meal provision and service, than to ensure a food service system that reliably assures that each client is satisfied first and every time. The trend towards contracting out non-core food service activities is widespread in the U.S.A. and has been growing in the UK and Europe, such that care home management and in-house caterers can no longer afford to ignore this development.

1.10: Contract out or In-House – the political conundrum.

At this point, several additional questions arose: Why is it that we know so little about the business of care home catering within academic journals? Are the care support and catering staff considered to be part of a unified team? Are they considered to be "professional" or are they merely an adjunct? Do the commercial catering providers operate in a different manner to the public sector providers? What are the accepted business processes in long term care home catering? Is there one particular business model or are there several? Is there a need for change? Do the service providers need to change? Do the for-profit catering companies, with slogans such as "*Dignity in Dining*" or "*Passionate about Food*" fail to acknowledge the truth that their motivation is commercial, NOT caring? Should the commercial caterers be responsible stewards rather than profit seeking carpetbaggers? Is the treating of care home catering as a business, a dereliction of '**duty of care'** towards the residents living with dementia? Also, it should be recognised that residents are not the clients of the caterers, the care homes are. These are also businesses.

It may be said, however, that caring is founded in love, which then raises the question "what is love". Is it wanting to give to the other freely, asking for nothing in return? Yet businesses are in business to make profit and profit is the surplus of revenue minus costs. Are the two concepts mutually incompatible when catering for people in care homes living with dementia? Perhaps, if cost-cutting does not endanger the caring mission.

Can this statement be plausibly made? Caterers understand food and its importance to health and well-being and make that understanding available to patients, families, and health care systems for high impact, low-cost, high-value care. Whether caterers will be willing and/or able to undertake adequate additional education and training in care catering, access evidence-based materials and research, practice the skills required to meet patient nourishment needs, direct

resources to help people improve negative social determinants of dementia, and be appropriately compensated for their efforts is unknown, and defines some of the core challenges ahead.

1.11: What is known – a brief explanation?

The initial literature review revealed that little is known about how catering services providers, catering staff or culinary / service staff within Long Term Care Home environments are viewed, or even valued. So, how is the provision of nourishment viewed within the care teams? It may be helpful to provide some background information and definitions on caterers, food, and nourishment.

1.12: Catering Definition

Catering can be defined as the provision of food, entertainment and service and a Caterer as one who provides that food, entertainment, or service. This broad definition, however, suggests there is much more than the three basic elements above. The provision of food does not totally define the catering product as surroundings, atmosphere, image, and consumer perceptions all contribute. Additionally, a consumer will generally interact with the producer whose own perceptions of the food should also be considered.

1.12. a Food Service Operations

There have been many definitions of food service operations in systems terms. Jones and Lockwood (1995, p. 17), identified three types of food service, which are still prevalent today.

1. *Integrated food-service systems: Both food production and food service are carried out as part of a single operation, as in the "traditional" restaurant concept.*
2. *Food manufacturing systems: Production of meals is separate from the service of those meals. Thus there is decoupling of service from production. The modern food-service industry often includes largescale production of meals served by other operators, as with in-flight and on-rail catering.*
3. *Food delivery systems: The operation involves little or no food production and focuses only on the service of continuously assembled or regenerated meals. Thus there is decoupling, and also production-lining.*

1.12. b Food Production Methods

Within the Food Service Operations methods identified above, most catering operations operate a number of traditional food production methods. These are shown in Tables 1, 2 and 3:

Table 1.1 Traditional Food Production Methods

Integrated Food Service System Cook – Serve	The most basic method where raw food products are prepared in advance (mise-en-place). Cooked as ordered and required and then served to the consumer. This is the most common method in traditional restaurants but rare in institutional catering.
Integrated Food Service System Cook – Hold – Serve	Quantities of raw materials are prepared in advance (mise-en-place), cooked to a calculated production time schedule, held at > 63°C (UK) – for a maximum of two hours, and served as required.

Each of the above methods are usually carried out In-House, by the organisation's catering team, be it large or small.

Table 1.2 Modern Food Production Methods

Integrated Food Service System or Food Manufacturing System or Food Delivery Systems Cook – Chill Rethermalise for service	The cook chill method allows for batch cooking of foods in large quantities; the finished product is then either blast chilled in a specialist machine or cooled by other mechanical means, for example in an ice bath, to below 5°C. The food is then stored under refrigeration, for a maximum time frame. When required, the food is then re-thermalised ready for service.
Integrated Food Service System or Food Manufacturing System or Food Delivery Systems Cook-Freeze Rethermalise for service	A similar process to the above except that the food is blast frozen, usually to a temperature of -18°C. Foods frozen in this way usually have a much longer shelf life. Rethermalisation usually takes longer and requires strict control measures.

Both the cook-chill-rethermalise and cook-freeze-rethermalise systems can be carried out in-house by the catering team. A significant drawback for these systems is the need for additional, and costly, chilled, or frozen storage space. There is often an associated need for specialist equipment. Recent developments in food production technology have introduced new production methods, some of which include the use of natural food additives such as hydrocolloids.

Table 1.3 Modernist Food Production Methods

Integrated Food Service System or Food Manufacturing System or Food Delivery Systems Cuisson Sous vide (Under Vacuum Cookery). Sometimes referred to as Low Temperature – Long Time (LTLT) cooking	Following the initial raw food preparation stage, the ingredients are portioned into plastic pouches or glass jars, either in bulk or individual portions. The pouches or jars are then hermetically sealed and placed in a special water bath, at pre-determined temperatures, for a specified time, which may be between one to eight hours depending on the product. In some cases this can extend up to 72 or more hours.
Food Manufacturing System and/or Food Delivery Systems **Steam-Plate Technology** and **Steamplicity** ™, based on the Marks and Spencer's "Steam Cuisine" retail meal products.	Raw products are prepared, and some will be pre or partially cooked, and then arranged on special plates. The food is then sealed in heat proof, pressure resistant, recyclable, containers. When cooked a valve control system assists the food to cook under steam pressure. The sealed plates are then chilled, labelled and prepared for distribution. Once on site, the plated meals are cold stored until required. At service time the individual plates are steam rethermalised in a microwave oven, to a set time and >75^{o}C.
Food Manufacturing System and/or Food Delivery Systems Electrolux, Peltier, Meal Distribution System (MDS)	The Peltier system allows gentle heating or cooling of meal components. A significant advantage is the ability to customise the plated meals for each individual consumer.

A number of drawbacks have been identified with the Steamplicity ™ system, mostly regarding the inability to provide deep fried foods such as Fish and Chips or crispy baked pastries. The pre-plated meals are inflexible in choice and cannot be modified by the consumer. There are, however, a number of reported advantages. The Caterer (2006), report on the Steamplicity ™ concept as being able to reduce annual energy bills by £50,000 and food wastage is significantly reduced. Another potential problem reported by The Caterer (2006) is the '*Point of no return*' decision to decommission the existing kitchen facilities and the ability to cook meals in house in any future decision.

Each of the above production methods attract their own concerns regarding microbiological hazards at each stage in the process. In most cases, especially in a well-managed kitchen environment, the microbiological hazards would be assessed as being low risk if the appropriate

Hazard Analysis Critical Control Point (HACCP) protocols are in place. Any care home or hospital catering production system should ensure there are robust HACCP systems in place.

For survival needs, all men, women, and children everywhere could eat the same food, to be measured only in nutrients e.g., calories, fats, carbohydrates, proteins, and vitamins. But no! People of different backgrounds eat very differently. People who have the same culture share the same food habits, that is, they share the same assemblages of food variables. But even within the same culture, food habits are not necessarily homogeneous. In fact as a rule they are not. People of different social classes or occupations eat differently. People on festive occasions, in mourning, or on daily routine eat differently. Different religious sects have different eating codes. Men and women at various stages of their lives, eat differently. Different individuals have different tastes. Some of these differences are ones of preferences, but others may be absolutely prescribed. These differences may be identified and explained, they are related to other facets of life, thereby identifying some of the future challenges for long term care home caterers.

1.12: The catering team

Continuing from the earlier definition of caterer it is important here to consider the rôle of the catering team. People, who serve food, carry plates, and clear leftovers are not from the point of view of social hierarchy, generally held in high regard in our culture. This low status contributes to the notion that control of service performance and management of such is both difficult and delicate. Even the staff who actually prepare the food for service, the chefs, and cooks, only get slightly better recognition. Yet those very professionals need a good understanding of nutrition and dietary needs.

It may be claimed that there are broadly two conceptual approaches to the service of the catering product. The first approach is the traditional one:

1. *This traditional view evokes images of 'personal' service and the performance of acts personally for another. It has connotations of obedience and subordination. Although society has changed to a more egalitarian approach, the rigid performance of rules and rituals have come to be seen as a standard of excellence in themselves, rather than the needs and wants of the customer.*
2. *The second approach can be summarised as the "provision of a service", i.e. a production line approach, that satisfies customers desires by concentrating on the tasks to be performed, rather than the performance of the task. This concept has led to the development and increased use of central production systems, distribution networks, and unskilled staff for food regeneration.*

1.13: Future needs and research title

What is needed in the context of care home catering is a practical approach for the beginning of a theoretical and methodological framework for the further investigation of food as a healing, rather than merely a chemical process, including a framework for improved business viability, sustainability, and profitability. Ultimately these thoughts have resulted in my amended research title:

Food, Aging, and Dementia: Exploring caterers' rôles in elderly care homes nourishment.

This thesis is an investigation of long-term care homes which provide care and services for people living with dementia, though many of the findings will be relevant for residential and nursing homes, and some of the recommendations would find equal acceptance in hospital catering situations. Many long-term care homes are now outsourcing their hospitality and catering requirements to specialist hospitality catering companies. The commercial companies are in the business of covering their costs and making a profit and the not-for-profit or community interest companies (caterers) must limit their losses and hopefully return a surplus. Also, there are many companies now promoting their ranges of ready-made, chilled and frozen, ready to regenerate (re-thermalise), convenience foods, some of which, whilst fulfilling both a gap in the market and the residents' need for sustenance, can hardly be considered the production of the finest culinary artists. How then can the quality of F&B Services be improved, whilst maintaining a healthy Profit and Loss (P&L) Sheet?

By F&B Services I mean both the F&B products (food – nourishment, nutrition, calories, and drink - hydration) and the softer elements of F&B Services, what may be described as the Hospitality element. Under current market and financial pressures there is little room for manoeuvre in costs and every caterer and food service provider is under constant threat from competitors eager to take away business (Ahmed et al., 2015). This is the problem which my research addresses.

1.15: Research Ethics

Throughout the initial research, literature review and data gathering I was constantly reminded of my ethical responsibilities towards the people I was interacting with, be that through questionnaires, face to face interviews or good old-fashioned observation. It was this last method which concerned me most. An integral and essential part of the research was to establish the precise methods of service within the care homes. This, inevitably, involved watching the catering and care staff cook, plate-up and serve to the residents of the care homes, most of whom were living

with dementia to some degree or other. The British Psychological Society Code of Human Research Ethics (2010) suggest:

> Studies based on observation in natural settings must respect the privacy and psychological wellbeing of the individuals studied. Unless those observed give their consent to being observed, observational research is only acceptable in public situations where those observed would expect to be observed by strangers. Additionally, particular account should be taken of local cultural values and of the possibility of intruding upon the privacy of individuals who, even while in a normally public space, may believe they are unobserved (p25).
>
> *n.b. The Code has been revised several times over the past years, the latest version has been authored by Oates,* et al*. (2021).*

How then to separate the observation of the catering and care staff from the residents? Would that be necessary or not? This ethical question was raised at a very early stage when first formulating the research question(s). To get better feedback regarding the efficacy, quality, and timeliness of the catering services within the care homes then surely the care home residents and their families should also be observed and questioned.

During this period, I was dissuaded from following that path and informed by the National Health Service (NHS) Ethics Committee (2015) that I would not be granted approval for such research (NHS Ethics, 2015). It was pointed out that there would be considerable difficulties in capacity, consent and even communication between the researcher and residents. This has not been an uncommon theme in NHS research.

It has been suggested (Brooks et al., 2017) that people living with dementia do have those difficulties mentioned above. They did, however, go on to describe how they were able to involve people living with dementia, as participants in their own research, though with some difficulty. They concluded that there is need for new research methods within the area and, perhaps, more tellingly, the need for "*ethics and consent processes that are appropriate for non-medical research which facilitate the involvement of people with dementia*".

Approval for this research was given by the Sheffield Hallam University Research Degree Sub-committee and prior to the research commencing. The SHUREC 1 Ethics Form can be seen in Appendix.3.

I now move forward along the research thread, to the desk research for the Literature Review and Research Scope.

Chapter 2 - Literature Review and Research Scope

"When we no longer have good cooking in the world, we will have no literature, nor high and sharp intelligence, nor friendly gathering, nor social harmony." Antonin Caréme, 1784 - 1833

2.1 Introduction

As was seen in Chapter 1, RSQ 1 required further exploration with regard to the literature on actual and optimal nourishment. This then leads to determining appropriate diets, current practices, and challenges.

The extant research was reviewed in relation to the business aspects of care home catering services. There is an increasing volume of research and media interest on how to offer improvements in nourishment for people in care homes living with dementia. There have been several interventions identified to support food and drink intake, but this is the first systematic research into understanding the factors for improving nourishment from the perspectives of those delivering catering services in care homes. The aim of this study is to develop an evidenced-based, research-informed model for understanding and delivering the complex nourishment (sometimes called gastronomy[1]) problems associated with eating and drinking for people with dementia. It has to date been a neglected life and social science research domain.

Exploring and critically evaluating findings from previous research is an essential aspect of all research projects enabling the work to be set in the context of what is known and what is not known. '*This necessitates a critical review of the literature in which existing research is discussed and evaluated, thereby contextualising and justifying the project*.' (Saunders and Rojon 2011, p156). Hewitt (2007) and Jesson et al. (2011) describe a literature review as being two main activities. First, searching and then critically evaluating research literature. Secondly, the process and findings should be written-up as a complete record. Consequently, this literature review will synthesise the key theories and results linked to care home catering for people living with dementia and the related fields, through evaluation and critical analysis of the works as they have evolved in the field.

[1] gastronomy is the reasoned comprehension of everything connected to the nourishment of man (Brillat-Savarin, 1825).

It is recognised that the hospitality business is about people (Chon et al. 2020). From the smallest enterprise to the largest corporation, organisations are created and designed by people to fulfil human objectives. This is nowhere more pertinent than in care home catering. Providing adequate nourishment to people living with dementia in long term care homes is a feature of catering and hospitality practice that appears to be an area neglected in hospitality business research. The body of knowledge directly related to catering within long term care homes is mostly confined to nutritional directives, the "what to deliver" rather than the "how to deliver" (Alzheimer's Society, 2013) and the seemingly strict and inflexible directives from nutritionists. The search is, who controls delivery?

Care home catering, that is the provision of Food and Beverages (F&B), for people living with dementia, or other needs, involves more than is usually dealt with in generic hospitality studies; it is far more intimate, aimed at recognising the humanity of these people, and their proper provisioning through the application of the principles of gastronomy, a definition for, and history of, which is to be found in 2.4.a.vi But there appears to be a conflict between the principles of business management and the recognition of the humanity of these people living with dementia.

At the start of the research there appeared to be a dearth of information dealing with the catering services responsible for the nourishment of people with dementia living in nursing homes. Also, there was a significant lack of published material on the impact and rôle of gastronomy on the well-being of these residents. As will be seen in this literature review, although some research, particularly those related to nutrition and dietetics, identified interventions designed to improve food and drink intake, there was little or no systematic research to understand the factors for improving nourishment and nutritional care from the perspectives either of all those delivering nourishment via foodservice in nursing homes - chefs, cooks, food service assistants - or of their clients.

In this chapter I explore the available literature dealing with the quality and effectiveness of food services (catering) provision in care homes caring for people living with dementia. This includes aspects of the work and input from the dietetic and nutritional communities, nursing and medical staff and resident care and well-being. A preliminary exploration of the literature was undertaken in an effort to identify and clarify the theoretical foundation for my research in evaluating the effects of catering quality on the well-being and quality of life of people living with dementia. This is a topic area in which I have been professionally engaged and personally interested. In this sense, searching for and evaluating what has been previously written on the topic of catering for people in care homes, and living with dementia was the basis for my initial engagement in the research project

(Marshall & Rossman, 2011). What I learned through this literature search was explored further, allowing the focus of the research to be progressively defined, refined and the depth of my reading and research increased.

2.2 Scope of enquiry

The literature review starts with an explanation of the Scope of Enquiry. This approach has been taken in order to ensure the reader has a clear understanding of what this thesis is about, right from the outset. A Definition of Terms used can be found in Appendix 1. Throughout the secondary research phase there has been much that, at first, confused me. The research delved into areas of the "natural sciences" that were unfamiliar. How then could I expect others to deal with the same confusion?

The ultimate aim of this research then is to provide the means whereby both in-house and commercial catering companies, their catering managers and production and service staff can deliver an innovative, multidisciplinary, and revolutionary approach to their systems delivery model, thereby creating a sustainable and profitable edge in the market.

Stemming from the above, will be the improvement to the wellbeing of people living with dementia in care homes through nourishing, varied and flavourful food, presented to the resident guests in the most hospitable, attractive, and efficient manner. It is believed that this research will lead to the establishment of new systems, nourishment and best practice guidelines for commercial care home catering managers and catering staff.

The first goal of the literature search is to identify issues, patterns and themes which would help to sum up some of the existing research in the area (Watson & Green, 2006). Secondly, the conceptual content of the research subject was identified and developed as a basis for further theory development.

In preparation of the groundwork for this literature review some key words, phrases and key terms were identified: Alzheimer's Disease; care home catering innovation; care home hospitality; catering innovation; catering systems; culinary innovation; chefs; chefs and nutrition; dementia; dementia feeding; food evaluation; food choices; hospitality; hospitality in hospitals; living with dementia; nursing; nutrition; nourishment; resident directed services sensory evaluation; servicescape; service quality; service delivery.

In keeping with the above terms: BMA Journals, COPAC, EBSCOhost; Emerald Insight; ERIC (Proquest); Google Scholar; Health Source; Hospitality and Tourism Complete; Hospitality and

Tourism Index; JISC Historic Books; JSTOR; Key Note; MEDLINE; Mintel Academic; Passport and Pubmed were used to identify related articles, journals, reports, and web pages (Petticrew and Roberts, 2006). The justification for this method was the need to examine inter-organisational issues with the result that papers on nursing were also included in the review with the review exploring the relationships in the literature between long term care homes, people living with dementia, hospitality services, catering systems and innovation.

The scope of this desk research was to seek out the academic, theoretical, and even practical references to people -- the residents living with dementia in long term care homes, and how caterers could influence the uptake of nourishment for those residents whilst maintaining and improving their business viability.

2.3 Overview of Ageing and Dementia

This is a wide-ranging subject and I have included links to literature reporting on similar issues in hospitals, especially those with a significant intake of people living with dementia. Within catering systems, I have also included references to the latest, innovative, systems and equipment available. This is not only to ensure depth of research but also to encourage the creativity and diversity required, to encompass a breadth of research in this complex, multi-method research area (Poth, 2018).

The review is divided into six sections (Table 2.1), exploring each theme in order. In this I consider the extant research in identifying and explaining the condition known as dementia in some depth. This is to aid the lay reader in understanding the different types of dementia and setting the scene for the rest of this work: The review then moves on to explore the current research from the medical and nursing professions regarding Resident (Patient) Centred Care and the use of food as medicine: The next stage considers the efforts and outcomes of interventions by the dietitians and nutritionists: Finally, I attempt an in-depth look at catering within long term care homes and investigate how caterers are currently delivering the food and beverage (F&B) service including a review of the literature on hospitality and catering management within hospitals and the relationships which could be applied to long term care home catering.

Table 2.1. Overview of the Literature Themes.

Dementia in Context
The Incidence of Dementia
The political economics of ageing
The Healthcare and Care Home Market
Post Pandemic care home market.
Resident Directed Foodservice
Are care homes hospitable? Should they be hospitable?
Are Catering Staff and Chefs regarded as part of the "Professional Team"?
Education and Training
Dementia and Gastronomy
Food in the Medical Context
Medicine and Food
Dietetics and Nutrition
Dysphagia and Texture Modification
Dementia and the Food Consumption Environment
Facilities and the physical care home environment
What is a meal environment?
The social and ambient environment
Preparation, Serving and Service Elements.
Using architectural service design tools to understand care home environments
Catering Systems
Long term care homes – catering definition
Innovation in long term care home catering

Source: Author.

2.4 Dementia in Context

Old age is the home of forgetfulness (Bacon, 1290).

The root of dementia is from the Latin: “de” which means without and “ment” which means mind, historically described as being “out of one’s mind”. It is a condition that has been known for several centuries and may even be as old as mankind and for many years was referred to as “*a madness”* (Boller & Forbes, 1998). Most of the popularly known and published history of dementia, however, dates back to the early 20th Century with the description by Alois Alzheimer of the first recorded case of Alzheimer's Disease in 1906 (Hippius & Neundörfer, 2003). However, recorded history of dementia dates back much further to the Greco-Romano period in the 7th Century BC. Within that period the fundamental concept of senility was discussed by both Pythagoras and Hippocrates (Berchtold and Cotman, 1998). It was Pythagoras who defined the *Senium* as the life after the age of 63 in which there is a decline in mental ability and body. Hippocrates proposed the concept of four cardinal bodily fluids, or *humours*: one of which was the notion that with age the brain would become "dry and old", leading to melancholy (*melas* - black; *chole*, bile) and a decline in mental ability. This concept lasted well into the Middle Ages.

Boller and Forbes (1998) also commented on the history of dementia going back into antiquity and the Egyptian medics of the time recognising that "*age could be accompanied by a major memory disorder*".

Dementia is a syndrome, progressive in nature and, as yet, has no known treatment for reversing the condition. For those people who do live with dementia they have to contend with the diminished ability to carry out their daily activities of living through the gradual loss of cognitive function (Ofori & Frommann, 2013).

The word dementia is an all-encompassing umbrella term which describes a set of symptoms that may include memory loss and difficulties with thinking, problem-solving or language (Bayles et al., 2018), though of itself, dementia is not a disease. Dementia is caused by neurodegeneration (Prince et al., 2013) and mostly irreversible neurological disorders firmly linked with aging (Savva et al., 2009). The most common form is Alzheimer’s disease with vascular dementia and Lewy-Body dementia frequently seen – all forms are progressive in nature and lead to functional losses (Amella et al., 2007). The hallmark symptoms and typical course of Alzheimer's disease can be described as "Aging in Reverse" with "memory deficits" being the hallmark symptom from onset, including episodic memory deficits and deficits with working memory and attention anomia (Mason-Baughman, 2012). The person may also have difficulty understanding new and complex concepts.

Unfortunately, there are several limitations to the actual word dementia and its meaning. As discussed by van den Noort and Bosch (2010) in The Lancet, there is no fully agreed or operationalised definition recognising the causes of diagnosed cognitive impairment on a range of causes that does not indicate the social stigma of dementia, "*to be demented evokes images of extreme disability that go beyond mere cognitive impairment, and has serious social, legal, and economic consequences for those so-labelled who must live intimately with the meanings of their illness"* (van den Noort & Bosch, 2010, p. 1538).

As our understanding of dementia has advanced in recent years, so too has our understanding of how to improve the quality of life and well-being of people with dementia in care homes (Cantley and Wilson, 2002). McFadden & McFadden (2011) refer to the unprecedented numbers of the ageing "baby boomer" generation who are getting the dreaded dementia diagnosis. Their viewpoint, however, has not been negative and they suggest that the fear and anxiety should be replaced with courage to lead a more fulfilling life.

One of the key aspects of dementia care, as noted by Mason-Baughman (2012) also highlights other concerns regarding dementia, and in particular Alzheimer's disease, including an inability to feed self, disruptive mealtime behaviours, food refusal and eating inappropriate objects. In the latter stages of dementia there may also be a need for texture modified foods to help those residents with dysphagia. The expected lifespan of those people living with Alzheimer's is generally considered to be eight to ten years after first diagnosis.

2.5 The incidence of Dementia

The incidence of dementia, however, has become burdensome on societies worldwide. Maximum and average life expectancies in the developed world are continually rising and are now higher than ever (Vernooij-Dassen et al., 2011). We are fortunate in the United Kingdom (UK) that we do not have the tendency to hide away those people living with the condition, as happens in so many other countries, in particular those around the Eastern Mediterranean (Sara et al., 2018) and the far east (Xu, 2013). There are, however, many instances where people living with dementia may be "warehoused" in institutions where they lose control of their dignity and their personal environment. There are also reported incidences of people living with dementia in protected environments where certain functional limitations may be under or overestimated due to low expectations from the elderly (Inzelberg et al. 2013).

There are many people who live with dementia and can live fulfilling lives in their own home (Miranda-Castillo et al., 2010). There are, however, many people living with dementia who must

seek out the care and support provided for people living with dementia in specialist care homes. For those living in care, their well-being is comparatively poor set against their community living peers with loss of personal control and little social interaction being commonplace (Watkins et al., 2019). Not only is the population of senior citizens growing, the incidence of dementia within that population is also growing.

Alzheimer's Disease International's [ADI] "World Alzheimer Report 2015" *The global impact of dementia: An analysis of prevalence, incidence, cost, and trends* (ADI, 2015), is the latest worldwide update on prior reviews and indicates the number of people living with dementia worldwide would increase to 131.5 million by 2050. The report also predicted the worldwide costs of the disease would exceed $3 trillion by 2018.

The results of the Office for National Statistics (ONS) findings indicate that there will be a continuing rise in care home needs for the foreseeable future. Dementia has also become a social and health care priority for high income countries such as the UK, USA, France, Korea, and Norway, all developing specific priorities, strategies, and formulating plans (Prince et al., 2013).

It is noted from the literature that the incidence of dementia related dependence and disability tends to escalate rapidly with advanced years. Laing (2017) suggests 0.6% of the 65- to 74-year-old population were living in hospitals or care homes at the beginning of 2017. This rises to 14.8% by the age of 85.

2.6 Feeding and Eating Problems Associated with Dementia

According to the Alzheimer's Society (2014) eighty per cent of care home residents have dementia. And one in three care home residents are admitted already suffering from malnutrition (BAPEN, 2012). Lui et al. (2014) in a systematic review noted that the quality of current research of the effect of mealtime interventions in dementia was poor. This also extends to identifying the causes of malnutrition prior to admission to a care home or hospital. The exact number of people with dementia in the UK living at home in the community is not known. Alzheimer's UK estimate there are currently around 850,000 people living with dementia in the UK, with around a third, or 288,000, living in care homes. That leaves around 562,000 living at home.

Taste and texture perception is reduced with older age, and some research indicates that environmental factors also influence the amount of food which dementia patients are able to eat (Dunne et al., 2004). That research, however, did not suggest any changes to food and hydration delivery other than changing plate and cup colours.

Watson and Green (2006) identified several problems with eating associated with dementia. Of significant concern was the indifference to eating displayed by people living with dementia and the resultant loss of weight followed by terminal decline. Keller (2006) noted chewing and swallowing difficulties, a decrease in motor-dexterity and loss of appetite as being among the common barriers to eating well. Cipriani et al., (2016) concur and identify swallowing difficulties which depend on the complex sensory-motor mechanism regulated by the central nervous system, as being central to weight loss and declining health.

There has also been some discussion on whether or not to legislate or regulate for the standards of food provision in long term care homes for the elderly and people living with dementia. Sheppard (2010) questioned whether the Care Quality Commission (CQC) Review: ***Meeting the healthcare needs of people living in care homes 2009/2010*** (CQC, 2012) would call for the introduction of legislation, regulation, or stronger guidance – or a combination of all three. This did not happen.

Shortly after that review was completed the Department of Health rearranged the responsibilities of the CQC and a further review, regarding thematic inspections on dignity and nutrition, was commissioned for 2012. Although the reports fell short of suggesting the introduction of legislation or regulation, the CQC report, ***Time to listen: In care homes – Dignity and nutrition inspection programme 2012*** – National overview, found several common failings in the care homes inspected. Several of these concerns were related to the feeding of residents:

Staff and managers in some homes:

- *did not always give people a choice of food or support them to make a choice.*
- *failed to identify or provide the support that people who were at risk of malnutrition needed.*
- *did not ensure that there were enough staff available to support people who needed help to eat and drink.*
- *14% of homes failed to have enough staff to meet people's needs.*

Homes caring for people with dementia, including those with a dedicated dementia unit, were less likely to be meeting the standards of F&B provision relating to respect and safeguarding.

A significant step forward was made by an update to the ***Health and Social Care Act 2008 (Regulated Activities) Regulations 2014***, with the introduction of **Regulation 14** The intention of this regulation was to ensure that adequate hydration and nutrition was available to people making use of services provided by care homes and other health and social care facilities and to ensure there was sufficient to maintain good health.

The CQC (2014) state:

> To meet this regulation, where it is part of their rôle, providers must make sure that people have enough to eat and drink to meet their nutrition and hydration needs and receive the support they need to do so."
>
> People must have their nutritional needs assessed and food must be provided to meet those needs. This includes where people are prescribed nutritional supplements and/or parenteral nutrition. People's preferences, religious and cultural backgrounds must be taken into account when providing food and drink.
>
> CQC can prosecute for a breach of this regulation or a breach of part of the regulation if a failure to meet the regulation results in avoidable harm to a person using the service or a person using the service is exposed to significant risk of harm. In these instances, CQC can move directly to prosecution without first serving a warning notice. Additionally, CQC may also take any other regulatory action.

What, then, is to be made of all this? Are catering services, hospitality management and the culinary arts – cooking, serving, and feeding – too commonplace or quotidian to be studied seriously or to be able to contribute to the well-being of people living with dementia?

A holistic approach is the basis using expert knowledge from hospitality, nourishment (gastronomy), and sensory science disciplines to allow the development of the catering professional leadership, competence and forward-thinking which is fulfilling its social and ethical agenda, more of which later.

2.7 The Political Economics of Ageing

We have already seen the Alzheimer's Disease International's 2015 report and the potential cost to the worldwide economy as being in excess of US$3 trillion by 2018. There are significant costs to the UK associated with dementia care. Dementia is proving to be one of the fastest growing illnesses and estimated to cost the country in excess of £26 Billion per year, £17.4 Billion of that picked up by the people living with dementia and their families and a further £8.8 Billion directly paid for by the Exchequer, with £0.1 Billion taken up by other costs. These figures are the latest available in 2021, though a further report was due for publication later that year. Despite those costs only £74 Million had been spent on dementia research in 2013 – but nothing could be found on expenditure on research into foodservice provision in long term care homes (Prince et al., 2014). If catering businesses can improve the nourishment of people living with dementia in long term care

homes it is hypothesised there will be savings to the exchequer, the long-term care homes, and increased profitability, through better reputation, for the catering service providers.

With the growing understanding of dementia and with more people accessing the support and treatment they need there comes the need for more facilities for people living with dementia yet care for those people living with dementia is highly resource demanding. These needs, however, do not always fall in line with what the governments of the day are prepared to fund. Laing (2017) highlighted some potential tensions between what they see as the demographically driven demand curve and the funders of care trying to contain that demand at local authority level. It is suggested the local authorities (LA's) are usually the dominant, if not monopoly, customers at this level. The private fee-paying market will be discussed in greater detail in the next section.

The most comprehensive and up to date market reports available on the UK care home sector have been provided by Laing (2017) and Laing (2021), though not all commentators fully concur with their findings (Causer 2017). LA's have become rather adept at avoiding a major "Capacity Crisis" in the care home sector, to date, by taking steps to contain the number of placements they allow by tightening the eligibility criteria for the receipt of financial support (Laing, 2017). How this will pan out in the next few years is currently open to debate.

It must also be recognised that the current Coronavirus pandemic has had a significant impact on the finances of both the care home industry and LA's responsible for funding. The Association of Directors of Adult Social Care (ADASS) have estimated that social care providers face more than £6Bn in extra COVID-19 costs (ADASS, June. 2020). That issue is not, however, discussed further in this research.

Capacity shortages are now being reported in some areas, especially those geographic areas traditionally heavily reliant on state-paid funding, predominantly in the northern areas of the UK. A lack of investment in the state funded care home sector is a result of the above with many privately owned care homes and care home management companies withdrawing from the sector (Laing, 2017).

Following on from the brief overview of the UK care home market above, and before investigating the sector in more detail, it is worth considering the underlying political theories of ageing. Estes (2001) discusses the political economy of ageing as a macro-level theory in which the political and socio-economic factors determine the experiences encountered. These experiences include those related to the social environment; the local and national economy; the structures of age; the person's social class; gender and race. By integrating the differing applications of

gerontology; economics; sociology and political science she claims we have developed a much more robust understanding of health and ageing. She draws the theories from the Marxist viewpoints countering capitalism and in the way that "old age" had been socially constructed in order to meet the needs of a modern economy, though "old age" has not been defined. In the UK, for instance, we no longer have a compulsory, default, retirement age and there are many people who continue to work well beyond the generally accepted retirement ages of 64 for women and of 65 for men. The current UK government have introduced plans to increase the state pension age for both men and women to 68 by 2037.

How then does this theory, the political economy of ageing, influence the availability of long-term care homes and the services provided therein? In the UK central government has traditionally made payments to the LAs to top up their diminishing revenues from local taxation. These local authority Councils are responsible for education, housing, **social care for the elderly** and disabled, local roads, waste collection and other services (Bounds, 2017). In 2015/16, councils received £9.9bn in Revenue Support Grant (RSG). By 2019/20, they received the much-reduced RSG of £2.2bn.

Bounds (2017) also reports that between 2015 and 2020, the RSG will have shrunk seventy-seven pence in the pound. Almost half of all councils — 168 — will no longer receive any core central government funding in the 2019/20 budgetary year, according to the Local Government Association (LGA). The new National Living Wage, a rise from £8.72 to £8.91 per hour (Gov.uk. 2021), has already had a severe impact on care home costs and the increases were already forecast to cost the LAs £360 million pounds on social care in 2018 but how much of that will be spent in long term care homes for the elderly is unclear. Responding to the Laing (2017) report which highlighted the financial cutbacks and increased costs, Margaret Willcox, former President of ADASS, said:

> These findings reflect universal concerns about the escalating social care crisis, resulting not least in councils struggling to meet rising costs. Councils are doing all they can to protect adult social care but reductions in funding and the cost of the National Living Wage, while welcome, means many providers are finding it hard to recruit staff, especially in home care in those areas of high employment. Despite 82 per cent of councils increasing fees paid to providers last year, our own survey reveals around two-thirds of councils have had residential and nursing home closures, and more than half have had care providers hand back contracts. It is a cause for celebration that more people are living longer but they are doing so with increasingly complex needs. Without significant, sustainable, and long-term

> funding, the funding crisis means thousands of older and disabled people, their families and carers will face an increasing struggle to get the care and support they need, National Health Service (NHS) delays will continue to increase, more care homes will close and there will be more gaps and failures in the provider market. (ADASS, Oct. 2017).

These cutbacks will have severe consequences on local care home funding unless innovative solutions can be found. For most people who need residential care and have a lower social-economic status there is little alternative but to use the publicly funded care home estate. There are negative attitudes in society to elderly people when they withdraw from employment and seek help from the public purse (Xu, 2013).

What then of the expected consequences of some significant demographic changes? The allocation and distribution of ever scarce resources in the public estate is overseen by stretched LAs. The care home owners, unless operated in-house or by charities, are reluctant to invest. There may, however, be a glimmer of light at the end of the financial tunnel: The former Health Secretary, Jeremy Hunt, pledged to end the "unfairness" of cancer patients getting expensive treatment free on the NHS whilst people living with dementia were being "*cleaned out*" of their savings to pay for their care (Walters, 2018). He also promised to reform the care system which left elderly people "*passed from pillar to post*" and leaves them feeling like "*just another task on someone else's to do list*" (Rudgard and Swinford, 2018). That pledge is, as yet, unfulfilled.

Cost of Illness (CoI) studies identify distribution of costs among differing payers for care and play an important part in understanding the political economy of care. The European Collaboration on Dementia (EuroCoDe) is part of the European Union's (EU) efforts to bring together a European network involving all professions and interested players in the area of dementia. The purpose is to develop an ongoing dialogue and consensual indicators (alzheimer-europe.org, 2014). Specifically, the EuroCoDe project focussed on 6 priority areas:

1. Consensual Prevalence rates.
2. Guidelines on diagnosis and treatment.
3. Guidelines on non-pharmacological interventions.
4. Risk factors and risk reduction and prevention strategies.
5. Socio-economic cost of Alzheimer's disease, and.
6. Inventory of social support systems

Under the consensual prevalence rates, existing epidemiological studies were analysed to determine the merits and shortcomings in order to determine a "Gold Standard"; The guidelines on diagnosis and treatment project identified already existing guidelines to establish commonalities and differences; Based on the findings of the study into the usefulness of various interventions, the project elaborated consensual guidelines and quality criteria for non-pharmacological interventions; Particular attention was given in this part of the project to developing recommendations for national Alzheimer associations to use within campaigns promoting a “healthy brain lifestyle; This part of the project examined the economic differences between the various Member States of the European Union, resulting "*in the publication of a report on the socio-economic impact of dementia in Europe*"; and finally, project partners surveyed the existing levels of support within the Member States of the EU for people living with dementia and their carers (alzheimer-europe.org, 2014). Fortunately, many UK based professionals continue to take an active part in Alzheimer Europe proceedings, contributing to research and conferences.

2.8 Big discussions and big decisions: Prime Minister’s Challenge on Dementia 2020.

I have shown above the many big discussions taking place with many big decisions needed. So far, many of those decisions have yet to be made. However, ***The Prime Minister’s Challenge on Dementia 2020*** (Department of Health, 2015) set out more than fifty commitments with the stated aim of improving dementia awareness, care, and research. Within that document the word **nutrition** was mentioned only once. The ***Implementation Plan for The Challenge*** (Department of Health, 2016) also mentioned nutrition only once. Neither publication mentioned the word **food**. ***The Dementia 2020 Challenge: 2018 Review Phase 1*** (Department of Health and Social Care, 2019. P.11) reported

> Respondents emphasised the need for a particular focus on hospital care, where people with dementia are still experiencing care that they felt fell short of the 2020 ambitions, as identified in the National Audit of Dementia 2017 by the Royal College of Psychiatrists, for example **not meeting the nutritional needs of people with dementia,** and not assessing the patient for delirium”.

The Review Phase 1, commented on the uptake of Tier 1 Dementia Awareness training as being 85% of homecare and residential staff having been trained. This was recognised as a key achievement. Neither the Tier 1 or Tier 2 Dementia training courses include references to diet, food, or nutrition.

The Department of Health "***Dementia Training Standards Framework***" (Skills for Health, et al*.,* 2018. P. 36), identify Key Learning Outcomes of Tier 2 training to include:

> d) "know how to take action in response to dehydration and hunger (including unplanned weight-loss), how to improve the provision of good nutrition and hydration through monitoring food and drink intake using appropriate tools and understand the factors that influence mealtimes to provide a positive mealtime experience."
>
> And:
>
> e) "know where to find evidence-based information and resources and when to refer for more specialist advice from a registered dietitian/registered nutritionist on nutrition or other health care professional e.g., speech and language therapist for textured modified foods".

At no point in those documents is reference made to the training of staff responsible for preparing, cooking, and serving the appropriate nutrition and hydration – the chefs, cooks, and food service staff.

2.9 The Healthcare and Care Home Market

As with Hospitals, Long Term Care Homes are socio-economic institutions created to satisfy the care needs of the residents. They range from simple, home from home family run operations to complex organisations. As with hotels, guest houses, hostels, prisons, and hospitals they hold an important place in the service sector economy (Sevin, 2018).

The organised care for older people in the community within the UK is believed to have started over four hundred years ago. Elton (1953) traces the English "Poor Law" legislation to 1536 at a time when many problems were caused by vagrants and beggars and the "impotent poor". Over previous centuries there had been minor efforts made by the Church to help the deserving poor, those who had fallen into misfortune through no fault of their own. From the reign of Richard II up to 1531 vagrants had been punished whilst the needs of the genuinely poor had been little more than discussed in pious circles. At that point a new Act was introduced and although the new Act had been an advancement it was mostly ineffective (Elton, 1953). The real changes came with the next Act of 1537 during the reign of Henry VIII when the three important principles, among others, were identified:

- *work must be provided for those that cannot find it.*
- *begging is wrong and the helpless must be a charge on the community.*
- *the Parish is to be the organisation responsible for the task, and the justices of the peace must supervise it (Elton, 1953. p56).*

Figure 2.1: Gentleman giving alms to a beggar: Illustration for "Of Pride" in John Day's A christall glasse of christian reformation, London, 1569. Anon.

This was followed several years later with revisions and experiments though no great progress had been made until the great Elizabethan **Act for the Relief of the Poor 1597**. This was followed by **The Poor Relief Act 1601**. Boyer (1990), commenting on the various changes to the poor laws since 1597 and in particular between 1750 to 1850, noted the fluctuating level of relief available to the population and shelter in the major cities and residential relief.

There were several changes to the laws, including the introduction of "Houses of Correction" predecessor to the "Workhouses". During these intervening years those people described as being "*out of their mind*" would often be incarcerated in those institutions until death. It was not until the **Poor Law Amendment Act of 1834**, which further developed the accepted principles and methods of application, that any significant changes were made.

However, it was not until the early 1900's that institutional care was introduced for the *old and infirm*, including those living with various forms of dementia, commonly referred to as the Elderly and Mentally Infirm (EMI). The social side of long-term care was further developed under the auspices of the **National Assistance Act 1948** on the assumption that it was possible to make a distinction between "*the sick or infirm*", who would receive help from the National Health Service

(NHS), brought about by the **National Health Service Act (1946)** and the "*frail and old*" people with social needs. This unhelpful distinction created an enforced divide which ensured that "*the sick or infirm"* received all care, free of charge whilst those considered "*the frail and old*" would have to pay (Help the Aged. 2007.). Those distinctions influenced the development of long-term care home provision during the 1950's and 1960's and the subsequent differences between Nursing Homes and Residential Homes. Bottery (2019), confirms the distinction still exists and "*the frail and old*" mostly continue with means tested self-funding.

Even during the 1940's, however, there was still an embedded culture of focussing on the washing, dressing, feeding and elimination. In Gubrium's (1975) ethnographic study of life in a geriatric nursing home he commented on how the different "*social worlds*" working and living in three distinct "*places*" within one care home would strive to keep their social worlds apart. The senior staff were more concerned about the concept of total patient care, whilst the junior and "*floor*" staff would concentrate their efforts on "*Bed and Body*" work. Finally, the residents would make every effort to make life inside the institution as much like life outside the institution as possible, doing their best to avoid the final call.

It was only in the 1980's and 1990's that the Department of Social Security (replaced by Department for Work and Pensions in 2001) made changes to funding which in turn encouraged new investment in care home provision which saw the move of a majority of long-term care away from the public sector and into the independent sector, whether for profit (the private sector) or not-for-profit (the voluntary sector). **The Registered Homes Act 1984** heralded the development of regulations. This saw some homes seeking registration as both residential and nursing homes (Help the Aged, 2007).

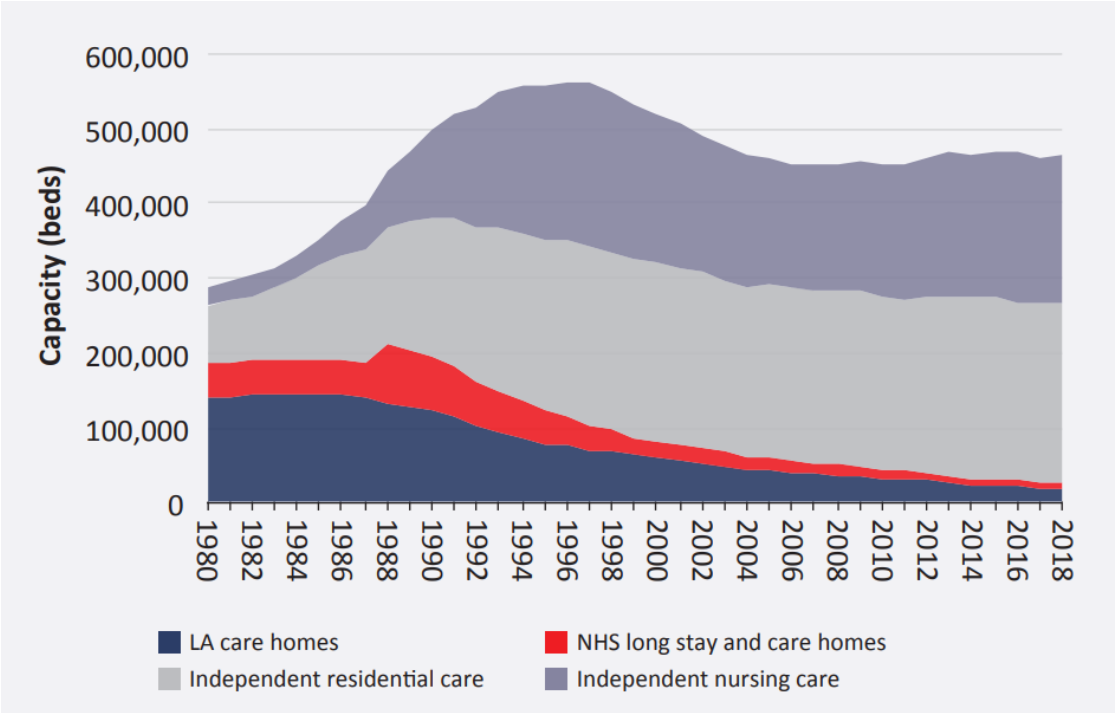
This was followed by the **NHS and Community Care Act 1990** in which the multi-disciplinary teams working within the NHS, who had traditionally provided vital support to the elderly and mentally infirm was now withdrawn as a direct resource, including assistance from speech and language therapists, geriatricians, and physiotherapists. These resources were not costed into long term care provision with quite significant effects. In terms of the political economy of ageing it has become clear that there is evidence of ageism from the various governments following the fragmented long term care provision private, statutory, and voluntary sectors. **The Care Standards Act 2000** replaced "Nursing Homes" and Residential Homes" replaced by the term "Care Homes" including those institutions which provide accommodation coupled with personal or nursing care (Help the Aged, 2007).

Following all those changes over the past twenty to thirty years the Healthcare and Care Home Market in the UK is now a multi-billion-pound industry with what seems to be constantly fluctuating, though increasing, demand and a shortfall in supply (Laing, 2017). Add to that the decreases in funding from the public sector and many believe it is fair to say that the sector is in crisis (Causer, 2017; Kotecha, 2020), perhaps even more so when it comes down to the efficient feeding of the residents with spiralling food costs and diminished budgets. Even so, the actual value of the commercial UK care home sector, in September 2020, was estimated to be £16.6 billion (Laing, 2021). The next section discusses the care home market post COVID-19.

Whether the care home market for older people will grow or not is subject to many influencing factors. There have been some advances in technology and treatments of dementia which may delay the entry to a care home (Community Care Home News, 2011) but the National Institute for Health and Clinical Excellence (NICE) assert the evidence is still too weak and call for further research. Traynor and Rademakers' (2017) report on the significant advances in the understanding of dementia but still conclude that there is much more to research and understand. They also propose that much of the reported decline in the occurrence of dementia may be linked to improved cardiac health and general lifestyles. Hankey (2018) continues the theme reporting on population based epidemiological data being used in cohort studies, none of which have produced any strong evidence of improvement but does point the way to future advances.

Unlike other industries in the UK the care home industry is fragmented (Laing, 2017). The care home market is highly localised, typically serving a population within a radius of 5 to 10 miles (Laing, 2017). As seen above the area is under intense resource pressure and those resource issues will likely continue. What this all suggests is that the market for care homes is likely to continue to grow and therefore the issues identified in this Literature Revue are likely to be relevant in the foreseeable future. It is estimated that 94% of all care home beds are owned and managed by private companies (Kotecha, 2020). This is not because LAs are unwilling to build care homes but because central government have denied the LAs the permission to borrow to invest in new care homes (Kotecha, 2020).

Figure 2.2: UK Capacity (beds) for older people (65+) in a residential setting by provider and care type. Source: Laing. Care Homes for Older People UK Market Report, 29th Ed. 2018



2.10 Post Pandemic Care Home Market

It is prudent to comment on the care home market during and post, COVID-19. Manthorpe and Iliffe (2021) suggest the proportion of the population with medium to high EMI care needs is increasing, placing greater strain on the social care sector, especially so as there still remains the separation from NHS funding. It was, however, due to the pandemic that data relating to care homes capacities and finances was collected on a weekly basis and then distributed to England's regulators and the Care Quality Commission.

Their further research suggests an additional 71,000 care home places will be needed by 2025, only a few years away. Whether those places will be provided by the private or public sector remains to be seen. Laing (2021) suggests it is too early to predict what might happen in the market once government support is withdrawn. However, he does suggest the key demand drivers – aging population – remain and there are some well managed businesses and opportunities to attract investors.

Allan et al., (2021) report on the significant differences in prices paid for care, with self-funding prices an average of 43% higher than LAs were willing to pay. The significant market power of the LAs may have a detrimental effect in reducing the number of privately owned care homes opening in the future. Of greater concern may be the clamp down on F&B expenditure and wages.

Covid has highlighted to the public the problems within the care sector and that those problems are not going away. Furthermore, the problem appears to be a lack of political consensus on how to solve the problems.

2.11 Are care homes hospitable? Should they be hospitable?

When hospitality becomes an art, it loses its very soul. Max Beerbohm.

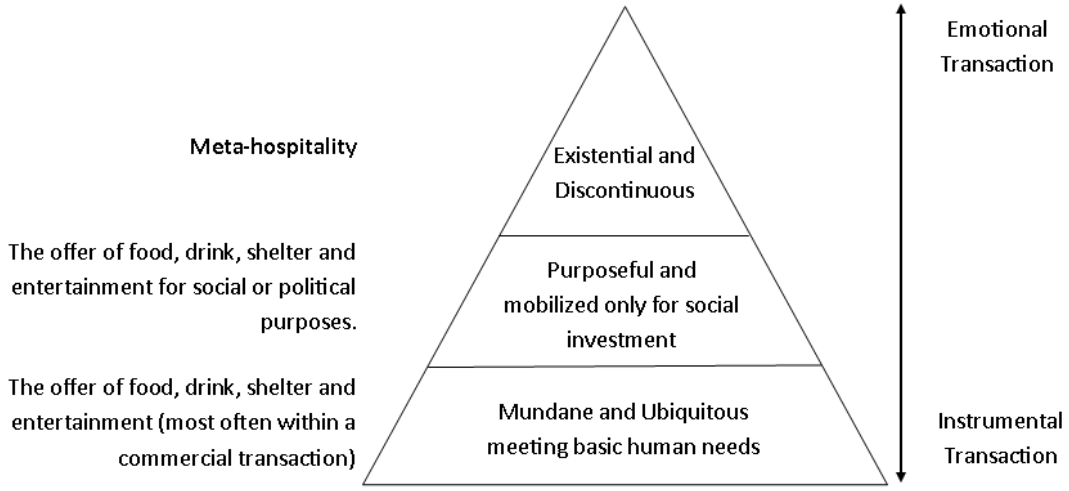
I have used the section title above to seek out debate in the literature and start with a historic perspective. "***To entertain a guest is to make yourself responsible for his happiness so long as he is beneath your roof"***. Brillat-Savarin (1825). Brillat-Savarin does not distinguish the difference between commercial or social hospitality as it is likely the term was not in common use at his time. Nonetheless, this is an important question to answer, considering the significant impact the understanding and application of which, might have on future F&B delivery within care home settings.

Just what is "hospitality"? Academics, anthropologists, historians, philosophers and many a barfly or bartender have asked this question for centuries. And what are the differences between social and commercial hospitality; indeed, is there a difference? We then have the relatively recent phenomenon that the question asked is, what is hospitality management, with Brotherton (1999); Hemmington & Gibbons (2017); Lashley et al. (2007), and Lugosi (2003 & 2008) all making their own contributions?

In trying to answer those questions many other academic commentators have attempted to define hospitality and the term has been described as both commercial and social activities (Brotherton 1999; Brotherton & Wood 2000, Lashley 2000). Brotherton (1999) contends that different researchers use the term hospitality indiscriminately and that no clear consensus had been reached, since first being questioned in the 1980's, on whether hospitality should be viewed as a product, process, or experience, or perhaps all three. Expanding on the theory further, Brotherton (1999. p. 168) suggested hospitality should be defined as: "*A contemporaneous human exchange, **which is voluntarily entered into**, and designed to enhance the mutual well-being of the parties concerned through the provision of accommodation, and/or food, and/or drink*" (**emphasis added**). He also warns of the danger of considering *hospitality* as being the same as *hospitable.* A question arising from the above would be, are residents of care homes **voluntarily** entering into a *contemporaneous human exchange*? Would they not usually be much happier back in their own homes, given the medical opportunity?

By contrast, Lugosi (2008) identifies quite clearly the differing forms of hospitality, both social and commercial and introduces the concept of Meta-Hospitality as a functional set of activities. Commercial hospitality was focussed on the narrow set of transactions involving food, drink and accommodation and he proposed that "entertainment" also plays a part in the hospitality offer, both commercial and social, leading to his concept of Meta-hospitality illustrated in Figure 2.3.

Figure 2.3: Forms and Manifestations of Hospitality: from Lugosi (2008)



The social side of hospitality has been described as the provision of food, drink, and shelter as a part of the host's cultural and social obligations (Derrida, 2000). Lashley (2015) proposes social hospitality as being the opposite of commercial hospitality, where the hospitality is offered for personal gain, and sits at the other extreme where the hospitality is given purely for the altruistic pleasure of bestowing hospitality on others.

The commercial hospitality industry is significantly wider and deeper than many other industries, taking in cafes, restaurants, fast food establishments, take-aways or carry-outs, hotels, hostels, camp sites, hospitals, educational establishments, prisons and even care homes. All of this, however, can be broken down to being the business of helping people to feel relaxed and welcomed and to enjoy themselves as much as is within their power. It is useful at this point to compare the differences between social and commercial hospitality to avoid confusion between the two. Lockwood and Jones (2000) provide the following useful comparison.

Table 2.2 Comparison of Social and Commercial Hospitality Source: Adapted from original Lockwood and Jones two column table (2000).

Social Hospitality	Care Home Hospitality	Commercial Hospitality
Supply led:	Both supply and demand	Demand led
Occasional	Continuous until resident death	Continuous
Small scale	Small to large. Most medium sized	Large scale
Self-administered	Mostly administered by others	Administered by others
Non-dedicated facilities	Dedicated facilities	Dedicated facilities
Unique experience	Once in a lifetime experience but repeated daily	Repeatable experience
Personalized activity	Depends on fees paid	Economies of scale
Social experience	Care home staff may include both	Service experience
Not for profit	Either for profit or minimising costs	Financial sustainability

However, all these new paradigms coming into being in hospitality studies do not appear to have coherent philosophical foundations. Whoever is concerned with hospitality, culinary, F&B services and accommodation services, education provision over the last forty years must face the fact that hospitality services provision has not succeeded in establishing its academic credibility. The frustration of this fact has weighed heavily on many of those serious scholars in the hospitality field who may feel unwelcome and unwanted in their universities, and who struggle daily for professional recognition from their colleagues in other departments.

Within a long-term care home environment there are competing values and priorities. Managers are urged to change perpetually, yet maintain order; to make the numbers, yet nurture their staff; to think globally, yet act locally (Gosling and Mintzberg, 2003). However, care home managers, usually from a nursing background, may be more concerned about the medical status of their charges, rather than the state of hospitality or their immediate comfort, whereas the catering staff may well place more emphasis on the feeding and hydration routines and creature comforts of their “guests”. Surely though we should not confuse hospitality with hospitableness (Brotherton, 1999).

There is a small, but growing, body of research questioning the philosophy of hospitality and the limited interactions between the different academic traditions, with even less interaction between practitioners and academics (Lynch, et al. 2011, Lashley, 2015). In one overlapping area of

the hospitality disciplines, care home catering, sometimes referred to as institutional catering, there appears to be even less interaction between the caterers and nursing or medical staff, as explored in the following sections (Dinsdale, 2019).

It could be suggested that “Catering”, in the context of the "principles of hospitality" demands a sacred obligation not just to accommodate the guest, but to protect the stranger, especially the patient living with dementia who arrived at the door of the care-home (Dinsdale, 2016b). The constantly evolving understanding of hospitality, including reference to cultural and religious meaning within our history have been followed, and commented on, by historians of hospitality. Within those studies the definitions of hospitality are wide ranging, including comment on the provision of food and drink, the ethics of welcoming strangers and the etiquette expected of societies (Browner 2003, Pohl 1999).

Mac Con Iomaire (2009) links the early emergence of hospitable monasteries in England to the development of hostels and inns, where hospitality was to be found, providing care for the outsider or traveller. The monasteries also gave shelter to the infirm, who in many cases could not look after themselves. Would this lead to the development of modern-day care homes?

Lashley (2008) suggests the provision of food, drink, and accommodation, in restaurants, bars and hotels is a commercial endeavour, defining the term “Hospitality Industry”, referring to the cultural and domestic traditions, whereby hosts are concerned for the well-being of their guests. Lugosi et al. (2009).

Should then, a patient resident within a long-term care home be considered as a guest and in receipt of hospitality? Should that hospitality be viewed as Derrida (2000) identified hospitality? In truth, Derrida’s explanation of hospitality was far removed from the commercial realities of the hospitality business sector and certainly removed from the reality of care home hospitality. Nonetheless, hospitality needs both a host and a guest as there must be an exchange of giving and receiving between the two. Within a long-term care home, the exchange of giving and receiving is that of money, or other consideration such as insurance premiums, in return for accommodation, medication, nursing care, food, hydration and cleanliness.

Who then is the host in the context of long-term care home hospitality? Should this be the Care Home Manager; the Registered Dietitian; Nutritionist; the Hotel Services Manager; Catering or Hospitality Manager; or even the Chef Patron? For clarity then, the definition of commercial hospitality used throughout the rest of this thesis is that of the functional form of hospitality rather

than the emotional form of hospitality. That is to say, hospitality services given in exchange for a consideration.

It must be accepted, however, that a long-term care home is not a hotel, where the daily rates fluctuate according to demand. You cannot just log on to TripAdvisor or Booking.com to change if you and your family don't like the services offered or the prices charged. Once in a care home the resident is more or less a hostage to the status quo. The Care Quality Commission (CQC) do publish a ratings guide, varying from outstanding to inadequate, but do not publish, or advise, on costs and rates. Since April 2016, all care homes were expected to display the results of CQC inspection ratings in a prominent position on their premises, much like the "Scores on the Doors" systems for restaurant food safety.

Shapin (1995) contends that relationships are established, developed, and maintained through trust. Within a long-term care home environment trust in the hospitality offer, including the trust in the delivery of nourishment and hydration is dependent on the establishment of a harmonious relationship between guest (resident) and carer (including catering staff).

As already noted, just one of the major problems facing those people living with dementia in long term care homes is the reduced intake of nourishment and hydration, leading to malnutrition, regardless of the hospitality services. The potentially harmful effects include dysphagia, apparent food refusal, stress and panic expressed by the resident when fed (DiMaria-Ghalili, 2014, Amella et al., 2008). None of the current academic research includes mention of the catering support and service staff, chefs, supervisors, or catering managers as being part of the multi-disciplinary care teams; people who are usually in close contact with the residents. The research above, in omitting the guys on the ground, the givers of hospitality through food and hydration, does little, if anything, to offer improved, practical, hospitality, nutrition and hydration.

Interestingly, however, the British Dietetic Association (BDA) have produced the second edition of *The Nutrition and Hydration Digest* (BDA, 2017) in which cursory mention of working with Caterers is included.

Despite past and current UK government strategies to improve the nutritional intake for people living with dementia in residential care homes, surprisingly little research has been carried out into the operational, practical, and staffing aspects of feeding those people. From a caterer's point of view there has been much advice as to what to feed to the people within their domain: See, for example the myriad information from the Voluntary Organisations Involved in Caring in the Elderly Sector [VOICES] (1998), The Caroline Walker Trust (1995), Caraher et al, 2009), Biernaki et al,

(2001) and Crawley and Hocking (2011), to name but a few. There has, in fact, been a long history of dietary and nutritional advice most of which seems to be both accurate and well intentioned. This is hardly surprising given that much of the literature has been influenced, or carried out, by nursing practitioners and / or dietitians and nutritionists.

There are, however, recent initiatives in the United States of America to integrate healthcare and hospitality services, The Beryl Institute (2016) has reported on an initiative, between the Christiana Care Health System and the University of Delaware Hospitality Associates for Research and Training, bringing together expertise in health care and expertise in the hospitality industry to create a unique training program that will give staff the skills and tools needed to achieve excellence in delivering an exemplary patient experience. Although this initiative was for a large hospital complex the results will be replicable within long term care homes.

The complexity of long-term care home resident feeding, and the management of the process, continues to challenge medical, dietitian, nutritional, and operational staff in equal measure (Miller & Kinsel 1998, Mathey et al., 2001, Remsburg et al. 2001, Wilson et al., 2000). Kitwood (1997), together with Miller and Kinsel (1998), were early promoters of Patient-Focused Care. Kitwood (1997) challenged what was considered to be the standard paradigm within residential care, emphasising the need for a change within the culture of service providers if significant, long-term, improvements were to be made. There are, however, aspects of his work which raise questions as to the viability of Patient Focussed Care, not least of which are the potential increase in costs of providing that care. Nonetheless, with improved technology and innovative advances in catering services, since Miller and Kinsel's (1998) paper, there is hope that improvements can be made.

Miller and Kinsel (1998) also recognised the need for change but did not include the food production and service staff in their suggestions for change though the American model for long term care uses differing terminology. Remsburg et al (2001) referred to several studies which had identified reversible factors associated with malnutrition in nursing home residents in the USA. Those factors included lack of sensitivity to residents' needs and food preferences, poor food quality and poor food choice. Consequently, the suggestion is made that for too long the traditional dining strategies within the long-term care home settings have been responsible for under nourishment and that those strategies need re-evaluation.

Considering that such reversible factors have been identified there is a paucity of research into the rôle of the caterers or catering systems employed within a long-term care home setting,

particularly within the UK. Nonetheless, diagnostic and treatment options are continuously evolving and new nutritional imperatives for people with dementia are being discussed as never before, together with other non-pharmaceutical interventions, for example, see Bakker (2003), Baptiste et al. (2014), Biernaki and Barratt (2001), Brush and Calkins (2008), Chang and Roberts (2011), De Bruin et al. (2010), Mathey et al. (2001), Remsburg et al. (2001) and Wilson et al., (2000).

Stemming from the above it is clear that the dominant area of research in terms of increasing or bettering the nourishment intake for people living with dementia is focussed on nutritional aspects – the "**what should be fed to the patient residents**" rather than the "**how it should be fed to the patient residents**". This will be looked at in greater depth in the following sections. Within the world of hospitality however, a more prosaic preoccupation with getting things done suggests Brillat-Savarin's "Physiologie du gout" (1825) has long been considered by professional caterers as still the only science that deals with everything pertaining to the nourishment of man.

As human beings, do we have a right to the foods we have enjoyed throughout our lives as we enter the later stages of life, the senium, or even succumb to the ravages of dementia? Access to foods enjoyed throughout life in a pleasant environment with close friends and family is desired, but often unavailable, to people in long-term care. The British Nutrition Foundation (BNF) have published guidance on the nutritional requirements for older people (BNF, 2016). Although comprehensive in nutritional advice it does not explore the particular nuances of which proteins, vitamins and minerals and the culinary processes involved.

The mealtime experience in a long-term care home can often be associated with dour, institutionalised, canteen like service (Perivolaris et al., 2006) and far removed from the pleasant atmosphere needed. The beneficial social element of eating and drinking should not be dismissed as unimportant.

In a study by Charras and Frémontier (2010) it was reported that in an assessment of eighteen residents living with dementia, at mealtimes shared with staff, there was a marked increase in weight of the participants after the three-month trial. The suggestion (though not measured) was that the intervention led to increased levels of eating independently and extended to the participants helping during service and post service clear down, better rapport between participants and staff and less wandering around.

In a similar trial by Altus et al. (2002) five female participants were involved in a trial using family-style meals, in which the purpose was to determine whether or not switching from pre-plated

meal plates to serving bowls and empty plates for self-service would increase the participants' communication and participation in mealtime service. The results suggested that family style meals would result in a modest increase in the resident's participation although further staff training would be needed to ensure continuity.

Early conversations with catering managers and chefs in care homes suggest they increasingly find themselves assigned the rôle of 'the rope' in a very real 'tug of war'—pulled in one direction by residents', or their relatives', mounting demands, coupled with the ever-present demands of the dietitians and nutritionists, and in the opposite direction by the company's need for profitability (Dinsdale, 2016a).

The following questions have emerged which do not appear to be in the literature. The goal now, then, is to identify methods of preventing the caterers' rope from snapping by identifying innovative methods of foodservice delivery, calling on the best practices identified in the commercial world of catering services and hospitality. This can be a challenge because of all the other professions involved in caring for patients in care homes. Who are these? How do they interact? What is the rôle and status of the caterer as a member of the care giving team, if at all? Are the caterers viewed as part of the care team, or merely as service providers? Are the caterers sufficiently educated or trained to fully understand the needs of their customers? These are some of the questions which is believed will be answered through the research.

Of major concern to most if not all care home caterers, as with any other commercial caterer, are the costs of running their business. Both goods and services generate costs before they generate money (revenues). Dementia is a costly condition and one that differs somewhat from other conditions in the way that its costs are distributed. Wimo et al., (2011), examining the economic impact of dementia in Europe, found that the total cost of dementia disorders was in the region of €160 billion, 56% of which was attributable to the costs of informal care. The average cost per person with dementia was estimated at approximately €22,000 per year, though significant variations were observed across countries.

2.12 Resident Directed Food Service

I have already established that people living with dementia in long term care homes are faced with considerable challenges. In addition to their declining cognitive powers, it becomes difficult to optimise their potential for well-being and good mental health, added to which may be an increased need for human contact and familiarity (Brooker et al., 2007). These problems may often manifest themselves in the care home dining areas and I will now look at the background of person-

centred care which will influence Resident Directed Food Service. It must be recognised, however, that the remit of this literature review does not extend to the full psychological, humanistic, or psychotherapeutic histories of Person-Centred Care and gives just enough information for the reader to understand the background of the theories.

Person Centred Care is a term which has been used across the health care sector to the extent that it is used at both professional and government levels to inform policies and understanding (de Carvalho et al., 2017). Practitioners are now using the term, in relation to elderly care, to challenge the traditional task-oriented paradigms and move towards a more holistic care environment. To date, however, little mention of this has been made in relation to the contributions which could be made by the catering teams, chefs and food service operatives and is predominantly focused on nursing care. An exception to this is from a research study into patient centric food service operations in UK hospitals (Altan, 2009). In this, he clearly defines how patient-oriented food service operations can, and should, be a multi-disciplinary effort.

Person centred care is difficult to define as a concept as different people in different circumstances understand the term in different contexts (Brooker, 2003). McCormack (2004), and McCormack and McCance (2016), to name a few, agree that person centred care is a multidimensional concept based on peoples' subjective experiences of illness and care. The traditional goals of "person-centred care" are to enhance quality of life for those in either hospitals or care homes or other such institutionalised residential facilities by building up and supporting a patient's or resident's "personhood". It was Kitwood and Bredin (1992) who developed the concept of personhood, building on Kitwood's earlier work (1987). The concept of personhood is to see the personhood in social rather than individual terms (Kitwood and Bredin, 1992, p. 269).

The encounter with dementia can be regarded as deeply paradoxical. On the one hand, care home or nursing staff involved in caregiving will often have a highly developed intuitive sense that even an individual who is disastrously impaired is still recognisably an individual person: whilst on the other hand the progress of a dementing illness, especially if it involves a long stay in residential or nursing care, seems to be taking personhood away (Kitwood and Bredin, 1992).

There are, however, several detractors and critics of the theories. Packer (2003) identified the theories as little more than a political slogan in aged-care and further criticism came from Nolan et al. (2004) in that the term was too focused on the individual.

In terms of legislation, de Carvalho et al's. (2017) statement that the theories would be used at government levels to inform policies and understanding came true in England following the

previously mentioned Health and Social Care Act 2008 (Regulated Activities) Regulations 2014. Section 2, **Regulation 9**, on Person Centred Care states:

> 9.— (1) The care and treatment of service users must—
>
> (a) be appropriate,
>
> (b) meet their needs, and
>
> (c) reflect their preferences.

How then can this concept of personhood be transferred to the catering operations and provision of nourishment to the residents? Care home catering is truly complex, and the kitchen staff will often have to cater for multiple diets and dietetic requirements for each mealtime. The planning alone for such meals should be considered a formidable task, let alone the purchasing, preparation, manipulation, and service delivery. Nonetheless, there are many opportunities here for caterers to take a lead rôle in person centred care, through Resident Directed Food Services: more of which, later.

Regulation 9. 3. (c) of the above Act states:

> … enabling and supporting relevant persons to understand the care or treatment choices available to the service user and to discuss, with a competent health care professional **or other competent person**, the balance of risks and benefits involved in any particular course of treatment (**emphasis added)**.

The following extracts state:

> Regulation 9. 3. (e) providing opportunities for relevant persons to manage the service user's care or treatment.
>
> Regulation 9. 3. (f) involving relevant persons in decisions relating to the way in which the regulated activity is carried on in so far as it relates to the service user's care or treatment.
>
> Regulation 9. 3. (i) where meeting a service user's nutritional and hydration needs, having regard to the service user's well-being.

These sub sections provide care home managers and caterers with an ideal opportunity to improve the services offered whilst ensuring compliance, but more importantly, a better service, nourishment, and hydration.

The Alzheimer's Society, however, following the initial consultations were doubtful that the new regulations would be effective, claiming: the CQC do not have sufficient resources to police the regulations or enforce them. I made a Freedom of Information (FOI) request to the CQC for

information regarding prosecutions related to regulation 14. Although the **prosecutions** page of their website provides details of nine prosecutions none were related to the provision of catering services. **I am still awaiting a response to my FOI request.**

2.13 Are Catering Staff and Chefs regarded as part of the "Professional Team"?

Andrew Borde, in his the "Breviary" and "Dyetary" of Andrew Boorde (1490-1549), the Physician, Priest and Traveller stated "*A good coke is halfe a physicyon. The chief physick doth come from the kytchen wherefore the physician and the coke for sycke men must consult togyther*." Guthrie (1943p. 27).

Whereas the medical, psychiatric, and nursing staff have a clearly defined rôle in the care of dementia patients in long term care homes, catering and hospitality support staff are less well acknowledged or recognised. One possible reason for this is that institutional catering operations, especially those on a small scale, tend to attract lowly qualified cooks rather than highly qualified chefs. Friedland (2005 pp. 24-32) notes that having highly trained chefs is far from universal.

> What's more typical is a home-grown situation with a lead cook who may have started out as a pot washer, learned techniques from previous cooks, and earned tenure in a department. But a trained chef can do much more to help.

Reichler and Dalton (1998) investigated chefs' attitudes, knowledge, and practice with regard to healthy food preparation and dietary guidelines. Perhaps unsurprisingly the chefs' food science knowledge was limited though the study concluded that the chefs and cooks in institutional catering environments were willing to learn more about food science and food modification techniques.

According to Hegarty (2014 a) in medicine, there is little discernible difference between researchers and users: all are practitioners. In the hospitality world, in contrast, researchers are rarely users, and this gives rise to major problems of communication. The time has come to raise the general publics', the academics', and the professions' consciousness and mindfulness of the importance of catering in the healthcare service - the medical, nutritional, and caring professions, and to the catering profession itself as a global business.

From the chefs/caterer's perspective it appears that greater knowledge and appreciation of the ingredients available, the processes engaged in, when selecting, combining, processing, presenting, and serving dishes need to be reborn. To say that the consumption of food and drink is a vital part of the chemical process of life is to state the obvious, but we sometimes fail to realise that

food and drink is much more than vital. What might be discussed in addition to the above, needs to include the concept of "corporate social responsibility"? Healthcare (large scale) catering as a Fordist pattern of catering can be criticised as problematic. This is understandable. However, at a deeper level, what underlies the fact that healthcare catering often gives rise to negative consequences is not the pattern itself (i.e., Fordism), but the realisation that large scale catering production in the care home context is often informed by 'instrumentalism' and 'short-termism', which tend to disregard the interests and long-term well-being of the clients, patients, the staff, and/or the environment (J. Hegarty, personal communication, September, 2014).

Most business enterprises are concerned with the maximisation of profits, or in the case of Not-For-Profit organisations minimising costs. This is in order to ensure a return on investment to shareholders, interest to lenders of borrowed money, as well as, investing in new equipment and other operating costs, including staff wages and salaries. In the current developing climate of ethical and ecological orientation many business enterprises are coming to recognise that corporate social responsibility and environmental considerations play an increasingly important rôle in their achieving public acceptability for a level of reasonable profitability and need to be given serious consideration.

The Council of Europe (Beck et al, 2001) identified a clear lack of defined responsibilities in nutritional care management, suggesting little cooperation between the different staff groups involved in nutrition and food service. Beck et al. (2003) confirmed this in their later article, where five major problems were found to be common throughout European hospital food provision:

Table 2.3. Five major problems of nutritional care with hospitalised patients (Beck. et al. (2003)

1	A lack of clearly defined responsibilities.
2	Lack of sufficient education.
3	Lack of influence of the patients.
4	Lack of cooperation among all staff groups.
5	Lack of involvement from the hospital management

A result of this study was the recommendation that to solve the problems, a combined team-effort was needed by all staff involved in nutritional care, their managers and specifically intervention by national authorities. Schauder (2001) had previously commented on catering services meeting the nutritional needs of patients in hospitals, later contributing to the above article (Beck et al. *2003*) and highlighting the need for physicians who had knowledge of clinical nutrition; nutrition steering committees and, nutritional support teams or units within the medical facilities. Goeminne et al. (2012), in their analysis of a new approach to hospital meal distribution, identified

lack of training in nutritional care and awareness by hospital staff to be a key factor in continued patient malnutrition.

These problems have been highlighted for many years by scholars such as Rasmussen et al. (1999), Sidenvall and Fjellström (1994), and Sidenvall and Ek (1993), to name a few. As we will see in the following sections, government interventions have been minimal over the years with little improvement or recognition of the continuing problems.

A key study by Carrier et al's., (2007) *Cognitively Impaired Residents' Risk of Malnutrition Is Influenced by Foodservice Factors in Long-Term Care* article. In that the authors randomly sampled residents of 38 nursing homes, with a final sample of 263 residents. In that quantitative study they screened the residents for malnutrition and administered a questionnaire to the care homes' primary care givers. That did not, however, specifically include any of the catering or hospitality staff, chefs, cooks, or food service personnel.

2.14 Education and Training

It is the mark of an educated mind to be able to entertain a thought without accepting it. Aristotle.

The UK is now, and has been for many years, experiencing a severe lack of fully trained chefs and cooks. Bosetti and Washington-Ihieme (2019) highlighted the situation in the London hospitality industry, where the relatively low-status of "cheffing" (now there's a verb I never thought I would use) is putting off entrants to the industry. Hancock (2021) comments further on the triple jeopardy of Brexit, The Pandemic and a poor image problem related to the culinary and food service sector. She continues to suggest the scarcest are the mid-level chefs, mostly from Europe, whose earnings are too low to meet the new skilled worker status visa requirements. The current minimum salary to meet the new visa requirements is £25,700 per annum or £10.10 per hour, whichever is higher. According to the Association of Graduate Careers Advisory Services (AGCAS), writing for Prospects UK (2021) typical starting salaries for commis (apprentice) chefs are between £12,000 and £16,000. More experienced chefs, such as chef de parti and sous chefs, earn between £20,000 and £30,000, and head chefs can expect higher salaries of £25,000 to more than £55,000, with many Executive Chefs earning in excess of £75,000. A further insight is given by employment agency, Reed.co.uk (2021) who are advertising chef jobs with salaries starting at £20,000 per annum with an average of £33,923.

As the wider hospitality industry is facing this shortage, it follows that a knock-on effect will be felt in the care home sector. A short survey of jobs available through Reed.co.uk (2021) show jobs available in the Social Care sector offering hourly rates from £9.00 for Assistant Cooks and Chefs to £11.00 per hour for a Head Chef.

Although a formal training is not legally required to be a chef, the most usual route for chefs is through a Further Education college, starting with an entry level introduction to catering and hospitality, through levels 1, 2 and 3. Some students will progress to Higher Education with Foundation Degrees in Professional Cookery and Culinary Arts, BA Culinary Arts and MA Culinary Arts Management.

As discussed above, there is no legal requirement to be trained to be a chef. There is, however, a good system already in place to be trained as a chef, though it would appear that the care home chefs and cooks are undervalued and under trained. Care home chefs, cooks and other related catering staff are a vital element within the care home sector but, in the UK, are not required to have any formal education or training, as above, nor any legal requirement for specialised training

in care home catering. However, in this specialised sector a different type of expertise would normally be required, rather than the basic training received at the many catering colleges.

The care home chefs and cooks need to understand the unique challenges of working in care homes. The CQC have issued guidance on catering standards and suggest a formal qualification may become mandatory (CQC, 2012) but this has not resulted in any mandatory qualification. Consequently, there is no standard qualification or route into care home catering employment. The situation is a mirror of that experienced within the wider catering and hospitality industry where no qualifications are required to find employment as a chef or cook. The National Careers Service (2017) have a page devoted to employment as a chef or cook and state that there are "*no set entry requirements but GCSEs in maths and English may help*" and " *You could do on-the-job training, starting as a kitchen assistant or trainee chef. Another option is to take a full-time college course*". If our government careers service pays such scant regard to the education and training of what is surely a core skill in providing safe, nourishing, food for the commercial catering operations then can we really expect more for the care home catering industry?

It should also be noted that the teaching of Food and Nutrition within primary and secondary schools is different throughout the UK. The subject of Food and Nutrition is taught and evaluated through the umbrella Design and Technology in England. There is no compunction for schools to deliver the food element.

The National Association of Care Catering (NACC) and the Hospital Caterers Association (HCA) worked with Barnet and Southgate College on producing an NVQ diploma for health and social care catering professionals (Mamzoori-Stamford, 2015). While the results of this offered hope for the future, the course was short lived.

As noted above, specialist, dementia related education and training of chefs, cooks, service staff and care givers in the UK is relatively rare with few of the care and catering staff communicating. There are, however, other moves to improve the current situation. The County Durham and Darlington NHS Trust have developed a training programme "Focus on Under Nutrition - Nutrition Catering Course". The course covers menu planning and special diets for older people. The course has evolved over several years of delivery at local colleges since 2002. The courses have been attended by over 500 chefs and cooks working in local care homes and hospitals. The course is delivered over six, three and a half hour sessions and divided into interactive workshops supported by practical kitchen sessions (CD&D NHS Trust, 2018). The course covers:

1. *Basic nutrition and menu planning for older people.*

2. *Diets for older people with diabetes.*
3. *Fortified diets.*
4. *Pureed and soft consistency diets and thickened fluids.*
5. *Nutrition and dementia.*
6. *Constipation and high fibre diets.*

By the end of the course the participating chefs and cooks are expected to have completed a portfolio of evidence including a recipe book.

More recent initiatives are encouraging but do need to be developed nationally and to determine best practice throughout the care home estate of the UK. One current initiative is that taken by the National Association of Care Catering (NACC), the HCA and The Institute of Hospitality (IoH). They have developed a **Level 2 Award in Professional Cookery in Health and Social Care Catering**. (IoH, 2017). To date, only two institutions, Norwich City College and Nottingham College are offering the course with a cost of £750 at Norwich and, £800 at Nottingham. If the applicant is over 19 years old, they must fund that themselves or the care home they work for must pay. There is limited funding available from LA's. The course is also offered at the Highlands College in Jersey, serving the Channel Islands. A private training company, HIT Training, offer the course but do not have the required practical facilities but will assess the candidates in their own workplace.

Initiatives in the care home catering sector in Australia were developed to educate and train caterers to manage the change in aged care from a **catering** mindset to that of a **hospitality experience** (Change Factory, n.d.). Steve White, of Balhousie Care Group in Scotland, as reported in Care Home Catering magazine (Dunk, 2018), commented on the need for a person-centred approach to care and the need to manage change in the human resources and encourage significant cultural and operational paradigm shifts. Whatever the results of these training initiatives strong and supportive leadership and management skills development within the human resource talent pool will be essential to successful change.

2.15 Dementia and Gastronomy

Sans teeth, sans eyes, sans taste, sans everything. Shakespeare, W (1599). As You Like It

---

How then does "Gastronomy" differ from "Hospitality", if indeed there is a difference? Are the two subjects closely intertwined or two totally different propositions? And what about "Food Studies" or "Food and Nutrition", or, at the top of the nourishment tree, "Dietetics"? I will start with a short history of gastronomy, including definitions as provided by the academy to date.

Gastronomy has evolved over millennia with clear social and economic influences during each period in history (Navarro et al., 2011). However, as a recognised word it has only been in common use since around 1800 in a poem by Joseph de Berchoux (1803). The history of gastronomy is said to date back to the early Greek and Chinese civilisations. Hippocrates [ca. 460 BC – ca. 370 BC] advocated the use of food as medicine, more of which later, but did not seem to directly refer to the theories of gastronomy. Since mankind learned how to cook, we have been looking for methods of improvement. The nomadic tribes of the Huns and Mongols, the so-called barbarians, were reputed to cook slabs of meat by fastening the pieces of meat between their horse's girth and the rider's saddle. There is, however, little proof of this old food legend in print (King, 2017).

The little else we do know about gastronomic studies of the time comes from the Sicilian Greek, Archestratus [ca. 330 BC], a gastronome, poet, and philosopher, some of whose works have been discovered. Although not actually a cook his work indicates he was a lover of the good life, good food and eating. Living in the Greek colony of Sicily he was fortunate to have access to some of the finest foodstuffs of the time, far better than those found in his Greek homeland. The few fragments of his poem Hedypatheia' (meaning "Pleasant Living" or "Life of Luxury") that do remain discuss the fine foods available, where to get them, how to cook some of them, but most of all how to enjoy them (Wilkins and Hill, 2011). A later philosopher, Athenaeus (ca 2nd to 3rd C AD), who also wrote extensively on food, wine, and gastronomy, is credited with saving the scraps of poems and publishing them in his fifteen-volume work, *The Deipnosophists* or *The Learned Banqueteurs* (Wesoly, 2011).

The science and philosophy of gastronomy includes the pursuit of physical and mental well-being for the human body. Harrison (1982) in his rather nebulous book divided the study of gastronomy into four distinct areas: 1) Practical Gastronomy; 2) Theoretical gastronomy; 3) Technical gastronomy; and 4) Food gastronomy; with a brief description of each. Most of the book is devoted to the practical aspects of gastronomy and could be viewed as more of an instructive manual than a theoretical discourse.

Gastronomy has also been defined as the art or science of good eating (Merriam-Webster, 2018), though I would emphasise art **and** science, as do Gillespie and Cousins (2012); the art and science of good eating and drinking (Gillespie and Cousins, 2012). Gillespie and Cousins (2012) also suggested that the term "gastronomy" was very difficult to define and that there were many bad definitions and even cases of "Pseudo Gastronomy", a form of wine and food snobbism! At the basest level, however, they subscribe to the definition of gastronomy as being about the enjoyment

of food and beverages. It could also be described as the study of food cultures with an emphasis on high-end gourmet culinary arts.

In terms of historical and traditional definition of gastronomy there is the tried and tested explanation given by the man who is often referred to as the grandfather of modern European gastronomy, Jean Anthelme Brillat-Savarin (1825), in his lengthy treatise: La Physiologie du goût, (translated by Fisher, The Physiology of Taste, 1949). In this, he asserts gastronomy to be "*the knowledge and understanding of all that relates to man as he eats. Its purpose is to ensure the conservation of men, using the best food possible*." But what is "the best food possible?" We each have our own tastes, traditions, preferences, cultures, and customs, pointing to "*another man's meat is another man's poison*" - "*quod ali cibus est aliis fuat acre venenum*" [attributed to Lucretius, Ca 1st Century BC] (Kassander, 1969).

Brillat-Savarin, (1825) also stated "*Gastronomy is the science of all that pertains to the nourishment of man*". Therefore, it is a central tenet in evaluating the impact of food and nourishment on the well-being and health of people with dementia living in care homes. Is this the link between medicine, nutrition, and taste?

Good food holds an important place in our lives, providing nourishment, pleasure, and a sense of well-being. However, the definition of good food can vary depending on individual needs, preferences, and circumstances. This section examines the concept of good food and its potential variations when considering the elderly, dysphagic individuals, and people living with dementia in care homes. By understanding these specific contexts, we can gain insights into the unique challenges and considerations involved in providing optimal nutrition and satisfaction for these vulnerable populations.

Good food encompasses more than mere sustenance; it embodies a combination of nutritional value, sensory appeal, cultural relevance, and personal satisfaction. It should meet individual dietary requirements, support physical health, and promote overall well-being (Macdiarmid., 2013). However, the definition of good food is not static and can vary across different populations, particularly in the context of care homes.

For the elderly, good food takes on additional significance. As individuals age, their nutritional needs may change due to factors such as reduced metabolism, decreased appetite, and altered taste perception. Consequently, good food for the elderly must prioritize nutrient density, including adequate protein, vitamins, and minerals, while considering factors like portion sizes and

texture modified options. Maintaining a balanced diet is crucial for their physical health, cognitive function, and energy levels (Buttriss., 1997).

Dysphagia, a condition characterized by difficulty swallowing, presents unique challenges in defining good food. For dysphagic individuals, good food goes beyond taste and nutritional value; it must also address safety concerns related to swallowing difficulties. Texture modification, such as pureed or thickened foods, becomes necessary to ensure safe consumption while maintaining a pleasant eating experience. In this context, the definition of good food shifts to encompass food that is not only nutritious but also easily manageable and swallowable.

The definition of good food is not uniform across all populations and circumstances. When considering the elderly, dysphagic individuals, and people living with dementia in care homes, the concept of good food becomes more nuanced and multifaceted (Stajcic, 2013). Understanding and accommodating their specific needs, nutritional requirements, and individual preferences is essential to promote optimal health, quality of life, and overall well-being. By recognizing these variations, care providers can create environments that foster not only physical nourishment but also emotional satisfaction, fostering a holistic approach to food and nutrition in care settings.

Beck et al. (2003) provides insights into the European perspective on hospital undernutrition. The article highlights the prevalence and consequences of undernutrition, emphasizing the need for standardized screening, assessment, and treatment protocols. Although the article offers valuable recommendations, the lack of a robust methodology limits the generalizability of the findings.

Goeminne et al. (2012) present a prospective cohort trial evaluating the impact of a new food delivery system on food intake and appreciation among patients in a Belgian hospital. The study demonstrates positive outcomes, indicating higher food intake and improved patient satisfaction with the bedside meal approach. However, the study's limitations include a small sample size and potential biases, such as self-reported measures and lack of a control group.

Kondrup (2004) argues that proper hospital nutrition should be considered a human right. The article emphasizes the importance of nutrition in patient care and highlights the ethical obligations of healthcare professionals. While the article provides a thought-provoking perspective, it lacks empirical evidence and may benefit from further exploration of the practical implications and challenges of implementing nutrition as a human right.

Rasmussen et al. (1999) conducted a questionnaire-based survey to explore clinical nutrition practices among doctors and nurses in Danish hospitals. The study identifies gaps in knowledge and

practices related to nutrition, emphasizing the need for education and training in this area. However, the study's reliance on self-reported data and potential response biases may limit the validity of the findings.

In view of the above it may be prudent to try to define "*good food*", especially in relation to elderly care.

Who dares make an indisputable definition of good food? A brief literature search brings forth instructions on good food and healthy eating from experts in the NHS, the BBC *Good Food* magazine; videos from the likes of The Soil Foundation (2019), and directives from the United Nations' *Food Systems Summit* (2021), in which they state, "Good food is everything". Age UK also provide their own guidance on this in their *Healthy Eating Guide* (nd). These comments, however, ignore the other side of good food, as commented on by Lucretius, above.

A particular definition, set out by Gerda Verburg at the United Nations "*Food Systems Summit* (2021) was "*Good Food means nutritious food that is healthy, tasty, produced in a nature-friendly way by farmers, fishers folks or food producers who got a decent price for their product*." A similar definition was set out by Chef, Jose Andres at the same summit, without commentary on taste, individual preferences, customs, or cultures. Even so, whilst these definitions have clear meanings, each one ignores the organoleptic, odours, tastes and pleasantness related to the consumption of good food as described by Brillat-Savarin.

It is recognised, however, that taste and texture perception is reduced with older age, and some research indicates that environmental factors also influence the amount of food which dementia patients are able to eat (Dunne et al*., 2004)*. That research, however, did not suggest any changes to food and hydration delivery other than changing plate and cup colours. Brillat-Savarin, (1825) also stated "*Gastronomy is the science of all that pertains to the nourishment of man*". Therefore, it is a central tenet in evaluating the impact of food and nourishment on the well-being and health of people with dementia living in care homes. Is this the link between medicine, nutrition, and taste?

Brillat-Savarin's ideas suggest a holistic approach to the study of food and drink and was, in many ways, suggesting an interdisciplinary and multidisciplinary take on "field to fork" long before such terminology found favour in modern times. This definition also implies the study and understanding of the sociological issues of food which integrates with other fields such as anthropology, philosophy, and psychology. Other studies of gastronomy may include the rôle of food in the performance arts, painting, and sculpture.

A relative newcomer to the theorising of gastronomy is Professor Peter Klosse (2013) in which he states, "*The world is full of traditional theories and opinions that are hardly ever seriously questioned*". He further contends that his theory of "Flavor Theory" will provide the answers for questions that have previously been too difficult to consider. He also suggests that his new theory on flavor will be able to address many gastronomic issues. There is, however, little in the book which convinces me that 'Flavor Theory' will lead the way in future studies in gastronomy. It is fair to say, however, that he does raise some interesting points about the relationship between nutrition and gastronomy; stating gastronomy is a holistic concept and should be viewed as the antonym of nutritionism.

More recent definitions come from scholars of hospitality and gastronomy, such as Mc Con Iomaire (2021 p.134) who suggests" *Gastronomy and food studies are described as being interdisciplinary, multidisciplinary, and even transdisciplinary".* He identifies the disciplines as anthropology, sociology, history, art history, philosophy, psychology, and English literature.

Further considerations are that the study of gastronomy includes an enquiry into why humans like particular foods, why taste, or flavour, is a subjective issue and that, overall, the full study of gastronomy will remain both a challenge and interesting. In which part he refers to the nourishment of the elderly as one of the major societal issues.

How then, to integrate gastronomy with the catering and food service services within the long-term care homes? In the 1960s the Nobel Prize winner Dr Linus Pauling coined the phrase 'orthomolecular medicine' (see Janson, 2006) and sometime later Nicholas Kurti and Hervé This-Benkhard (1994) coined the phrase, "molecular gastronomy". They examine, analyse, and classify alimentary substances, and reduce them in the manner of Hervé This-Benkhard (1994, 2006 & 2009) to their elementary molecular constituents. They fathomed the mysteries of assimilation, and tracing inert matter through its changes in form, saw how it became endowed with life. They have studied food in its effects, whether momentary or permanent, for days, for months, or even for whole lifetimes. They have estimated its influences on the brain, and upon the faculty of thought. They have speculated whether the soul receives impressions from the senses or can perceive without the occurrence of those organs. Finally, they have formed, as a result of all these labours, a grand generalisation, embracing the human race and all matter that is capable of assimilation. But how much of this is considered by the food service sector in seeking new ways to enhance their services, quality, and profitability?

Much has been said over the past decade or more of the term, Molecular Gastronomy. The term in itself is often misjudged or misinterpreted. As already discussed, the term gastronomy refers to the "study" of all things to do with food and nourishment of man, whereas the term molecular gastronomy is often taken to mean the physical process of food preparation using molecular, or modernist, techniques. A better and more accurate term for this physical process would be "molecular cuisine or molecular cooking". That, coupled with the application of other "Modernist Cuisine" techniques may provide answers to some of the pressing needs in aged nutritional care. Indeed, it is said that molecular cuisine is now so old that it has become almost classical and is no longer as trendy (Lavelle et al., 2021).

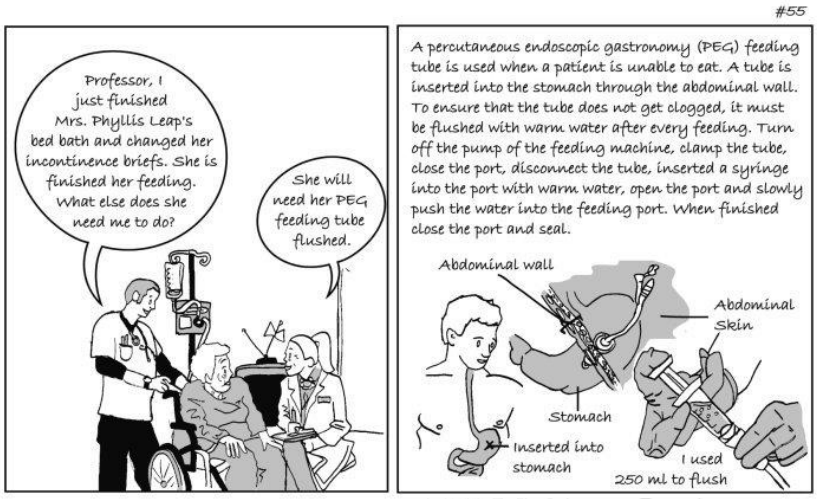
There are also potential benefits of introducing some of the findings of Spence and Piqueras-Fiszman (2014), *The Perfect Meal - The multisensory science of food and dining*, or Spence (2017) in his book, *Gastrophysics,* or those of Shepherd (2012), related in *Neurogastronomy: how the brain creates flavor and why it matters.*

At this point in the literature search I came to a stumbling halt! Carrying out a simple Boolean search for the coupled term Gastronomy AND Dementia brought about a myriad selection of articles with titles such as: "*The use of percutaneous endoscopic gastronomy (PEG) tubes in patients with endstage (sic) dementia: A survey of medical students (sic) attitudes and opinions*" and abstracts such as "*82 patients (80%) did not have a feeding tube on admission; of these, 62% had a percutaneous endoscopic gastronomy tube placed during …*". This search result was not envisaged at all. Was the word "gastronomy*"* misinterpreted? Was my understanding of gastronomy about to be turned on its head? What had feeding tubes to do with gastronomy? Investigating further it seemed that even the medical profession could not agree on the use of the word "gastronomy".

It would seem that the medical profession, or at least the search engines related to the medical world, use the terms "gastronomy" and "gastrostomy" interchangeably. Further searches excluding the word "gastrostomy" produced nothing of relevance. What next? The **only** link I found, using the word gastronomy, rather than gastrostomy, was the following medical cartoon:

Figure 2.4 Gastrostomy Cartoon

Source: https://wilomis.wordpress.com/2009/11/07/250-ccs-of-excitement/



As this apparent anomaly confused me, I thought it relevant to the research to investigate further. If it confused me, it may well confuse others, not cognisant of the terminology or use of the words in this respect. Intrigued by this I delved further to determine the type of foods used in feeding tubes and whether or not their use was still popular, and if so, how effective, and what part the food service staff and chefs would play in this. Schwartz et al. (2014. p 830) stated quite clearly, in a report written by the International Clinical Ethics Section of the American Society for Parenteral and Enteral Nutrition "*that advanced dementia be seen by health care providers as a terminal illness. And that view and what it means should be communicated to the patient's family and loved ones for patient-centered (sic) care decision making*". They further report:

> Numerous articles have been published about advanced dementia and use of feeding tubes, yet there remains a high consistency in finding a lack of efficacy in tube feeding in this population. Current scientific evidence suggests that the potential benefits of tube feeding do not outweigh the associated burdens of treatment in persons with advanced dementia. Studies consistently demonstrate a very high mortality rate in older adults with advanced dementia who have feeding tubes.

Mitchell (2019) concurs and reports that the "*best available evidence fails to demonstrate any health benefits of tube feeding in advanced dementia, with risks associated with the intervention*". She further supports ongoing hand feeding rather than tube feeding being the recommended approach of the American Geriatrics Society (2014), the Canadian Geriatrics Society (2014) and the American Board of Internal Medicine's Choosing Wisely Campaign (2014).

In the UK, the British Society of Gastroenterology (BSG) have issued advice, based on a report by Westaby et al. (2010) that such procedures, known as a gastronomy, are often unnecessary and potentially dangerous. This advice follows in the wake of the BSG disclosure that many care homes in the UK are making it a condition of residence that people with the need for additional care in feeding and nutrition have the feeding tube fitted to make it easier for staff. **Where tube feeding does take place the use of blended foods from the kitchen is not recommended due to potential contamination and inadequate viscosity.**

Consequently, pre-prepared commercial feeds are generally used, and this part of the literature review will go no further in discussing enteral tube feeding as the catering staff rarely, if ever, take an active part.

How then, to take this search for a link between gastronomy and dementia further? I continue here with a look at the efforts being made by the medical community.

There has been some work on identifying how the five senses; vision, hearing, smell, taste, and touch could be used to stimulate the intake of nourishment and hydration. Sodexo (2017) in collaboration with the University of Ottawa produced a guide to how those senses, in particular taste and smell, could be stimulated. There was nothing really new in the report that any informed food service manager or dietitian would not know already and nothing that referred to the art and science of gastronomy.

The effects of ageing on olfactory senses of taste and smell have presented diagnostic dilemmas in the medical profession for many years (Boyce and Shone, 2006). Boyce and Shone (2006) also reported that more than 75% of people over the age of 80 years evidenced major olfactory impairment, and that the olfactory senses decline considerably after the age of 70.

With the re-introduction of the sciences into cooking, for so long the domain of manufacturers, utilising the techniques, equipment and ingredients of molecular and modernist cuisines, there is an added impetus to examine the type of education and training given to care home food service staff.

At the start of this chapter, I commented on the dearth of research dealing with the nourishment of people with dementia living in nursing homes. Also, there appeared to be a dearth of published material on the impact and rôle of gastronomy on the well-being of these patients, as seen in this section.

Whilst several interventions were identified to improve food and drink intake, there was little or no systematic research to understand the factors for improving nourishment and nutritional care from the perspectives either of all those delivering nursing care and food service care in nursing homes or of their clients.

To recap, the aim of this study is to develop a research-based model for understanding the complex gastronomic problems associated with eating and drinking for people living with dementia in care homes and the complex problems faced by the care home managers, the food service companies and their respective staff. The literature review has unearthed little so far. Consequently, I conclude in this section, as did Brillat Savarin in his 1825 "Physiology du Gout", "*that Gastronomy is the scientific knowledge of all that relates to man as eater*". Its aim, he tells us, is by means of the best possible nourishment to watch over the preservation of mankind, and it attains that end by laying down certain principles to direct in the search, supply, and preparation of alimentary substances. In the concluding chapter I will discuss how the food service companies and catering staff can best achieve those goals through resident directed food service.

2.16 Food in the Medical Context

"The science which feeds people is worth at least as much consideration as the one which teaches how to kill them." Jean-Anthelme Brillat-Savarin (1825)

After admission to care, and especially towards the later stages of dementia, potentially harmful effects include dysphagia, apparent food refusal and panic expressed by the resident when fed. In this section I look at steps being taken by the medical and nursing community to improve hydration and nourishment for their charges. This will include a look at texture modification of food and drink. There are some links to, and overlap with, what has previously been discussed.

2.16 A Medicine and Food

The links between food and well-being have been reported on for a few thousand years. Consequently, the use of food as treatment in ill health, and for maintaining good health, is not new and can be traced back to two distinct areas of the globe: one of the earliest medical works, the '*Hwang Ti Nei-chang Su Wen*' - the Yellow Emperor's Classic of Internal Medicine, [ca. 722-ca. 721] -, (Veith and Barnes, 2016) describes the use of food as medicine in significant detail. At the other side of the world Hippocrates, considered one of the most outstanding figures in the history of western medicine, just a few centuries later [ca. 460 BC – ca. 370 BC], was advocating the use of food as medicine with the following quote attributed to him; "*Let food be thy medicine and medicine be thy*

food", (Gorski, 2015) my interpretation of which is that food is critically important to a patient's capacity to recover.

However, the quote may in fact have been incorrectly attributed. Cardenas (2013) asserts that the attribution of the quote to Hippocrates is false, leading to an entire misconception about the ancient concept of food being a medicine. In her research, Cardenas carried out an extensive review of the works related to food and diet in the 60 texts known as The Hippocratic Corpus [*Corpus Hippocraticum*] (Jouanna. 2016). These texts had been recorded by Hippocrates himself or by his disciples. Although the texts do refer to the value of food and the theories of diet at the time, throughout Cardenas's search no mention of "*Let food be thy medicine and medicine be thy food*" was reported to have been found. Where then does that leave the authors of the fifteen, medicine based academic articles Cardenas had found to be using the phrase to support their work? Cardenas contends that by attributing pharmacological properties to foods, authors are confusing both food and medicine. She goes on to point out that none of the authors cited the original text of this alleged phrase accurately. Two of the examples referred to no primary sources.

Nonetheless, it is clear from the Hippocratic Corpus that Hippocrates and his disciples did use food to treat many illnesses of the time, but the success rates of the interventions have not been clearly recorded. There are now numerous medically qualified doctors who have taken the use of medicine as food to a new level. Added to which there are a multitude of self-proclaimed experts in diet, health, and nutrition that all seem to have at least one opinion on what is good and bad to eat, how to eat and when to eat. There are also several professional organisations, with their stated aims as being to ensure the well-being of their nation's residents.

Of particular interest are the comments by Maharaj (2020), in that good food does not generally arrive on a tray. Although the book contents are primarily focussed on hospitals and schools there are several anecdotes that relate to hospital patient care and nutrition that can be transferred to nursing and care home situations. There are also anecdotes that I can personally relate to, following my own major surgery in an NHS Hospital. During recovery, following surgery and in need of nutrition and hydration, Maharaj was served a tasteless, dry egg sandwich and a cup of sugary ginger ale. Maharaj was dopey, sore, she was hungry, the sandwich offered little hope, did not offer a "get well soon", rather more, she proposed the sandwich said, "Sorry, sucker, this is all they'll pay for" (Maharaj., 2020, p, 2). This relates clearly to my personal experience of food in NHS hospitals in England following two knee replacement surgeries. Culinary experiences I'd rather forget. It was clear that budgetary issues took precedence over my culinary or nutritional needs. In

agreement with Maharaj, the trays of re-thermalised food presented to me indicated to me that I was not worth any further effort.

The previous anecdote was in stark contrast to my experiences of a private hospital, some 45 years ago. I had been admitted to a private clinic, in Harley Street, London, for a third laminectomy operation on my spine. The catering services there were exceptional, with an almost a la carte style of food production and service including a glass of wine with dinner! I also report on the good quality of F&B provision in a couple of the privately funded care homes in my research. It became clear that, in the large scale, publicly funded, care home environments, no one in control really cared enough about the quality of food to make any changes (Maharaj. 2020).

Kondrup et al. (2002) discuss the incidence of nutritional risk to elderly patients in Danish hospitals, with only 25 per cent of patients who were at nutritional risk being fed adequate energy and protein. It is clear the findings could be linked to care home catering management in Danish care homes.

Riddiford et al. (2000) investigated the role of dietetic support staff through a survey of dietetic managers in New South Wales public hospitals. The study sheds light on the diverse responsibilities assigned to dietetic support staff, including patient education, menu planning, and coordination of dietary requirements. The findings highlight the importance of these roles in facilitating optimal nutrition in hospitals. However, the study's reliance on self-reporting and a limited sample size may introduce biases and limit generalizability.

Ross et al. (2011) examines staff perceptions and explanations for poor nutritional intake in older medical patients. Through interviews and focus groups, the study reveals a lack of clear responsibility among healthcare staff for addressing patients' nutritional needs. Staff members identified various factors contributing to poor intake, such as time constraints, inadequate staffing levels, and limited communication among healthcare professionals. The study emphasizes the need for a multidisciplinary approach to nutrition care. However, the study's focus on a specific patient population and the potential for subjective interpretations of staff perceptions warrant caution in generalizing the findings.

The reviewed studies, here, and others within the Literature Review, shed light on important aspects of hospital and care home nutrition, specifically the roles of dietetic support staff and staff perceptions of poor nutritional intake. Riddiford et al. (2000) provide insights into the responsibilities and contributions of dietetic support staff in New South Wales public hospitals, highlighting the need for well-defined roles and effective coordination. Ross et al. (2011) highlights

the challenges in addressing poor nutritional intake among older medical patients, emphasizing the importance of shared responsibility, communication, and adequate staffing levels. Both studies contribute to the understanding of nutritional care in hospitals, but further research is needed to corroborate and expand upon these findings. Future studies should employ rigorous methodologies and consider diverse patient populations to provide comprehensive insights into improving nutritional outcomes in healthcare settings.

How has the nature of food become a perplexing issue, driving debate and controversy? Caldecott. (2014) suggests society has been led to believe, over the past century or so, that other than supplying basic energy, food has little impact on physical or mental health. There is now, however, a greater understanding of the rôle food can play in all systems of traditional medicine.

The Malnutrition Task Force (2016) has published research showing that only half (51 per cent) of health care professionals believe that malnutrition is an urgent priority within their organisation. Of greater concern only 47 per cent felt confident in their skills or knowledge to enable them to help the people most at risk. The Malnutrition Task Force (2016) have produced guidance for care home caterers emphasising the need for caterers to be involved in planning residential care. Considering those findings there is an identified need for training of catering staff in the basics of dietary nourishment and the acceptance by medical staff that the catering staff can, indeed, make a significant contribution to the well-being of the people living with dementia as part of the overall care team.

2.16 B Dietetics and Nutrition

Dieita, is the ancient Greek word translated as “Way of Living” and is the source of the word DIET. The following is an extract from the Hippocratic Oath, recited by every medically qualified physician in the western world, but how many medical doctors actually advise on dietary regimes?

> I swear by Apollo the physician, and Asclepius, and Hygeia and Panacea and all the gods and goddesses as my witnesses, that, according to my ability and judgement, I will keep this Oath and this covenant: … I will use those dietary and lifestyle regimens which will benefit my patients according to my greatest ability and judgement, and I will do no harm or injustice to them… (attributed to Hippocrates. C. AD 275).

The work of Dietitians is regulated by the Health and Care Professions Council (HCPC) of Great Britain and are the only nutrition related profession to be so. Dietitians are often considered to be uniquely qualified to convert scientific information about food into practical advice on diets

(The Association of UK Dietitians [BDA]. n.d). The title Dietitian is protected by law and anyone using the title must register with the HCPC. The work of dietitians in care homes is primarily to advise on diet content for the residents.

There have been many long-term care home studies investigating weight loss and malnutrition and which found those residents living with dementia were more prone to succumb (Suominen et al. 2005). Many of those studies attempt to link the cases of malnutrition and weight loss to the food service operations and methods of delivery (Keller et al., 2014. Keller et al., 2017 & Woo et al., 2005). None of these, however, make any specific reference to the input of caterers, chefs, and foodservice personnel.

This literature review has not revealed any studies carried out by dietetic, medical, nursing, or nutritional researchers which include discussions on the rôle s of catering, foodservice, and hospitality staff in the overall area of people living with dementia in long term care homes and certainly not taking a deep look at the potential benefits of enrolling chefs and catering managers as part of the overall care team. However, in one exception, Keller and Duiza (2014) did discuss the training of cooks, together with both dietary and nursing staff to ensure consistency in product quality and client satisfaction.

2.16 C Nutrition – a false science?

> In an honest search for knowledge, you quite often have to abide by ignorance for an indefinite period. Instead of filling the gap by guesswork… however irksome the gap may be, its obliteration by a fake removes the urge to seek a tenable answer… The steadfastness in [this obligation], nay in appreciating it as a stimulus and a signpost to further quest, is a natural and indispensable disposition in the mind of a scientist. Schrodinger (1996).

The origin of the word nutrition derives from the late Latin nūtrītiō, from nūtrīre to nourish (Collins, 2018). It is also described in the *1550s as,*

> … act or process by which organisms absorb their proper food into their systems and build it into living tissue, from Old French nutrition (14c.) and directly from Latin nutritionem (nominative nutritio) "a nourishing", noun of action from past-participle stem of nutrire "to nourish, suckle, feed," from PIE *nu-tri-, suffixed form (with feminine agent suffix) of *(s)nau- "to swim, flow, let flow," hence "to suckle," extended form of root *sna- "to swim." Meaning "that which nourishes, nutriment" is from c. 1600 (Etymonline, n.d.)".

It is difficult to prove any theory in medical science with the science of nutrition being no different (Newman, 2020). An article in the American Council on Science and Health suggests:

Yesterday, coffee caused cancer, today it is a cure. With such self-contradictory statements should we really trust nutritional science (Berezow, 2018)? Berezow continues to report on a paper published in Frontiers in Nutrition in which the authors believe nutritional research into diet and disease is mostly fictional. Looking further into this, Archer et al. (2018) suggest that previous research conducted over the previous six decades demonstrated that the memory based dietary assessment methods concluded unequivocally that the data produced was "*physiologically implausible",* that is to say, they produced meaningless numbers. This led to their contention that the confusion on putative health effects was created by the fictional discourse and use of pseudoscientific methods to inform public policy led to the field of nutrition science losing credibility and scientific authority.

Dr Ben Goldacre (2009) takes a very caustic view of nutritionists in his book *Bad Science*. He also wrote a column for the UK newspaper, The Guardian, exposing health scares and "quackery". He also operates a science related website https://www.badscience.net/ . In one article he strongly criticised a high profile, celebrity, nutritionist, "Dr." Gillian McKeith – *The awful poo lady*, for her claim that ingestion of chlorophyll in green vegetable leaves "*oxygenates the blood*". His response in The Guardian (2012) was:

> To anyone who knows the slightest bit about science, this woman is a bad joke. … She talks endlessly about chlorophyll, for example: how it's "high in oxygen" and will "oxygenate your blood" - but chlorophyll will only make oxygen in the presence of light. It's dark in your intestines, and even if you stuck a searchlight up your bum to prove a point, you probably wouldn't absorb much oxygen in there, because you don't have gills in your gut. In fact, neither do fish. In fact, forgive me, but I don't think you really want oxygen up there, because methane fart gas mixed with oxygen is a potentially explosive combination.

Goldacre investigated McKeith's membership of the American Association of Nutritional Consultants (AANC). He paid $60 to get membership for his dead cat, Henrietta, writing –

> It looks as if all you need to be a certified member of the AANC is a name, an address, and a spare $60. You don't need to be human. You don't even need to be alive. No exam. No check-up on your qualifications. And no assessment of your practice. I guess that could be embarrassing for some of their certified professional members. Presumably, the diploma is there to certify that you have $60." (Goldacre, 2004).

The AANC have now added an exam requirement for full membership. Goldacre has posted many other critiques of the nutrition industry and other medical related pseudoscience topics. His website is well worth a visit.

In the UK, anyone can claim to be a "Nutritionist" without any specific qualification though many nutritionists do have a degree in nutrition and may also register with the UK Voluntary Register of Nutritionists. There is no mandatory register of nutritionists in the UK (Association for Nutrition, 2021). There is, however, a significant interest in nutrition and the practical application of the nutritional theories and there are many respected universities offering Under Graduate, Post Graduate and Doctoral degrees in the UK. The Association for Nutrition (AfN) have a membership requirement of a BSc (Hons) or MSc in a nutritional science or, through an evidence based Portfolio of experience https://www.associationfornutrition.org/register/apply-registration/apply-rnutr/rnutr-via-eebn . So, it's not all bad.

In whatever way it is described, nutrition, nourishment, or aliment, these words refer to the provision of food (organic materials) required by the human body, organisms, and cells, to flourish and stay alive. In the realm of human medicine and science, nutrition is often referred to as the practice or science of consuming and utilising food (Nordqvist, 2017). The World Health Organization (WHO) however provide a simplified explanation:

> The intake of food, considered in relation to the body's dietary needs. Good nutrition – an adequate, well-balanced diet combined with regular physical activity – is a cornerstone of good health. Poor nutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity". It is notable that no mention of science is made in their clear definition of nutrition.

The WHO concentrates their educational and political efforts on informing the world population on matters relating to the provision of adequate nourishment for people around the world. Dr Margaret Chan (2014), former Director-General of the WHO, at **The Second International Conference on Nutrition** (ICN2, 2014), discussed the worlds malnutritional challenges as being related to **quantity** of food available, together with concerns about the **quality** of food available, as being two side of the same coin. At no point did she refer to nutrition as being a science.

Conversely, Drummond and Brefere (2016) define nutrition as a science that studies the nutrients in foods and the actions they produce in the body. They summarise:

> … nutrition is a science that studies nutrients and other substances in foods, and how they affect the body, especially in term of health and disease. Nutrition also explores why you chose the foods you do – in other words, why you eat a certain type of diet.

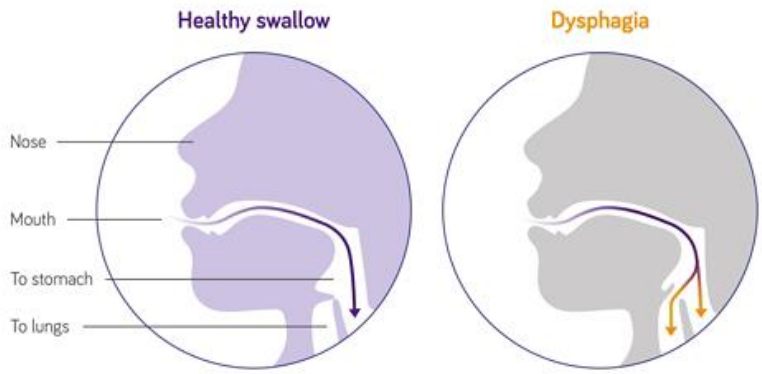
This review has so far identified that malnutrition and under nourishment seems to be a key issue for people with dementia. One of the key reasons being swallowing problems brought on by dysphagia.

2.16 D Dysphagia and Texture Modification

Texture modified foods and drinks are used in situations where the resident is experiencing dysphagia. Dysphagia is a combination of two words of ancient Greek origin. Dys, translating to difficulty and, phagia, to eat.

Painter et al. (2017) describes dysphagia as being common in people living with dementia and is often associated with an increased risk of choking, malnutrition, and death. Panebianco et al. (2020) describe dysphagia as being a difficulty in mastication or the swallowing of food and drink. Dysphagia, if untreated, may result in malnutrition, weight loss and dehydration.

Figure 2.5: Comparison between a healthy swallow and one a dysphagia patient may experience. Source. Nutricia: Stroke and dysphagia: an introduction (n.d.)



Texture modification is achieved by either mechanical (physical) or hydrocolloid (chemical) manipulation. Early delivery of texture modified foods and drinks were not particularly appetising, with little or no effort to make the plated food attractive (Dinsdale. 2019).

Figure 2.6: Example of plated texture modified food in a care home. Roast Chicken, carrot, and potato purees. (Author's photo from care home visit)

Many Dietitians, speech therapy specialists and nutritionists advise dysphagic patients to follow a texture modified food and drink diet and this has become a widespread clinical practice. However, for many years they have been unable to agree on international texture classifications. For example, Table 2.4 shows the comparison between the Australian texture scale, the National Dysphagia Diet (USA) and the UK (adult) texture classification systems.

Table 2.4: Comparisons of Texture Modified Food Scales. Source: Adapted from Dietitians Association of Australia, Speech Pathology Association of Australia Limited. Texture-modified foods and thickened fluids as used for individuals with dysphagia: Australian standardised labels and definitions. Nutr Diet. 2007;64(S2): S53–S76.

Food Texture		
Australia	USA	UK
Regular	Regular	Normal
Texture A – soft (1.5cm)	Dysphagia advanced (2.5cm)	Texture E (1.5cm)
Texture B – minced and moist	Dysphagia mechanically altered (0.6cm)	Texture D
Texture C – smooth pureed	Dysphagia puree	Texture C
		Texture B
		Texture A
Fluid viscosity		
Australia	USA	UK
Regular	Thin 1 – 50 cP	Thin fluid
		Naturally thick fluid
Level 150 – mildly thick	Nectar 51 – 350 cP	Thickened fluid – stage 1
Level 400 – moderately thick	Honey 351 – 1,750 cP	Thickened fluid – stage 2
Level 900 – extremely thick	Spoon or pudding > 1,750 cP	Thickened fluid – stage 3

Cichero et al. (2016) comment on the differing interpretations and understanding of descriptors in different global locations, often leading to confusion. Standardised terms have been sought for many years, leading to the establishment of an international organisation, the **International Dysphagia Diet Standardisation Initiative** (IDDSI), developed by a multi-professional group in 2012. The new framework and standardised terminology were released in 2015, following a pilot release in Kempen, Germany (Lam et al. 2017). The programme was eventually rolled out in the UK in April 2019, after this research commenced. The formal transition from the UK National Standardised terminology to the IDDSI definitions was supported by The Royal College of Speech and Language Therapists, British Dietetics Association and The National Association of Care Catering (IDDSI, Dec 2020).

2.17 Dementia and the Food Consumption Environment

"who said anything about medicine? Let's eat". (Attributed to one of Hippocrates's forgotten [and sceptical] disciples, circa unknown).

In this section I explore the meaning of the environment with regards to eating, dining and meals. This will cover both the softer social environment and the physical facilities within the built environment, the human-made setting of the care home buildings and supporting infrastructures. There are several sources of information regarding the physical care home environment and some current guidelines on best practice in this area. These will be detailed in the following pages.

2.17 A Facilities and the physical care home environment

One of the most active organisations in environmental design for specialist dementia care homes is the Dementia Services Development Centre (DSDC) at Sterling University. Although much of their work appears to be concentrated in the design elements for the domestic home situation there are excellent guides 0on design, including an interactive, on-line guide, for a Virtual Care Home (DSDC, 2012), which provides online access to design ideas and an understanding of age-related changes and impairments. This understanding has enabled the designers to create living environments which support the needs of elderly people with dementia. Five individual rooms - living room, kitchen, dining room, and bedroom and en-suite bathroom are presented, each offering instructive advice on layout, fixtures, fittings, and furniture.

The work of the DSDC is represented by eight domains, or key areas, which can make a positive difference to people living with dementia or their carers: Ideas; education; design; housing; creativity; change; communities and information.

A search of their website however revealed no content related to "chef", "hospitality", or "food service" and the only reference to "caterer" being to in-house catering services in their conference centre or provision of catering services in the architectural design pages. The search for "cook" or "cooking" revealed plenty of advice on how to encourage self-cooking within a shared, assisted living environment but little with regard to professional cooks. There was, however, reference to the 2010 International Dementia Excellence Awards where two care homes were given the *Pleasure of Eating Award* - granted by *La Fondation Médéric Alzheimer*, the awards are a celebration of innovation and good practice. One of the winners, Mullan Mews in Belfast encourages the residents to help cook their own meals in communal kitchens with a little help from care assistants.

The other winner, HammondCare of Australia follows a similar approach, with their website (www.hammodcare.com.au 2014) stating:

The main characteristics of HammondCare's approach to food service are:

- *Freshly cooked food*
- *Small home-like kitchens*
- *Increased choice for residents and patients*
- *Engagement in the meal preparation process (a potentially low-cost intervention worth adopting)*

The DSDC (2013) suggests dementia specific facilities should:

- *be small in size.*
- *control stimuli, especially noise.*
- *enhance visual access, i.e., ensure that the resident can see what they need to see from wherever they spend most of their time.*
- *include unobtrusive safety features.*
- *have rooms for different functions with furniture and fittings familiar to the age and generation of the residents.*
- *have scope for ordinary activities (unit kitchens, washing lines, garden sheds).*
- *use objects rather than colour for orientation.*

Although the list is actually greater than that above, the main points are intact. A particular problem, however, may be that some of the recommendations will add substantially to the operating costs of the care homes (Andrews, 2013). The suggestions are also generic in nature and provide little practical, if any, advice for the commercial caterer.

Chaudury and Cooke, in Downs and Bowers (2016) confirm the need for small size dining facilities and pay particular praise to the Swedish system whereby the unit cluster is restricted in size to the number of people who can be comfortably seated around a large dining table. They report that smaller, less institutionalised, dining rooms result in fewer resident accidents or aggressive and disruptive behaviour. These restricted size facilities however are the opposite of what many commercial caterers would consider viable, where volume is often the driver for reduced operating costs. There are opportunities in this respect for long term care home caterers to investigate further the systems for the delivery of foodservice in the smaller units whilst maintaining volume benefits.

An earlier literature review (Fleming and Purandare, 2010) searched for articles post 1980 and used 57 articles with significant relevance and methodological strength. Their results and conclusions identified that designers and architects may be confident about using unobtrusive safety measures, varying the ambience, size, and shape of spaces ... maximizing visual access to important

features and providing for stimulus control with the periodic availability of high levels of illumination. Throughout the review however no mention was made of the effects of the environment on dining facilities or foodservice options.

Cantley and Wilson (2002) discuss the pros and cons of several long-term care home designs in the section on “Design in Practice”. In some cases, the kitchen facilities were compromised due to after-thoughts and the installation of other facilities such as in-house laundries. It is fair to say however that this phenomenon is not limited to long term care home architecture and design and such compromises are often found in other commercial catering operations.

2.17 B What is a meal environment?

Commensality is dining with other people, be they family, friends or newly met strangers and has been so since the very first-time humankind squatted around a campfire to share the day's catch or hunt. The invention or discovery of fire did much to improve the well-being of humankind and brought people together to cook and benefit from the heat. The discovery of fire also did much to extend the variety of food consumed and gatherings would take place to celebrate life and eating. Silverman (2006) commented on the growing evidence of communal eating in a functional ceremony, perhaps a lunch or dinner, as having distinct health benefits. It is proposed that similar effects can be had within long term care home settings and that the environmental factors of dining areas play an important part. It should not be ignored, however, that many people do dine alone, whether through choice or circumstance. As noted above, commensal eating is deeply rooted in cultural consciousness and sociality and eating alone is an anomalous behaviour.

However, there will be many residents of care homes who have spent the last few years of living in the community as solo diners, usually due to the earlier bereavement of their partners, spouses and friends, changes in daily activities or other changes in demographics (Pliner and Bell, 2009). Douglas (1972), however, noted that an "eating occasion" would not normally be considered a "meal" if taken alone. Social eating is generally considered to be the norm and newly registered residents may find the switch from solo eating to sharing a dining space with many others rather daunting.

At this stage informal conversations with long term care home catering staff indicate that they are not included within the care team discussions other than to be directed on what to serve and are not consulted on how to serve food to people living with dementia. In such an environment it is difficult to see just how the catering staff can hope to be seen as professionals.

True, there are support organisations for care home and hospital caterers, including the National Association of Care Catering (NACC), the Hospital Caterers Association (HCA) and FoodService Europe (formerly Fédération Européenne de la Restauration Collective Concédée – FERCO), but these do not consider the non-medical, environmental, or operational factors of dementia care homes. The NACC do publish a number of Good Practice Guides, but all are concerned with menus, recipes and meeting the nutritional needs of care home residents. Is this because most, if not all, care home caterers do not feel a responsibility for the built or social environment in which they work and consequently leave it to the long-term care home owners, and nursing managers to resolve any particular problems in that respect?

The HCA's (2013) *Catering for Health Care* Strategy Document 2013 – 2017 makes no mention of catering for people living with dementia or even the design of catering facilities. It is acknowledged that the HCA are not primarily concerned with long term care homes, but they do have responsibility for catering provision to people living with dementia whilst in hospital and it is surprising that no mention of people living with dementia is made within their strategy document.

Whilst discussing the HCA's Strategy Document it is fair to say that their third aim and objective is rather self-serving: "*The provision and improvement of the professional interests and status of those engaged in the Health Care Catering Services"*. The document continues to assert that "*the HCA will foster strong links with the government, other influential bodies and other fellow associations*". Whilst these aims and objectives are laudable and, in some respects, to be encouraged, a search of their website reveals no mention of their overarching policies, their philosophy or association terminology. A professional body is a group of people in a learned occupation who are entrusted with maintaining control or oversight of the legitimate practice of the occupation. Such a disparate membership will have difficulties in establishing themselves as "Professionals" compared to the established medical professions.

2.17 C The Social and Ambient environment

Much research shows how the environment can improve nutrition and most people have a need for a familiar social environment, a daily rhythm in which they can immerse themselves and familiar social systems and customs they understand. For many residents of long-term care homes that live with dementia this need may be even greater to ensure a safe and dignified existence. The meaningful contact people have with each other can often be emphasised at the dining table or in the common areas.

The universally understood concept of a mealtime is seen in all societies, cultures, and classes but each culture, class and society views their mealtime traditions differently (Fjellstrom.

2004). So how is a "meal" defined? Many encyclopaedias define a meal as being a determined amount of food consumed at a specific time, whereas researchers may define the meal as being a part of an eating space. Others consider a "meal" to be nutritionally distinguishable from "snacks" (Fjellström. 2004). None of those definitions include any mention of the social aspects. For most people the meal is something that is inherently understood, including the formality of eating and the sociability of eating.

Brush et al., (2002) report on the long-term care literature describing most long-term care home dining facilities being noisy, with residents seated long before the food is actually served and seated next to companions with a comparable level of ability rather than social compatibility. According to Cahill et al., (2011) people with dementia are particularly sensitive to their psychosocial environment and good environmental design is now widely regarded as critical to the care of people with dementia. In a one-year intervention study, Mathey et al. (2001) has shown that the institutionalised elderly can improve their nutritional intake. The study at a nursing home in Breda, the Netherlands, concluded that the improvement to the social ambiance of the care home dining facilities led to a positive change in mean body weight and a relatively stable health condition.

A parallel group intervention study was performed. Improvement of ambiance focused on three points: (1) physical environment and atmosphere of the dining room, (2) food service, (3) organization of the nursing staff assistance. Twenty-two subjects completed the 1-year intervention trial. Mean body weight significantly increased (13.3 kg, P, 0.05) in the experimental group (n 5 12), not in the control group (20.4 kg, P 5 0.78; n 5 10). Health status biochemical indicators and the SIP score remained stable in the experimental group, indicating relatively stable health conditions. On the contrary, negative changes in the control group suggested a decline in health status. Dietary intake, which was insufficient at baseline, increased in both groups. This study showed that improving the ambiance of food consumption is a non-negligible issue for improving nutritional status and stabilizing health of nursing home residents.

Again, although the study was not directly related to dementia patients the improvements to the environmental ambiance of the dining facilities led to an improved nutritional status of the elderly residents. This initiative may well prove to be a suitable case for replication with long term care homes for people living with dementia.

Another Dutch study (De Bruin et al., 2010) reported on the efforts to stimulate dietary intake of people living with dementia but still living at home and attending a type of day care centre called Green Care Farms (GCF's). This study aimed to compare dietary intake of older people with

dementia receiving day care at regular day care facilities (RDCFs) or at so-called GCF's. Design and settings: A comparative cross-sectional study was performed at 10 GCFs and 10 RDCFs in the Netherlands. Participants: 30 subjects from GCFs and 23 subjects from RDCFs, aged 65 years or over, were included in the study. Subjects from GCFs were mostly married males who were aged younger than the subjects from RDCFs who were mostly widowed females. Measurements: Dietary intake of the subjects was observed and/or recorded both at home and during their time at the day care facility. Results: In the GCF group, average total energy intake was significantly higher than in the RDCF group (8.8 MJ/d vs. 7.2 MJ/d). Also, total carbohydrates and protein intakes were higher in the GCF group than in the RDCF group (with 257 g/d vs. 204 g/d, and 76 g/d vs. 65 g/d respectively). In addition, average total fluid intake was significantly higher in the GCF group than in the RDCF group (2577 g/d vs. 1973 g/d). Multiple linear regression analyses, carried out by the researchers, revealed that after taking possible confounders into account, day care type was still significantly related to the intake of energy, carbohydrates, and fluids. Their conclusion: "*This study suggests beneficial effects of this new type of day care on dietary intake by community-dwelling older people with dementia".*

Although the attendees were living in the community, rather than in long-term care homes the results of the study may have direct relevance to long term care home caterers, insofar as several of the findings may be transferred to the long-term care home facilities. It was reported that the GCF's enjoy a relatively home like ambiance. The participants are often involved in meal preparation in various ways: peeling and preparing vegetables and laying tables for example. Now whilst some may say this poses Food Safety and Health and Safety risks it is, nonetheless, an avenue worth exploring further. It is recognised that not all residents would be able to participate in such activities, but it is recommended that a trial study in this area be carried out in the future. Again, Cantley and Wilson (2002), reported that in some cases the long-term care homes placed the kitchens "out of bounds" to residents and visitors, despite the acknowledged therapeutic benefits of involving residents in light kitchen duties, whereas other long term care homes actively encouraged participation, albeit under the watchful eye of staff.

One study within the English NHS (Wright et al., 2006) found that elderly patients in an acute elderly medical ward increased their intake of nourishment following the introduction of a controlled study where half the ward patients were fed at their bedside, in the usual manner, and the other half ate their meals in a newly introduced ward dining room. Although the medical ward was not related to dementia patients the study highlights the importance of the social aspect of dining in company.

Patients on the intervention ward were encouraged to attend a dining room every lunchtime by a trained nursing assistant as part of the rehabilitation process. The patients on the control ward ate only by their bedside. Food intake and weight data were collected over the study period on each patient. **Results:** Forty-eight patients participated in the study. At the lunchtime meal studied the dining room group had higher intakes of energy compared with the controls [489 kcal (95% CI: 438–554) versus 360 kcal (95% CI: 289–448), P < 0.013]. There was no difference in protein intake between the groups [18.9 g (95% CI: 16.6–21.2) versus 17.7 g (95% CI: 13.2–22.2), P ¼ 0.63]. No significant difference in weight gain between the two groups was seen (P ¼ 0.6). However, there was a trend towards weight gain in the dining room group. Their conclusion: Food intake can be improved by using a supervised dining room, and this will potentially lead to weight gain and corresponding improvements in nutritional status and rehabilitation.

The above results give further credence to the hypothesis that enhanced social and ambient environments will have a positive impact upon increasing food consumption in people living with dementia and again may well be a suitable case for replication in long term care homes for people living with dementia.

Noise is a well-known stress inducer, especially for people with dementia (Bakker, 2003). Consequently, noise reduction programmes should, wherever possible be introduced. With many dining areas potentially subject to high noise levels every effort should be made by catering staff to play their part in noise reduction interventions. Bakker also suggests table mats would help reduce some noise. It must be recognised that dining and food production areas are inherently noisy, mostly by nature of the activity but partly due to design, especially kitchen and servery areas. The clatter of pans, emissions from steam ovens and steam tables (Bains-Marie), ice machines and the general noise of preparation all contribute to what could be significant distractions and a cause for concern. According to Maguire and Howards (2001) such noisy environments certainly create issues for the cooks and chefs with recorded sound levels of up to 90 dB. Couple that level of noise with the sounds produced on the service counters, where used, and there can be no doubt that the created environment could be construed as injurious to the mental well-being of people living with dementia and may lead to agitated behaviour and a reluctance to eat. For those residents constrained to sitting in an area used as a pathway by staff or even close to servery counters the auditory confusion could be significant (Brush and Calkins 2008). Even playing background dinner music could cause anxiety.

A study by Durnbaugh et al. (1996) suggested that the removal of distractions during mealtimes helped people living with dementia improve their calorific and nutritional intake. They

also suggested removing condiments from the meal trays, to avoid distraction and to keep any desserts completely out of sight until the main meal had been consumed.

The conclusion from the above indicates the most efficient way of reducing kitchen noise and distractions would be to enclose the kitchen and service areas entirely. In doing so however would be to contradict other research which promotes the use of open kitchen environments as being of significant help to people living with dementia. Pollock (2003) suggests servery and catering trolley sound sources should be minimised as much as possible. He further suggests ensuring curtains and blinds, absorbent ceiling tiles, table settings with cloths, napkins and flowers are used as sound absorbers. He further suggests avoiding hard chair legs on hard flooring and to use cushioned floor finishes.

One of the more comprehensive studies on the effects of environmental factors on food choice, consumption and intake comes from Stroebele and De Castro (2004). They make interesting and informative claims regarding the ambiance which deserve further study in the context of feeding people with dementia. They assert that whilst we eat, we respond to environmental stimuli known as ambience. Apart from the external factors such as social and physical surroundings already discussed, including the presence of other people and sound, "*other factors such as temperature, smell, colour, time, and distraction affect food intake and food choice*". There are different ways in which the smell, colour and temperature of foods do affect food choice and consumption but the effects on nutritional health are yet to be determined.

Stroebele and De Castro (2004) further indicate that the available literature suggests that there are major influences of ambience on eating behaviour and that the magnitude of the effect of ambience may be underestimated. It is suggested that the manipulation of these ambient factors as a whole or individually may be used therapeutically to alter food intake. Their major contributions are that "*Color can be a food-internal or a food-external stimulus. The latter refers to the colors in the environment*". They further propose that:

> In food service, food colors and colors of objects interact. Blue grapes do not appear blue if served on a blue plate. The choice of color for decorating a restaurant depends strongly on the prospective customers. Young people seemed to prefer bright, strong colors, whereas adults mostly enjoyed their meals in weak, unobtrusively colored environments.

The advice would be that the dining environments of long-term care homes be carefully considered as it appears that colour as a food-external stimulus may affect food intake more

indirectly by manipulating people's cognitive, emotional, or physiologic reactions. "*Environmental colors seem to more unconsciously influence mood, sensation, appetite, food choice, hunger, and food attractiveness*", Stroebele and De Castro (2004).

Bakker (2003) suggests lighting and colour contrasts play an important rôle in improving the dining environment. Whether the subject of lighting should be included in this section, or the previous section on the built environment may be debated. There is no doubt, however, that bright lights stimulate, and perhaps aggravate, most human beings. Conversely, warm light relaxes and slows down a person's activities. In terms of dementia care, the architectural or design advice is that all tabletop settings should be brightly illuminated (Bakker 2003). Though Brush et al. (2002) have determined that reflected glare and lack of contrast makes it difficult for residents to see their food, any dim lighting has a more detrimental effect, exaggerating any visual problems which may challenge some LTCH residents.

The effects of lighting on food intake have been studied by Stroebele and De Castro (2004) and found that within the general population people are less inhibited and less self-conscious when lights are low and, therefore, eat more at night. It is argued that exposure to the dimmer lighting of evening promotes general behavioural disinhibition. On the other hand, elderly people or those with dementia tend to need the brighter light in order to determine the food on their plates. *If they cannot see it, it does not exist* (Bakker, 2003).

2.17 D Preparation, Serving and Service Elements.

According to Barnes et al. (2013) poor staff training can lead to mealtimes becoming a task-centred chore rather than a pleasurable experience. Hartwell et al. (2013) recognise that "*institutional foodservice has always been a challenge and is where the meal is part of the business but not the sole purpose*". Their study identified gaps in the literature on institutional foodservice and how the contextual environment of hospital wards facilitates operational practices during mealtimes. One particular aspect of the study was the report on one elderly patient, who had not been eating well since arriving in hospital. He had been used to eating with a knife and fork and at a table and ate little whilst eating in bed or at his bedside. The patient ate a complete meal at the newly introduced ward dining room, rather than the little he ate at his bedside.

Altan and Gehrels (2017) discuss the perception of hospital caterers' production systems and acceptance of pre-plated meals by the catering staff and patients, with one respondent stating "*[steamplicity] has been tested and can be completely ripped apart. Due to its pricing and lack in [patient] satisfaction*". Conversely, Dillon et al., (2012) reported on the introduction of the Steamplicity system by Morrison, a healthcare food service division of Compass plc in Canada.

Morrison reportedly claimed a 90% patient satisfaction score together with 39% tray waste reduction.

Barnes et al. (2013) identified a long-term care home situation where all the meals were pre-plated before being served to the residents. The perceived conclusion was that the pre-plated meals, although being a more efficient method of service, had a negative impact on the residents' experience, making the mealtime environment institutionalised and, again, more task centred. Care home staff had been observed serving the pre-plated meals to the residents with many not communicating and eating in silence. In contrast, two types of "family service" mealtimes were observed, including one where a chef was present to serve the food onto plates. The social environment was considerably improved with the residents doing more for themselves, allowing the staff to respond to residents' requests and generally overseeing the dining room activities. We could conclude from the above that pre-plated meals, the preferred service style for many long term care home and hospital caterers, are not to be recommended. That does raise some serious questions about costs –v- benefits and how that style of service impacts upon the residents' experiences.

Bakker (2003) makes a clear call for there to be a strong contrast between table ware and the tabletop and proposes "*if they cannot see it, it does not exist*". The Salisbury NHS Foundation Trust Quality Account (2014) reported on an experiment whereby elderly and dementia patients were served food on blue coloured plates. It was reported that patients did improve their food intake by 30 grams per day. No reference to an academic study of this initiative has been found. There are, however, previous studies which may have influenced the Salisbury initiative.

Dunne et al (2004) in a study of residents with advanced Alzheimer's disease investigated the effects of interventions to improve deficient contrast sensitivity and poor food and liquid intake. Differing plate colours were used in the interventions as part of the study. White tableware was used for the baseline and post-intervention conditions, and high contrast red tableware for the intervention condition. In a follow-up study one year later, other contrast conditions were examined (high-contrast blue, low-contrast red and low-contrast blue).

The study reported significant increases in food and liquid intake were observed with high-contrast intervention compared to baseline in the participants. One could argue that the novelty effect of the high contrast tableware had an impact, but the baseline participants were tested at intervals post intervention. Dunne et al. (2004) also report "*the intake levels changed as a function of contrast levels of the tableware and hence as a function of perceptual salience. Hue itself was*

relatively unimportant". How this can be applied to a long-term care home setting for people living with dementia in the UK needs further study.

Piqueras-Fiszman et al. (2013) have investigated the influence of plate colour on the perception of food. Their study tested the extent to which plate colour would influence the hedonic and gustatory experience of food on a plate. The results of their investigation demonstrated that the colour of the plate did influence the diners' perception of the foods used. Zellner et al. (2010) also investigated the effect of plate colour concluding that plate colour did influence attractiveness of food perception though the plate colour did not influence the flavour liking of the foods. Again, further studies are required for people living with dementia within a long-term care home setting.

Within the generic world of Hospitality Management, a number of studies have been carried out on how plating and presentation affects the liking and even taste of food. Furthering their previous study Zellner et al. (2011) investigated how the visual properties of food affect expectations regarding the chemosensory qualities and hedonic value. Within their experiment, the neatness of the food presented on the plate influenced liking, suggesting that the neatness of the food on the plate signified a higher quality type of food.

Van Ittersum and Wansink (2012) considered plate size and colour, coupled with the effect of the Delboeuf Illusion. In their study the conclusion was that people put more food onto large plates and consequently ate more. No studies appear to have been carried out with people living with dementia as the investigation subjects. Due to impaired cognitive abilities, it may be that the results of the above studies have little if any relevance to the increase of nutritional food intake for people living with dementia, though this may be an avenue for further investigation.

It is reported that as the dementia patient loses the ability to self-feed, using traditional implements, then self-feeding can be improved by the introduction of finger foods (alzheimers.org.uk. 2013) with regular snacks or small meals being more helpful than set mealtimes. Most of us in the western world have grown up and developed with the notion of three-square meals a day and even set patterns as to what those meals contain. Within the UK most people generally follow the traditional breakfast, lunch and dinner pattern, or the breakfast, dinner, and tea (or supper) pattern favoured in some parts of the UK.

One study in the United States of America (Boczko 2004) suggests a team approach called "Timed Snack Protocol" would decrease malnutrition and dehydration in people living with dementia and dysphasia, a particularly distressing combination, in long term care homes. The participants of the study, carried out over a four-week period, were weighed weekly. Snacks were distributed two

hours after each meal and the consumption of those snacks was recorded for each participant. The highly spiced or sweetened finger snacks, chosen by patient preference, were distributed as a "medication protocol" by nursing assistants to ensure both regular delivery and consumption. Boczko hypothesised that the hand-held finger foods would be consumed by the participants for a number of reasons: "*(1) residents' self-feeding leads to their increased awareness of food; (2) snacks based on residents' preferences (e.g. for sweet or spicy foods) are better tolerated; and (3) consumption of discrete, small amounts of food may serve to satisfy appetite without overloading the system*."

Although the population of the above study was only small, 3 men and 3 women, it would seem to offer some positive guidance for future feeding strategies. The results were generally positive with four residents gaining weight, one maintaining weight and one losing weight. One conclusion drawn by the author was that an interdisciplinary team was an essential element to ensure complete follow through of all nutritional recommendations.

Perivolaris et al. (2006) discuss the case of a large long term care home, for residents with dementia, where three smaller dining rooms were introduced with an individual capacity of 25 to 30 residents. The initiative included the introduction of many familiar, homelike, artefacts and features including sideboards, bookcases, houseplants, and pieces of artwork. They also included a fireplace and injected the aromas of fresh baking bread and freshly brewed coffee, in much the same method sometimes used by supermarkets to encourage customer purchases. These initiatives were reported to have a significant impact on the nutritional intake of the residents. However, a significant barrier to providing what could be considered "round the clock dining" is the inherent labour costs involved.

Remsburg et al. (2001) introduced a buffet style dining system to a long-term care home setting for people living with dementia and compared the results against a cohort who continues to receive their meals on the original tray-based system. The results indicated that although there was no significant increase in nutritional intake or weight gain, nor was there any loss. Nonetheless one major gain from the project was the increase in quality of life experienced by the subjects. The evening meal had become a major social activity. Residents were reported as looking forwards to the evening buffet meal.

All the preceding results of the literature review on how the social environment elements demonstrate a general consensus on how the environment can help improve nutrition, though these are mostly single studies and I perceive there is a need to pull these together for future research.

2.17 E Using architectural service design tools to understand care home environments.

Service design is recognised as an academic framework approach which can have significant success in increasing service values in hotels (Kozak and Gürel, 2015). This same service design framework is also relevant to other applications such as healthcare settings. Architectural service design is a theoretical framework which can be applied in the health care sector, especially within the care home market. This is a complex process involving many stakeholders, each having their own specific needs van Hoof et al. (2013).

It was decided to research this area further in an attempt to establish the use of design in care homes, particularly those catering for people living with dementia. The search revealed some knowledge related to the silver economy and life in care environments. The majority of the work found was directly related to the environmental factors and the links between hospitality and healthcare.

Having been contracted as a Hospitality Management consultant to several European tour operators and Hotel Resorts, I had already experienced the architectural challenges encountered within dozens of new build and refurbished hotels. I knew how important sensory design was within architecture when creating a new resort hotel environment which would be used and enjoyed by a wide age range and demographic. How then, was architectural sensory design being used in healthcare environments?

The search led to the following, interesting, and helpful, published articles and books all with one common aim – to promote Therapeutic Architecture to optimise well-being and health in old age. Osei (2014) proposes therapeutic architecture, incorporating all the senses, apart from just vision, as a means to create a therapeutic environment. She applied her work to propose a new build cancer treatment centre. One interesting question raised in her work is how do our senses influence design; what would the built environment be like if touch, taste smell and sound were given equal importance as sight in the architectural design process? Her goal was to create a building that would have a positive impact on healing and wellbeing. Her practical theories would be equally beneficial to the care home environment.

Chrysikou et al., (2018) discuss the benefits of a new "Dementia Village" and how the worlds of hospitality and healthcare intertwine. They propose the built environment plays a major rôle in the well-being of older people and introduce the theory of the salutogenesis approach to human health. The definition of salutogenesis is:

… an approach to human health that examines the factors contributing to the promotion and maintenance of physical and mental well-being rather than disease with particular emphasis on the coping mechanisms of individuals which help preserve health despite stressful conditions (Merriam-Webster, n.d.).

They further suggest that each discipline, architecture, and hospitality, could learn from the other "*through multi-disciplinary collaborations between the interface of service provision and the built environment*". Indeed, they reveal that new healthcare facilities such as care homes are now being designed and built like hotels, with hotel like environments which help to improve the user experience.

2.18 Catering systems

There is an interesting division in the definitions of "**Food Service**" or "**Foodservice**" between North America and Europe. In the United Kingdom, the Cambridge Dictionary defines Food Service as being "*the business of preparing food for schools, hospitals, companies, etc. and serving it to people there*". Many companies in the business of providing food service to care homes, hospitals and schools also refer to the provision of food and beverage services as **catering**. The United States define the one-word noun, Foodservice as being "*about food and beverages that are consumed out of the home*". For the rest of this thesis I will use the term "catering" or "catering services" to relate to Food Service in long term care homes

The history of the use of the word "systems" can be traced back to the late 1940s and 1950s when the reductionist approaches of scientific method used by many designers and engineers encountered many problems when applied to complex scenarios (Johnston, 1994). Moving away from the engineering and design fields, "Service Systems" aroused the interests of Operations Management (OM) academics in the 1980s. (Johnston, 1999). This was mostly down to the timely realisation that many OM classes were populated by students who would have little, if any, future use for concepts such as economic batch quantities, stock control or line balancing. That was not to say that those techniques had no value but the central issues facing service operations managers at the time were more concerned with customer service, service design and quality management.

In an earlier academic comment, Livingston (1979) declared:

> It was probably inevitable that the systems approach that has been used in attacking other complex problems in our terrestrial and extra-terrestrial environments (e.g. weapons systems, space travel systems, eco systems), would result in the application of the same concept to the problems in the food service

> industry. What does appear to be astonishing is that the term 'Food Service System' did not come into general use before the 1950's and that it was not the professional food service managers, but rather food technologists and industrial engineers, viewing the problems of the food service industry, who brought the term into general use.

Other early research into system productivity in hospital kitchens (Woodman, et al. 1996) surveyed a range of different NHS hospitals and produced a simple definition of catering productivity as being the number of meals produced per day, per chef (m/d/c). Further analysis discovered some extensive differences between the hospitals surveyed. Their final conclusion was that the costs of implementing a cook-chill system would be too high for most hospital catering departments and would, instead, be better off buying in pre-prepared vegetables and other partially prepared commodities.

Within the generic service sector the development of systems thinking was encouraged in relation to business applications (Kirk and Pine, 1998). Kirk and Pine (1998) also refer to three meanings of the word "technology" in business literature: First, the knowledge used to produce any product is referred to as *Product Technology,* specifying the characteristics and uses of the product; Second, the knowledge used to organise the inputs and equipment to produce the product or service is referred to as *Process Technology*; Finally, the knowledge informing the operation of a business, the management skills required to effectively run the business, by using available resources effectively, is referred to as *Management Technology*. Kirk and Pine (1998) also suggest that Operating Systems; Communication Systems, and Management Systems could also be referred to as forms of technology but possession alone of such systems would not make the business a success.

Kirk (1995) describes the term "system" as meaning an assembly of parts, leading to a certain sense of confusion, with the meaning of "system" degenerating to little more than a package of distinct parts bought "off-the-shelf". He cites examples as being "computer system" or the "catering system" and decries the use of such systems as ready-made solutions without testing their effectiveness. He refers directly to examples where such packages have failed due to faulty analysis, design or even implementation. Many examples included failures of cook-chill or cook-freeze systems being installed in establishments where a more thorough analysis would prove such systems to be unsuitable. He further identifies the differences between "soft" systems and "hard" systems, and the value that can be gained by use of a combination of hard and soft methodologies.

Pine (1987) provided an overview of the technological changes available and used in the catering industry of the time and the effects on productivity by the implementation of a systems approach. Going back even further, an example of the above unsuitability was referred to by Willett (1969). In this she stated that for hospitals, new food service systems were necessary and desirable. However, many of the new systems being sold to hospital administrators and directors, rather than directly through consultation with hospital food service managers, were inappropriate, less efficient, and more costly than need be or promised. She questioned the need for new food service systems without a thorough analysis of the existing system and stated the goal in any change should be a combination of excellence with improved economic performance. She also warned the American Hospital Association and the American Dietetic Association to be sceptical of some claims they may hear from systems salespeople without a critical analysis of the need for such new systems. She closes her argument with the following:

> Can we arrange a real world, optimal conjunction of the cost-cutting factors that are right for hospitals with our own recognition of the human needs with which we must deal? I believe we can. As a long-range social matter, I think we must.

Moving ahead, Johnston (2005) noted that the interest in service systems and operations had not dwindled and had remained high on the agendas of OM and Human Resource Management (HRM) academics as well as for the marketers.

The existing research on various types of catering services in care homes for people living with dementia is sparse. A rare exception was found in **Food Service Organisation – A managerial and Systems Approach** by Gregoire and Spears (2013). In this they report on the use of foodservice systems within the US Nutrition Services Program for Older Americans. They also comment on the challenges faced by care home operators with rising food and labour costs, lack of government financial support, together with difficulties in recruiting and retaining qualified staff. It is often said that what happens ‘across the pond, happens here next’; In the UK we are now experiencing that sense of déjà vu.

As so little was found directly related to care home catering systems, I decided to widen the search to catering systems within hospital environments, encouraged by the work of Willett (1969), Kirk and Pine (1998), and others, previously mentioned.

Livingston (1979) had earlier defined a "food service system" as being: “*An integrated program in which procurement, storage, preparation, and service of food and beverages and the*

equipment and methods required to accomplish these objectives are fully coordinated for minimum labour, optimum customer satisfaction, quality and cost control."

Willett (1969) examined a number of proposed "new ideas" for delivery in what now seems to be a rather tongue in cheek manner, though a few of the ideas proposed have come to fruition. Is there truly, nothing new in the world?

Table 2.5: Original New Ideas 1969. Source: Adapted from Willett. (1969) Hospital Food Service Systems

	Results
Turn food service over to an outside caterer and let them worry about it	This is now commonplace in the sector
Buy all food prepared, washed, plated, ready-to-be-re-heated, send it to the patient and let the nursing staff heat and serve the food; throw away the utensils	Again, this is becoming commonplace with the Medirest / Steamplicity concept gaining popularity
Put the recipes and menu components into a computer's memory bank along with prices, nutritional components, and frequency factors for service. Tie this into a perpetual inventory, recipe expansion program, and food ordering system - all computerized.	The question to ask now is, just how many food service software programmes are on the market.
Have all food and supply records kept centrally in a geographic region. Use a central kitchen to prepare most of the food and ship it to receiving units.	This has been the modus operandi for many companies for many years.
Automate meal delivery to the patients and the hospital staff via electronic and elaborate materials-handling equipment.	I am sure many companies have tried, though I am not aware of any successes.

Hartwell et al. (2006) discuss the differing catering systems in use in NHS hospitals in the UK. They also emphasise the essential need for a catering system which provides an optimal level of food and nutrient intake in the most cost-effective manner. In this research the evidence pointed mostly to the Ganymede or Regithermic trolley service system of food service to be both the most accepted by staff and patients, compared to plated service.

The original Ganymede system was based on a conveyer belt type set-up, where the pre-cooked foods were plated at various points of the conveyor belt journey.

Figure 2.7: Typical Ganymede conveyer system

The completed trays were then stored in the heated trolleys and transported to the wards for distribution. The system as originally introduced had some significant drawbacks. The plated meals lost heat very quickly; the foods, such as baked pies and battered fish, roast potatoes, and similar items, lost their crispness due to moisture retained under the cloche plate cover; the system takes up a great deal of room, needing significant space for a kitchen and storage facilities; the system is expensive to maintain and requires a significant number of staff to operate.

A later adaptation of the Ganymede system was to prepare and cook the food, hold in multi portion heat-proof trays within heated trolleys, dispatch to ward kitchen serveries for plating and service on the ward. This removed the need for the conveyor belt system, freeing up valuable space. Some of the trolleys were later fitted with over-head heated gantries and / or heated bains-marie (heated wells in the trolley counter top) to support plating and service. It was this latter type of heated trolley service that was observed in the care homes.

Figure 2.8: Heated Ganymede style food trolley with heated gantry

Edwards and Hartwell (2006) made a comparative analysis of hospital food service systems and made an introductory analysis of a commercial, pre-plated, microwaved meal service system.

The new system was assessed against the traditional cook-chill system for food consumed, plate waste, trolley waste, and patient acceptability. Apparently, the pre-plated microwave meal scored highest for all variables with significant advantages reported and a higher patient acceptability. The limitations of the microwave system were compared to the cook-chill trolley system, these being lack of menu choice, minimal choice for vegetarians or those who required a “soft diet” (dysphagic?), and no opportunity to vary plate accompaniment content, though this was not regarded as an issue. One issue not raised in the research was the lack of traditional fried food choices such as battered fish, crisp baked savoury pies, though some younger patients were disappointed by the lack of opportunity to order chips as a side dish. More on the use of the commercial steam microwave meal system later.

Hickson et al. (2007), noted the disadvantages of microwave plated meals had not been overcome, after a year of use. A further concern raised by the research was that hospital patients would be unlikely to meet their daily energy needs by relying solely on the microwaved meals, though the system would have the potential to do so with some adjustments.

So far, the literature reviewed related to catering systems has been significantly dated. Generic catering systems have been researched and analysed many times over the past years (see for example Kirk, 1995. Kirk & Pine, 1998. Johnston, 1999). Kirk (1995) has produced what may be considered the most accurate definition of catering systems, particularly in health-care settings, as being a combination of both hard and soft systems which consider the human factors involved.

Foskett et al. (2015) state it is every chef's challenge to ensure the food they prepare (mise-en-place), cook, and serve is safe, cost effective and of consistent quality. It is further suggested that this can only be achieved when the chef can analyse the full procedures, by utilising critical path analysis and identifying all work processes as part of the catering system.

Table 2.6 demonstrates the different food production and service systems in common use within the catering industry in the UK. Table 2.4.6 explains some of the less common, or complex, food production methods in use.

Table 2.6. Common Methods of Food Production / Systems. Source: Adapted from Foskett et al. (2011). P. 208

Food Production System	Description
Conventional Cook-Serve	The most basic method utilising mainly fresh foods and traditional cooking methods. Often linked to a la carte type restaurants or hotel room service operations with food cooked to order.
Cook-Hold-Serve	Food is cooked and kept hot at point of service and then served - often linked with table d'hôte (TDH) menus. Most often used for large food service numbers.
Interrupted Production (Cook-Chill and Cook-Freeze)	Food is cooked and then chilled or frozen, stored, transported, regenerated, and then served. In this method there is a "Time-Lag" between production and service delivery - the service delivery is **de-coupled**.

Table 2.8 Complex or alternative Food Production Systems. Source: Adapted from Foskett et al. (2011). P. 208

Food Production System	**Description**
Convenience	A method of production using predominantly convenience and / or partially prepared foods
Call Order	Where food is cooked to order either directly from a customer command (as seen in American style diners) or from a waiter / waitress. The production area / kitchen is often open to customer view.
Centralised	Production is done in a central production unit (CPU) and is not directly linked to service. The prepared food is either cook-chill or cook-freeze, appropriately stored at correct temperatures, and then distributed to satellite kitchens for regeneration and service
Sous-Vide (Under vacuum)	At one time this method was often referred to as "Boil in the Bag" and was generally only available from specialist food wholesalers. This method has evolved making use of modern technology. Foods are vacuum sealed prior to cooking, cooked at specified temperatures and then either served immediately, chilled, frozen, stored, distributed and regenerated.
Hybrid Assembly	A system based on a combination of the above, accepting and incorporating the latest technological developments in the preparation, storage, distribution, and regeneration of food products.

As indicated by the last system, Hybrid Assembly, the systems should not be viewed in isolation.

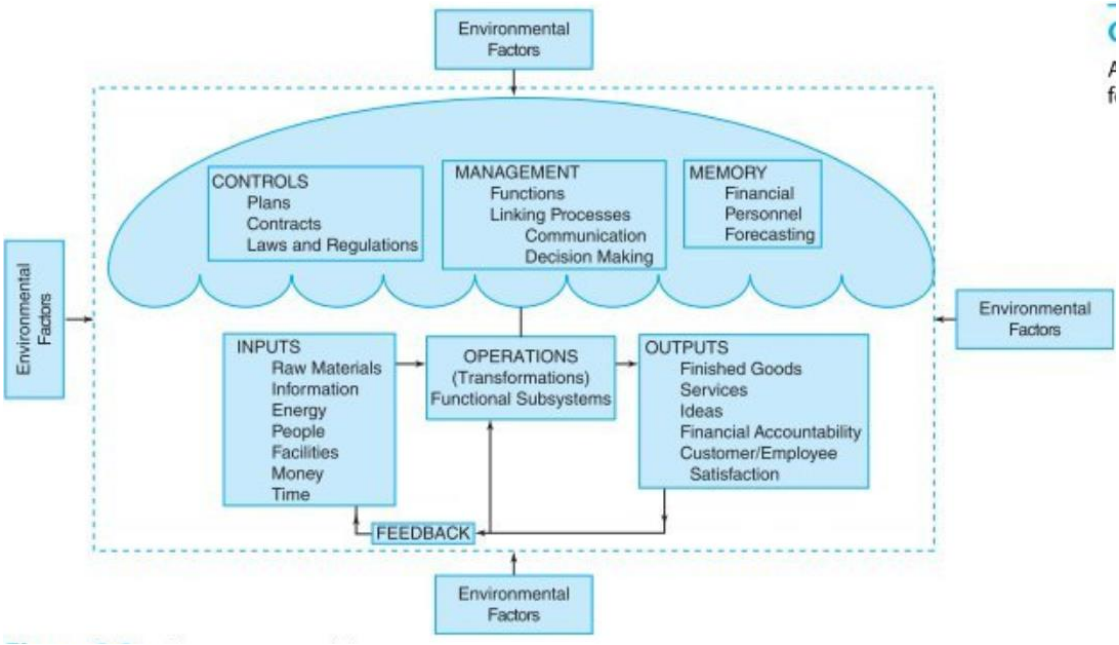
Rodgers (2005) analysed three food service systems - cook-chill, cook-freeze, and the more conventional cook-hot-hold - claiming the choice of which was a major investment decision for catering companies. The review excluded other catering systems. The research identified potential problems inherent in decoupled food production and service. The research was concerned with highlighting concerns related to food safety, HACCP, and good manufacturing practices (GMP). The time buffer created in the bulk food system, by decoupling production from service was identified as having the potential to increase the risk of bacterial growth.

In a related, and later, article, Rodgers and Assaf (2008) analysed the quantitative methods needed to measure the productivity outcomes of foodservice systems. One result of their research was to contend that despite the potential benefits proposed by the equipment manufacturers, there was little statistical data to support the claims made.

Puckett (2013) has produced an in-depth manual for use by Health Care institutions in the US but argues that what might work well in a hospital may not work quite so well in a nursing home environment. The book does, however, contain some very useful information which may adapt well for the care home catering industry in the UK and other countries. Surprisingly, however, no mention is made in the tome about the clinical condition, Dysphagia, other than to refer to the need for texture adjustment of foods for the elderly or for speech therapists to be consulted in the case of swallowing problems. Considering the percentage of elderly residents who do have dysphagia I believe this to be a serious omission.

Payne-Palacio and Theis (2016) refer to catering systems as having a number of subsystems, inputting their contributions to the organisational system. Their diagram systems model, Figure 2.9, being clear and simple to use, can be adapted for many situations.

Figure 2.9: The systems Model. Source: Payne-Palacio and Theis (2016 p. 61).



Payne-Palacio and Theis (2016 p. 63) offer four major groups of catering (Foodservice) operations: *Conventional, Ready-Prepared, Commissary and, Assembly / Serve*. Translating the reported US systems into UK based terminology is shown in Table 2.8., together with a brief explanation of advantages and disadvantages.

Table 2.9. US Definition / UK

	Advantages and Disadvantages
Conventional System Cook-Hold-Serve. Raw foods purchased & prepared on-site, served soon after preparation.	Quality control standards easier to maintain. Adaptable to local, ethnic & customer preferences. Greater flexibility. Work environment can be stressful. More staff normally required to cover all meal periods and preparation time.
Ready Prepared System /Cook - Chill or Cook - Freeze Foods are purchased & prepared on-site, chilled, or frozen on-site and stored chilled or frozen for later regeneration.	Reduction in peaks and troughs of staff workloads. Easier to create production schedules. 40-hour weeks, 8-hour days easier to timetable benefitting staff. Decreased staff turnover. Large chilled / frozen storage facilities needed. Equipment costs can be high – blast chillers / freezer / tumblers. Structural and texture changes to food difficult to control
Commissary / Central Production Kitchen Centralised food purchasing & preparation, usually in large, factory like production kitchen. Food distributed to service satellites.	Large volume purchasing cost savings. Lack of space in service unit compensated. No need for production kitchen. Food safety in distribution. Many critical points in HACCP system. Transport costs
Assembly - Serve No food production on-site. Referred to as *kitchenless kitchens*. Readymade, chilled, or frozen, individual starters, main courses and other products purchased, stored, and regenerated & assembled as required. Often referred to as "*pick, pack, pop & pitch!"*	Significant labour savings. No need for culinary skilled staff. Better portion control Equipment and space requirements minimised. Limited selection of meals depending on location / market. Careful analysis required before switching to this system

Altan and Gehrels (2017) carried out research into the perception of hospital managers, dietitians, medical staff, and hospitality services of hospitality-oriented food services in health care. They recruited participants from seven acute care hospitals in Belgium and the Netherlands. The study reported on the different meal production and delivery systems in use throughout the case-study hospitals. Again, no mention was made of systems in place, catering for people living with dysphagia.

2.18 A Long-Term Care Homes - Catering Definitions

Among the many aims of the caterer or food service operator, one of outstanding importance is '*to do no harm*'. This aim would appear to be self-evident and be beyond dispute. However, it is important that it should be stated because there may be circumstances in which some caterers, food service staff or chef practitioners, do not pursue this aim unreservedly. By harm, I mean here the deliberate or accidental exposure of the residents to any form of food contamination.

A second aim of the caterer is to provide ambiance, comfort, and dignity in dining. Care home residents, who are not likely to be in the best of health or stressed, are usually persons full of fears and anxieties that the caterer, by his/her behaviour, can assure the resident that nothing in the meal experience will contribute or add to those fears but can assure the resident that the meal experience will be a positive and wholesome one. Another less well appreciated aim of the caterer is to teach and educate the residents and food service staff. For example, when it comes to food safety, the dining public, whether in restaurants, canteens, hospitals, care homes etc., *'bears all the health risks'*. Therefore, it is incumbent on all caterers to ensure that behaviours around food are improved continuously, and food preparation and service practices that directly relate to food-borne illnesses are eliminated in all the various catering establishments whether commercial or non-commercial. Much is known nowadays about what one should eat and both the positive and negative aspects of eating certain foods, but for the full benefits of this knowledge to be reaped it must be conveyed to the consumer. Also, the information conveyed to the consumer needs to be accurate and needs to be checked regularly and interpreted for the individual consumer by a competent, knowledgeable, and certified practitioner.

2.18 B Innovation in Long Term Care Home Catering and F&B Service

The care home catering sector has been relatively slow to take up some significant and innovative changes in food preparation and service systems. The literature review has revealed very little other than a few on-line advertisements for 3-D food printers and sous-vide machines. There were also a few advertisements for pre-prepared frozen and fresh ready meals in bulk and individual portions (See for example: Apetito, Anglia Crown, and many more) and some for regeneration using "microwave - steam technology". Several companies in Germany have been reported as experimenting with texture modified (TM) printed food for EMI residents with dysphagia (Burger et al, 2019) and Aguilera and Park (2016) comment on the technical opportunities for food companies in the provision of TM foods.

The commercial use of 3D printed foods is likely to be slow to enter the general F&B and culinary market, though Food Ink, a Pop-Up 3D-Printing restaurant opened the concept in London,

Barcelona, and The Netherlands. The short-lived concept printed all the foods, chairs, decorations, and lamps!

Other restaurants have introduced the concept but is not yet in wider use. 3Dsourced.com (2021) report on one notable exception, the five-time Michelin star chef, Paco Pérez. Pérez has introduced 3D printed food in his two Michelin starred restaurant, La Enoteca, in Barcelona (see: https://enotecapacoperez.com/en/) and his Michelin starred restaurant 5-Cinco by Paco Pérez in Berlin (see: https://www.so-berlin-das-stue.com/restaurants-bars/cinco-by-paco-perez/). Another restaurant, again Spain, the Cocina Hermanos Torres, are using the technique to allow greater precision in presentation and minimising food waste (https://cocinahermanostorres.com/en/).

3Dsourced.com (2021) also report on the development of 3D printed raw materials, including meat free, vegan 3D printed steaks. With the rise in domestic interest in vegetarianism and veganism there is an anticipated increase in demand for these products, to be cooked and served in the kitchen, rather than being cooked and processed in factory and then re-thermalised. Russian astronauts have successfully 3D printed “steaks” in a zero-gravity environment on board the International Space Station, where living cell cultures of beef muscle were used in a 3D printer (Murray, 2021).

To date, there are no convincing scientific studies on the benefits of printed foods. As the use and efficacy of printed food is still at the research and development stage, other advanced technologies are providing an opportunity to prepare and combine different textures, colours, and flavours. Given that 3-D printing of TM foods may be some time away from being totally ready and food safe it is disappointing that many care home chefs and cooks have yet to take advantage of the techniques sometimes referred to as "Molecular Gastronomy" or, more correctly, "Molecular Cuisine".

Most of the large-scale food production companies have for many years used the many hydrocolloids available to stabilise their foods. Commercial application of hydrocolloid gelling and thickening agents for texture modified foods is on the increase from suppliers of ready-made meals to the care home catering industry (Aguilera & Park, 2016, Burger et al*.,* 2019). The materials are readily available from several suppliers and training courses in their use, both live workshops and on-line videos, are also available. A recently published book, Handbook of Molecular Gastronomy: Scientific Foundations, Educational Practices, and Culinary Applications (Lavelle et al., 2021), provides a unique take on what is termed Molecular Gastronomy, which provides a good grounding

in the scientific aspects and technology available, we will see what uptake there will be among care home cooks and chefs.

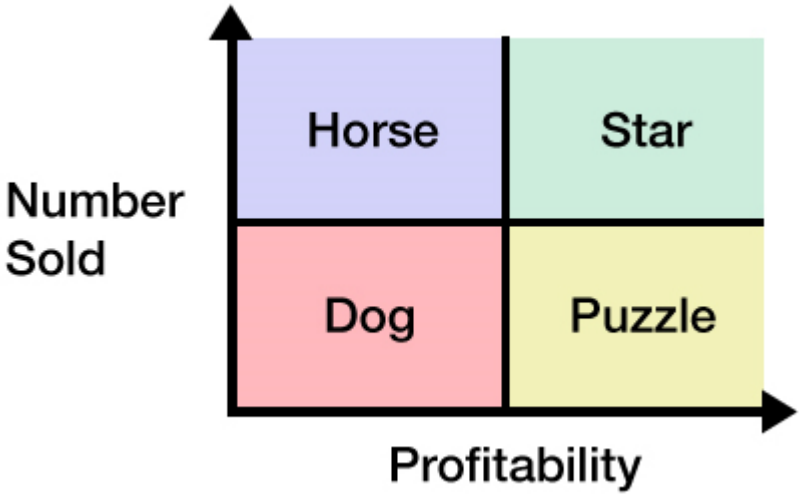
2.18 C Menu Engineering System

As will be seen in Chapter 3, the term Menu Engineering (ME) is a largely unknown term within the UK food service industry. Most of the chefs interviewed, or responded by questionnaire, had never heard of the term, let alone used it. It seemed like an alien concept, to be avoided at all costs. In fact, it could prove to be a valuable weapon in the care home chef's culinary artillery.

ME as a concept was first developed by Kasavana and Smith (1982), based on the Boston Consulting Group matrix. This was developed as a study of the popularity and profitability of a range of menu items. However, as an offshoot of the concept and by making minor alterations to the process, Feldman et al. (2011) claim to have developed the system as a strategy to enable the elderly to select healthier meals. This was also investigated by Mahadevan (2012) in an effort to determine just how effective ME could be for the assisted-living elderly. One point to evolve from their research was the apparent mis use of the term ME, as understood in Europe and the UK.

What their research was really investigating was the use of what we term in the UK as Menu Mechanics or Menu Placement, the placement position on the published menu, either hard copy or on-line. The purpose being to place those menu items which the manager or chef wanted to sell the most of. By strategic positioning on the menu, customers could be 'nudged to choose the items which the restaurant wanted to sell the most of. The menu should also demonstrate tangible evidence and communicate a reflection of the restaurant's image (Bowen and Morris. 1995). Radice (1993) suggested that the primary purpose of any menu was to sell those items which the restaurant wanted to sell most of.

Figure 2.10 Menu Engineering Quadrant



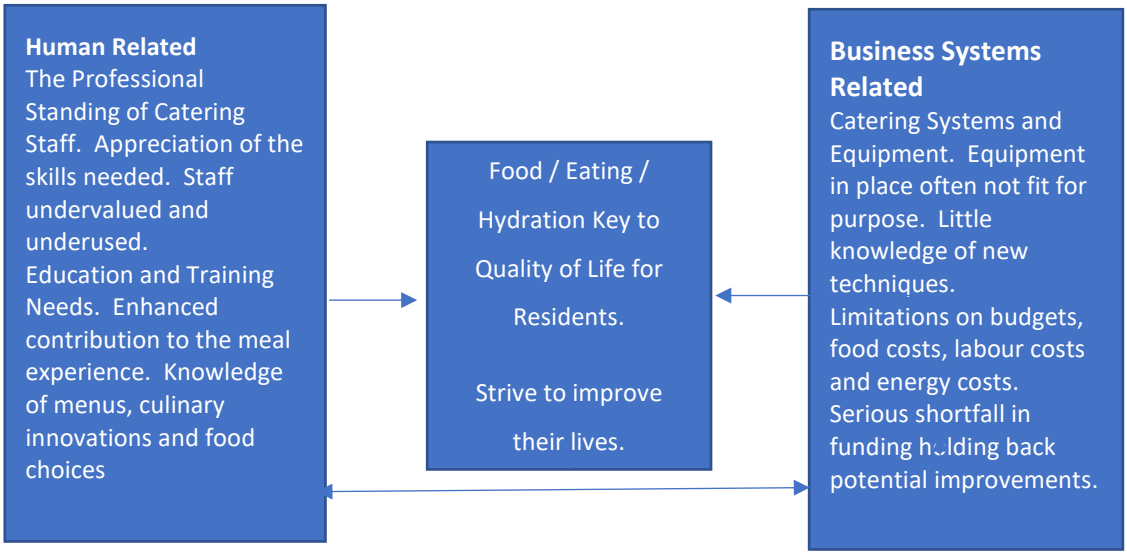
However, the original use of ME within care home catering could potentially lead to significant cost savings and waste reduction. ME has been described as a specific technique, for comparing individual dish performance, based on a portfolio analysis (Jones and Mifli. 2001). In a commercial restaurant situation it can be referred to as a sales tool, communicating menu content to the customer (Ozdemir, 2012).

A straw poll of culinary lecturers, known to me, in UK catering colleges, and a look at the City and Guilds Catering syllabuses, reveal that Menu Engineering is not a taught subject. Foskett et al. (2016), however, devote a complete chapter to the subject in their book, which begs the question, why the useful theory is not taught. The new Level 2 Award in Professional Cookery in Health and Social Care Catering does not include ME in the syllabus either.

2.19 Conclusion of Literature Review

Having reviewed the academic and professional literature, related in one form or another to feeding people living with dementia in long term care homes, from the point of view of catering management, I have concluded that this research is an essential step forward in furthering our knowledge and understanding and signposting the way forward to better food through better business.

Figure. 2.11: My Conceptual Framework – Matched to emergent themes



The emergent themes above, identified within the literature review will be presented again in Figure 5.1

What is less understandable is the apparent lack of either interest or knowledge from the front-line caterers, chefs, and service staff and the rôle they can play in respect of the larger care giving team. The main reference to this statement however is the lack of academic papers or even trade magazine articles found during this literature search.

The Literature Review has followed the MRQ: ***What is the rôle of caterers in the provision of nutritious food and drink within elderly care homes*** and answered the RSQ's. In particular, RSQs 1 and 2, were answered in sections 2.12, 2.13, 2.15, and 2.16. RSQs, 3, 5 and 6 were answered in sections 2.6, 2.11, 2.12, 2.13, 2.14, 2.16 and 2.18.

To summarise, the literature review highlights that individuals living with dementia in long-term care homes face significant challenges, including cognitive decline and a growing need for human contact and familiarity. Person-Centered Care (PCC) is a concept widely used in the healthcare sector to inform policies and practices, emphasising a holistic approach to care that considers individuals' subjective experiences of illness and care. PCC aims to enhance the quality of life for residents in care facilities by supporting their "personhood." However, the concept of personhood is complex, as it involves seeing the person in social rather than individual terms.

While PCC has gained prominence in healthcare, its application to catering services in care homes is relatively underexplored. Care home catering is complex due to diverse dietary requirements, and catering staff must address multiple challenges in planning, purchasing, preparation, and service delivery. Nonetheless, regulations like Section 2, Regulation 9, of the Health and Social Care Act 2008 (Regulated Activities) Regulations 2014 in England emphasise the importance of meeting service users' needs and preferences, including their nutritional and hydration needs. This presents an opportunity for caterers to play a significant role in promoting person-centered care in care home settings. However, there are concerns about the effectiveness of these regulations, with doubts raised about the resources available for enforcement. Despite this, the literature review did not find any prosecutions related to catering services under these regulations.

In summary, the literature review underscores the importance of person-centered care for individuals with dementia in care homes and the potential for catering services to contribute to their well-being. While regulations exist to support this concept, concerns persist about their enforcement and effectiveness. Further research and exploration of the role of catering teams in promoting person-centered care are warranted.

Chapter 3 - Methodology

"Methodology is too important to be left to methodologists." (Becker, 1970)

3.1 Introduction

Chapter 2 reviewed the research issues and literature relevant to the provision of food and beverage services in the care home and associated sectors. The MRQ was partially answered and the RSQ 4, what is the optimal methodological approach for exploring of this topic, will be discussed here.

Further exploration into the rôle of the food service staff within the larger care team revealed that there is little involvement by the professional food service or culinary staff in the decision-making processes related to feeding the care home residents.

The general purpose of this chapter is to present my understanding of the various types of research methods which may be used in studying the business of catering, and seeking an emphasis on care home catering, in order to evaluate with greater discrimination the many research reports that are found in professional and academic journals. It is a critical discussion, comparison and evaluation of the research methodology and the design of the research methods appropriate to my specific research area. In doing so I combine the essential theoretical aspects of business research with evidence of the practical nature of care home catering. The way academic research is done is forever changing and evolving and my theory is that there remain many hidden truths in care home catering awaiting discovery. This chapter includes my justification of the research approach used. It is also a reminder to me of just how many books and academic articles on method and methodology there are out there. The number is incredible, though I have not counted them all – time does not allow.

Before moving on to my definitions, understanding and, use, I am reminded of a book I first read many years ago, when researching for my MBA, by an admired American sociologist, Becker (1970), who started an essay with the provocative statement:

> "Methodology is too important to be left to methodologists. By that trite paraphrase of a cliché I mean a distinction that will be clearer when I define the terms. Methodology is the study of method. For sociologists, it is presumably studying the methods of doing sociological research, analysing what can be found out by them and how reliable is the knowledge so gained, and attempting to improve these methods through reasoned investigation and criticism of their properties. … The question then arises as to whether methodologists - the institutionally accepted

> guardians of methodology - deal with the full range of methodological questions relevant for sociology, or whether they deal with a non-randomly selected subset (as they might say) of those questions. …
>
> … Obviously, I raised that question because I believe methodologists do **not** deal with the full range of questions they ought to. Instead, they attempt to influence other sociologists to adopt certain kinds of methods."

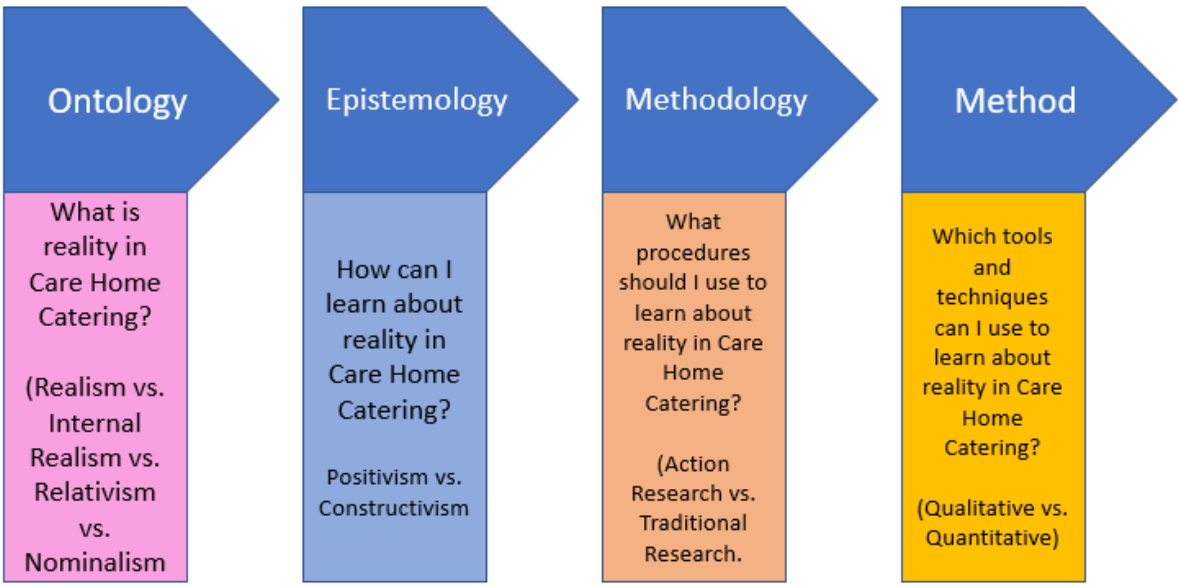
Those comments made me, a lay researcher, feel much more comfortable about my own research and methods chosen. It was a de-mystifying moment; it gave me a simplified view on methodology and led me to believe that there was a way forward out of the darkness of methodology and that my chosen mixed-method approach was right for what I wanted to achieve in this research. What Becker was saying, was that I should not take notice of, or be confounded by, what the '**Methodologists**' were telling me what to do and, perhaps, just as importantly, I ought not be doing.

Methodology is defined in the Shorter Oxford English Dictionary as the "science of method" or more historically as "treatise on method". My own interpretation of methodology is the activity or business of choosing, reflecting upon, evaluating, and justifying the research methods used. Indeed, the latter is an essential feature of any written report or research thesis i.e. justifying the decisions one has made on methods. No one can assess or judge the value of a piece of research without knowing its methodology.

Thus, the aim of methodology is "Put simply and cursorily, the aim is to make known something previously unknown to human beings. It is to advance human knowledge, to make it more certain or better fitting … The aim is discovery" (Elias and Dunning, 1986, p. 20). The research process itself therefore involves a scrutiny or an evaluation of methods." Although the focus of this chapter is to discuss methods, in a very practical vein, it should not be forgotten that reflection on methods is a vital part of any research project, large or small. Figure 3.1 demonstrates my step-by-step approach to how I developed my research design, identifying the processes to go through, where ontology is about the **nature** of reality or what we believe to be reality; epistemology is about the theory of knowledge (McAuley, 2014), and methodology, what do I need to do to discover the answers. Finally method, which tools I would use, qualitative, quantitative, multi-method or mixed methods. The following sections helped guide me in choosing method.

Research Design Process

Figure 3.1 demonstrating my step-by-step approach to a simplified research design (Dinsdale, 2018)



3.2 Approach to the research

The field of research methodologies has seen the emergence of various approaches and frameworks proposed by different authors over the years. In this I will evaluate the methodologies proposed by Kothari (2011), Gill et al. (2010), Saunders et al. (2019), the seven-step research sequence by Sharp et al. (2016), Gummesson (2017), Silverman (2005), and Bryman (2008). These are not exclusive and other methodologists, and their methods, will be discussed in further detail within this chapter.

Kothari's (2011) research methodology emphasises a structured approach with a focus on quantitative data collection methods. While this approach provides clear guidelines for data collection and analysis, it does not adequately address the complexities of qualitative research. The exclusive emphasis on quantitative methods limits the exploration of rich, contextual insights that qualitative methods can offer.

Gill et al (2010). propose a systematic review of literature and synthesis of research findings. While this methodology is valuable for aggregating existing knowledge, it may lack originality and innovative thinking. Relying solely on existing research can lead to a lack of fresh perspectives and may not adequately address emerging research gaps.

Saunders et al. (2019) present a comprehensive research approach that covers various stages of research, from problem formulation to data analysis. However, the methodology can be overwhelming for novice researchers due to its intricate details. This approach might discourage

researchers from exploring innovative methods outside the suggested framework, limiting creativity and adaptability. However, embracing a multi-disciplinary approach ensures that researchers draw from a wide range of sources, enabling a comprehensive understanding of the research problem. By integrating numerical data, facts, opinions, and stories, researchers can capture both the objective and subjective aspects of the phenomenon under study.

Incorporating stories and opinions adds depth and context to the research findings. These narratives help to shed light on the lived experiences of individuals, offering insights that quantitative data might not capture fully. This is particularly beneficial in social sciences and qualitative research where understanding the nuances of human behavior and experiences is crucial.

The seven-step research sequence (Sharp et al., 2016) offers a structured approach to research, seemingly promoting clarity and coherence. However, its linear nature might oversimplify the iterative and dynamic nature of research. Real-world research often involves back-and-forth movement between stages, which this rigid sequence might not fully accommodate.

Gummesson (2017) advocates for a "qualitative business research" approach, which prioritizes understanding the social and contextual aspects of research. While this approach provides depth and context, it might lack the rigor associated with more quantitatively focused methodologies. Researchers might struggle to generalize findings beyond the specific context of study.

Silverman's (2005) emphasis on qualitative research methods is valuable for exploring complex social phenomena. However, this approach may not provide clear guidelines for data analysis and interpretation, leading to subjectivity and potential bias in drawing conclusions. Researchers might struggle with ensuring rigor and transparency in their qualitative research process.

Bryman's (2008) mixed-methods approach seeks to combine the strengths of both quantitative and qualitative methods. While this can yield comprehensive insights, it might also demand a higher level of expertise to execute effectively. The complexity of integrating different data types and analysis methods might be daunting for researchers new to mixed-methods research.

Towards the final months of the thesis research, I was encouraged to use Bottery and Wright's, "Writing a Watertight Thesis" (2019) and the later version, Bottery et al. (2023), to pull the whole thesis together.

The journey of academic research and scholarly writing is often a challenging endeavour, requiring meticulous planning, rigorous analysis, and precise articulation. In this context, the

guidance provided by renowned academic resources becomes invaluable. "Writing a Watertight Thesis," authored by Bottery et al (2023), is a notable contribution to the field of academic writing.

In conclusion to this brief analysis, each of these research methodologies offered me valuable insights and guidance, but they also came with limitations that I needed to consider. My choice of methodology had to align with the MRQ objectives, and my own limited expertise. I would advise that researchers should be aware of the strengths and weaknesses of each approach and adapt them to their specific research context to ensure robust and insightful findings.

A more simplistic description of academic research could be as a voyage of discovery, or the movement from the unknown to the known (Kothari, 2011). In short, research is a process through which new knowledge is discovered and theories developed (Hegarty, 2015).

Epistemology refers to the study of knowledge, how it is acquired, and the nature of knowledge. In the context of research, an epistemological stance influences how researchers view the nature of reality, the sources of knowledge, and how they approach the process of acquiring knowledge. This approach which incorporates numerical data, facts and opinions, and stories, suggests a methodological pluralism. This means that I am open to using multiple methods to gather and interpret data, rather than adhering strictly to one particular method. This approach recognises that different research questions might require different methods to effectively explore and understand complex phenomena.

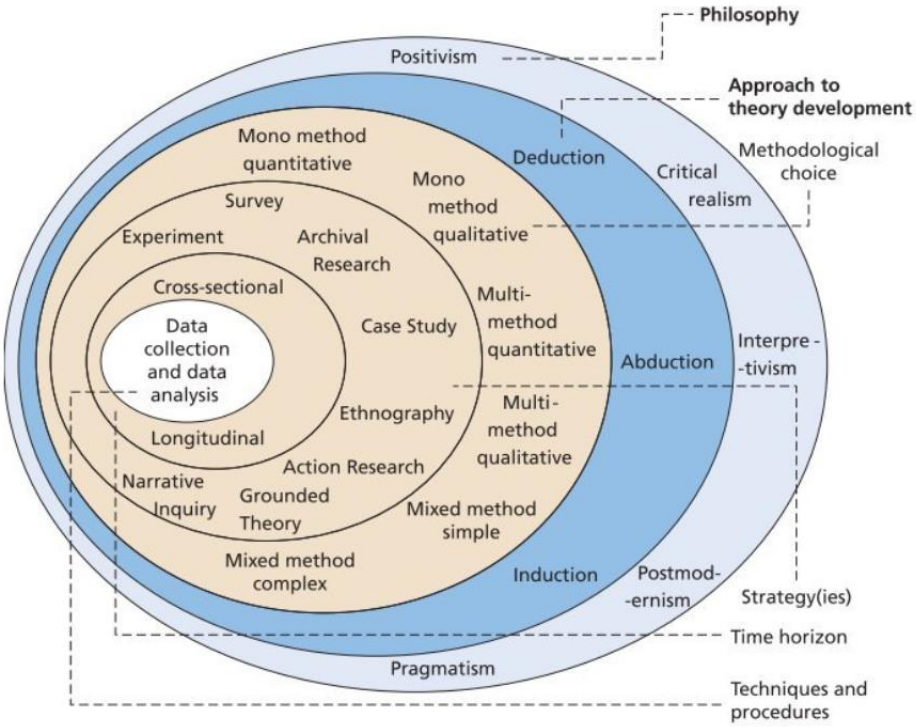
Incorporating both facts and opinions implies a recognition that qualitative data, including people's perspectives and subjective experiences (opinions), can provide valuable insights into understanding certain research questions. This aligns with interpretivist or constructivist epistemologies, which emphasize the rôle of human interpretation and the influence of context on knowledge.

The use of stories, or narratives, in research is associated with a narrative or postmodern epistemological stance. This approach recognises the power of individual and collective stories in shaping our understanding of the world. Researchers, such as me, who embrace this perspective often seek to explore the subjective and contextual nature of knowledge through storytelling.

The epistemological research philosophy I am taking combines elements from various epistemological stances and embraces methodological pluralism. This allows me to draw on a range of methods, including quantitative data, qualitative insights, and narratives, to address complex research questions from multiple angles. This approach acknowledges that different methods can provide complementary perspectives, enriching the overall understanding of the topic under investigation.

I have used an epistemological research philosophy, where the multi-disciplinary approach, using numerical data, both facts and opinions, and stories, where the epistemological research philosophy is an interesting and progressive perspective, which may also be considered legitimate methods (Saunders et al. 2019). This approach acknowledges the complexity and diversity of knowledge sources, allowing for a more holistic understanding of the research phenomenon. Following early class discussions with student colleagues and lecturers, during the taught sessions at SBS, and in line with Saunders et al. (2019) and an interpretation of The Research Onion, Figure 3.2, it was also important for me to visualise where I stood in relation to the research philosophies available to me.

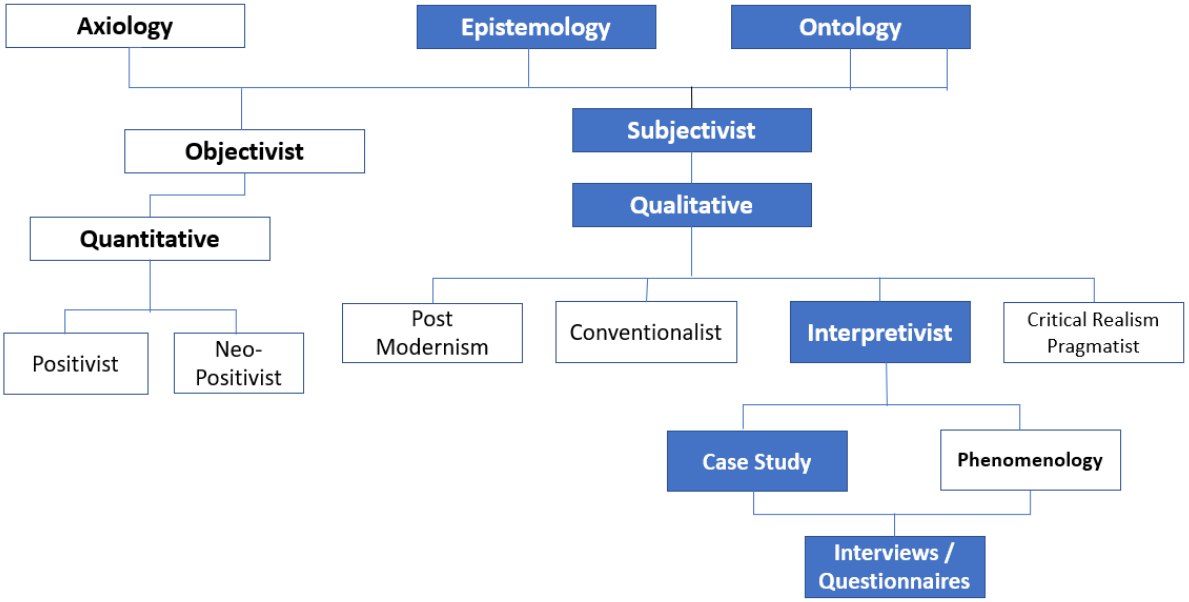
Figure 3.2: The Research Onion (Saunders et al. 2019)



Once again, I referred back to my class notes and discussions with course colleagues and decided to create my own visual map. Highlighting my route in dark blue, the research philosophies led me down the subjectivist route, through to qualitative, interpretivist, case study research, indicating interviews and perhaps questionnaires as being the most appropriate method. Figure 3.3, overleaf, shows that mapping exercise.

For this research I did not intend to expound on the axiology (Greek: axios – 'worthy' & logos 'science') route, also known as The Theory of Value, as that was mainly concerned with value and worth and what is 'good' in the world, and this would not fit with my interpretivist stance in the research.

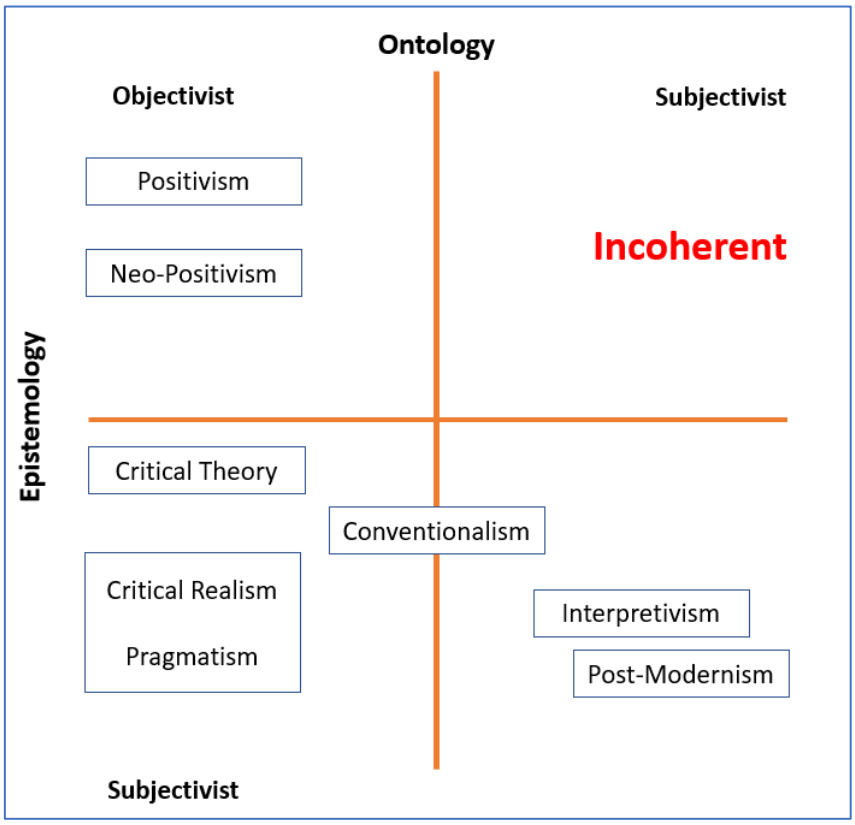
Figure 3.3: Mapping Exercise. Source. Dinsdale (2018)



So that was the way I would go forward. Figure 3.4, overleaf, demonstrates the ontological and epistemological views of recognised research paradigms. This shows the epistemological approach (Y Axis) ranges from objectivist to subjectivist and the ontological approach (X Axis). I have identified these differing paradigms and chosen the interpretative method, sitting within a strong subjectivist ontology and epistemology. No research approach sits within the subjectivist ontology and objectivist epistemology, consequently the top right quadrant is deemed incoherent.

I have taken the three management philosophies of pragmatism, critical realism and interpretivism to help define this research, it must be noted, however, that as before, my pragmatic leanings direct me mostly to interpretivism.

Figure 3.4: Reflexivity and Management Research Tool (adapted from Johnson and Duberley, 2012, p. 180)



Taking my research methodology forward, I adopted the seven-step research sequence, proposed by Sharp et al. (2016):

1. *Identify a broad area of interest.*
2. *Select topic and develop a focus.*
3. *Decide the approach.*
4. *Formulate a plan.*
5. *Collect information.*
6. *Analyse data.*
7. *Presentation of findings.*

Stage 1: The broad area of interest

In the introduction to this thesis I established the need for this research, to extend the boundaries of knowledge in catering services in the long-term care home sector. Within the broad area of interest (**Stage 1**) I was determined to investigate the feeding of people living with dementia in long term care homes as this interest stemmed from personal experiences outlined in **Chapter 1: Introduction.** I further developed my focus (**Stage 2**) on the benefits that were to be had through the promotion of enhanced hospitality catering services for long term care home caterers and hospitality catering businesses.

The rest of this chapter now discusses the approaches which were available – **the methodologies** - (**Stage 3**) and my aim is to further illustrate what I believe "methodology" to be and how the term relates to my research endeavours. There will be a discussion on research philosophies, leading to the selection of an appropriate paradigm, followed by the tentative outline of the research design I proposed and followed (**Stage 4**), involving "mapping" – a walk around observing the systems and steps - to address my research questions and complete my research.

I identified sources from which I sought to obtain my data and now describe the methods and methodologies available when collecting the data. This includes documentary sources supplemented by informal interviews and non-participant observations, to form the basis for my data gathering research design (**Stage 5**). Reactive methods of data collection (questionnaires, and formal interviews) were considered at this stage to be inappropriate in my reflexive approach to this case study, but this position changed as I got deeper into the research. The analysis of data collected (**Stage 6**) followed. This was developed by first transcribing the informal interviews making full use of transcription hardware and software in an attempt to speed up the process. As I am increasingly susceptible to loss of hearing this became a substantial challenge. I am now at the stage of final arrangements for dissemination of the results (**Stage 7**) - the publication of my DBA Thesis.

I will now continue with a brief outline of the phenomena known as Catering and Hospitality, within which I developed my focus.

Stage 2: Research Topic and Focus - Catering and Hospitality

Having previously established the meaning of 'Hospitality' and 'Hospitality Management'? And of 'Catering' and 'Catering Management', and at risk of repetition, in this section I will attempt to provide sufficient information to give a background to the phenomena and contextualise both with regards to long term care homes. Brillat-Savarin (1865) suggested that hospitality was mostly about the happiness of others and devoting self to the service of others. Telfer (2000) gave a classical definition of hospitality, within the domestic domain, as "the giving of food, drink and sometimes accommodation to people who are not regular members of a household". I will not, however, go further back as this has already been discussed, in depth, in the Literature Review.

Brotherton (1999) suggested there is no clear definition of commercial hospitality and that there are concerns regarding the emphasis on the 'product elements' of hospitality as opposed to the nature and implications of the 'hospitality exchange'. Telfer (2000) suggests the definition could be stretched to include a commercial venture which provides hospitality through the provision of food and drink to visitors. This now includes the provision of accommodation (safe shelter) and, occasionally, entertainment. She further offers the paradoxical point of view that the commercial host does not necessarily have to be 'hospitable' and may well be mechanistic in their endeavours to

provide hospitality. Blain (2012) argued that the growth of the business orientated hospitality industry, and as an academic subject, disguised the origins of hospitality.

The provision of catering is, perhaps, easier to define. Just one definition, which mirrors countless others, is said to be the supply of food, refreshment, and related services to people away from their usual place of residence (Kahraman et al. 2004). Catering, however, does not include the provision of accommodation. Within many long-term care homes the catering services are provided by commercial or contract caterers, the growth of these outsourced services allows the contracting customer to concentrate on their core business rather than be diverted by the need to directly control said services. The provision of catering services removes the worry of skilled labour shortages and the reduction of operational costs through large scale and often centralised production.

Bringing the phenomenon of commercial hospitality, together with the provision of catering services, to play in the domain of a long-term care home is where the perceived difficulties for my studies, the **Stage 2 focus**, started. One issue I had to face in my research, prompted by my second supervisor, is the question, "*is healthcare (long term care home care) an altruistic (some might say religious / ethical) mission or a commodity traded on the healthcare market*? The answer, I concluded, is both. The tension between them can be resolved only by exiting the care business or by a radical change in medicine. Since neither appears to be on the horizon, living with ethical and mission tension appears to be the future of long-term healthcare.

Not only must the catering services provider offer good quality F&B services but also ensure the products offered comply with the dietetic and nutritional requirements of their clinical and medical customers. At what point then, if at all, do the human aspects of hospitality supersede the material provision of F&B products and services? Do the residents in long term care homes have the right to expect total and unconditional hospitality in exchange for their fees? What then of the catering staff providing those products and services – do they need to demonstrate full hospitableness and the hospitable host's motives for the concern of their residents' well-being, welfare, and pleasure? **How can that motivation be reconciled with the imperative to make a profit or create a surplus?**

Stage 3: Methodologies and Paradigms

Having determined both stage one and two I then progressed to **Stage 3 – Deciding the approach**. This included the selection of a methodology which I used to collect the information I needed. First, however, it was essential for me to fully understand the methodologies available before I could make a choice: In addition to the points discussed in **3.1: Introduction**, the following notes helped me to make that choice.

The choice of an appropriate methodology for any given research project can present significant challenges, even for the established and experienced researcher (Creswell, 1994). The human activity of research is a process involving both construction of ideas and creation of theories. Careful consideration of the available research tools must be made for every stage of the anticipated process. There are also times when the research questions may demand a multi-faceted approach using a combination of different methodologies.

Every knowledge domain has its own research methods, determined by its peculiar nature. This is a matter of so much importance that it has been erected into a distinct department within the academic world. Modern literature abounds in works on Methodology, i.e., on the science of method, many of which were identified and discussed in **3.1: Introduction**. They are designed to determine the principles which should control scientific investigations. If a researcher adopts a false method, he is like one who takes a wrong road which will never lead to the desired destination. The two great comprehensive methods are the à priori and the à posteriori. The one argues from cause to effect, the other from effect to cause. The former was for ages applied even to the investigation of nature. Researchers sought to determine what the facts of nature must be from the laws of mind or assumed necessary laws.

Even in our own day we have had Rational Cosmogonies, which seek to construct a theory of the universe from the nature of absolute being and its necessary modes of development (Trnka, 1997). Many researchers know how much it costs to establish the method of induction on a firm basis, and to secure a general recognition of its authority. According to this method, we begin with collecting well-established data, and from them infer the general laws which determine their occurrence. From the fact that bodies fall toward the centre of the earth, has been inferred the general law of gravitation, which we are authorised to apply far beyond the limits of actual experience. This inductive method is founded upon two principles: First, that there are laws of nature (forces) which are the proximate causes of natural phenomena. Secondly, that those laws are uniform; so that we are certain that the same causes, under the same circumstances, will produce the same effects.

There may be diversity of opinion as to the nature of these laws. They may be assumed to be forces inherent in matter; or they may be regarded as uniform modes of divine operation; but in any event there must be some cause for the phenomena which we perceive around us, and that cause must be uniform and permanent. On these principles all the inductive sciences are founded; and by them the investigations of natural philosophers are guided. The same principle applies to metaphysics as to physics, to psychology as well as to natural science. Mind has its laws as well as

matter, and those laws, although of a different kind, are as permanent as those of the external world.

Methods has been defined as ‘the techniques that researchers employ for practicing their craft … the instruments of data collection or … the tools used for analysing data’ (Bryman, 2008). Methodology has further been defined as ‘the study of the methods employed’ (Bryman, 2008); ‘the study of the methods or procedures used in a discipline so as to gain warranted knowledge’ (Gill et al. 2010); ‘the science of method’ or historically as ‘treatise on method’, a 'general approach to studying a research topic' (Silverman, 2005) and; ‘the theory of how research should be undertaken’ (Saunders et al. 2016). Of particular interest to me, whilst determining my methods, was the introduction to "*Methodologyland*" by Gummesson (2017) and his assertion that "the 2 taken-for-granted categories - quantitative and qualitative - are delusive". (p. 4) In this he contends, quite forcefully, that both methods focus on the use of language, a case of numbers versus words, and that a further focus is about the **ritual** of actually doing research, ignoring the results or the usefulness of those results. I was further intrigued by his apt analogy that **"*it takes time to become a seasoned 'case chef' … You have to cook the food, serve it, and let others taste it*"**.

I have boiled down these definitions, for my own pragmatic understanding, to mean the activity or business of choosing, reflecting upon, evaluating, and justifying the methods I eventually used. The latter, justification of method, is an essential part of any written article or research thesis, justifying the decisions made. No reader, regardless of expertise or talent, can judge the value of a piece of research without knowing its methodology.

Consequently, my understanding of the aim of methodology, as suggested by Kaplan (1963, p. 3) is: "... to describe and analyse methods, throwing light on their limitations and resources, clarifying their suppositions and consequences, relating their potentialities to the twilight zone at the frontiers of knowledge". The research process itself therefore involves a scrutiny or an evaluation of methods in which our methods chosen should be tested together with the proposed hypothesis (Walker. 1985).

It should be noted, however that I had neither intention nor desire to enter into paradigm wars with either myself, tutors or other established researchers and would see if my own intellectual puzzle pulled me inexorably towards one direction or another, though with differences outside existing customs and practices. I had decided though to thoroughly investigate the differing methods and paradigms before deciding: The results of which are discussed in **Stage 4 - Forming a Plan**.

Consequently, although the focus of this part of the thesis is to discuss methods, in a very practical vein, it should not be forgotten that methodology i.e. reflection on methods, is a vital part of any research project, large or small. However, from an extensive search of the literature I have concluded that the use of a pre-planned method will not always produce the expected results and that what started out as a promising way of discovery quickly, or indeed slowly, becomes inappropriate and must be abandoned. As in life, there are situations over which we have little control and all too often the unexpected happens, prompting the ditching of the "rule book" in favour of ingenuity and innovation.

The way we ask questions, and the way in which we find answers, and how we analyse the answers, as argued by Johnson and Duberley (2000), as being dependent on our epistemological approach. This is discussed in greater detail further into this chapter.

The Inductive method

Inductive reasoning is taken to cover all the cases in which we pass from a particular statement of fact, or set of particular statements of fact, to a factual conclusion which they do not normally entail. The inference may be from particular instances to a general law or proceed directly by analogy from one particular instance to another. In all such reasoning we make assumptions that there is a measure of uniformity in nature; or, roughly speaking, that the future will, in the appropriate respects, resemble the past. I see here a significant paradox; we think ourselves entitled to treat instances which we have been able to examine as reliable guides to those we have not. But how can this assumption be demonstrable? The denial that nature is uniform, to whatever degree may be in question, is that not self-contradictory? Neither is there any means of showing without logical circularity, that the assumption is even probable. For the only way of showing that it was probable would be to produce evidence which confirmed it, and it is only if there are fair samples in nature that any evidence can be confirmatory. But whether there are fair samples in nature is just the point at issue.

The same considerations apply if we seek to justify some more specific hypothesis. Unless it is treated as a definition, in which case the problem is merely transferred to that of making sure that the definition is ever satisfied, such a proposition will not be demonstrable; the denial of it will not be self-contradictory. Inductive reasoning is so called because it agrees in everything essential with the inductive method as applied to the natural sciences. Without wanting to re-invent the square wheel I believe the man of science comes to the study of nature with certain assumptions.

First, he assumes the trustworthiness of his sense perceptions. Unless he can rely upon the well-authenticated testimony of his senses, he is deprived of all means of prosecuting his investigations. The facts of nature reveal themselves to our sensory faculties and can be known in

no other way. He must also assume the trustworthiness of his mental operations. He must take for granted that he can perceive, compare, combine, remember, and infer; and that he can safely rely upon these mental faculties in their legitimate exercise. He must also rely on the certainty of those truths which are not learned from experience, but which are given in the constitution of our nature. That every effect must have a cause; that the same cause under like circumstances, will produce like effects; that a cause is not a mere uniform antecedent, but that which contains within itself the reason why the effect occurs.

Second, the student of nature having this ground on which to stand, and these tools wherewith to work, proceeds to perceive, gather, and combine his facts. These he does not pretend to manufacture, nor presume to modify. He must take them as they are. He is only careful to be sure that they are real, and that he has them all, or at least all that are necessary to justify any inference which he may draw from them, or any theory which he may build upon them.

The deductive method

Deductive method is based on the syllogism which was Aristotle's great contribution to formal logic. The syllogism is composed of propositions, which in turn are composed of terms, and in its structure should be considered and described as made up both of propositions and of terms. In its simplest and easiest form "*a syllogism is a triad of connected propositions, so related that one of them called the Conclusion, necessarily follows from the other two which are called the Premisses*" (Attributed to Socrates. C. 400BC). If I wanted to construct an argument to prove that two terms - unselfish and happy - which are each related, as subject or as predicate, to the same third term good, are necessarily related as subject or as predicate to one another, three propositions suggest themselves at once, and together constitute a syllogism, the first two propositions, which relate the two terms to the same third term, being the Premisses, and the third proposition which relates the two terms to one another being the conclusion:

- *The good are happy.*
- *The unselfish are good.*
- *Therefore, the unselfish are happy.*

From facts so ascertained and classified, Aristotle (Barnes, 1995) deduces the laws by which they are determined. That a heavy body falls to the ground is a familiar fact. Observation shows that it is not an isolated fact; but that all matter tends toward all other matter, that this tendency or attraction is in proportion to the quantity of matter; and its intensity decreases in proportion to the square of the distance of the attracting bodies. As all this is found to be universally and constantly the case within the field of observation, his mind is forced to conclude that there is some reason for

it; in other words, that it is a law of nature which may be relied upon beyond the limits of actual observation. As this law has always operated in the past, the man of science is sure that it will operate in the future. It is in this way the vast body of modern science has been built up, and the laws which determine the motions of the heavenly bodies; the chemical changes constantly going on around us; the structure, growth, and propagation of plants and animals, have, to a greater or less extent, been ascertained and established. It is to be observed that these laws or general principles are not derived from the mind, and attributed to external objects, but derived or deduced from the objects and impressed upon the mind.

Principles are derived from facts, and not impressed upon them. The properties of matter, the laws of motion, of magnetism, of light. etc., are not framed by the mind. They are not laws of thought. They are deductions from facts. The investigator sees, or ascertains by observation, what are the laws which determine material phenomena; he does not invent those laws. His speculations on matters of science unless sustained by facts, are worthless. It is no less unscientific for the culinarian to assume a theory as to the nature of say, ethics or moral obligation, and then explain the facts in accordance with his theories.

Although, according to Cohen et al. (2005), both induction and deduction have their weaknesses, their contribution to the development of methodology are enormous and fall into three categories:

1. *the suggestion of hypothesis*
2. *the logical development of hypothesis*
3. *the clarification and interpretation of scientific findings and their synthesis into a conceptual framework.*

It follows there are certain implications for the methodological concerns of catering and hospitality researchers, since contrasting ontologies, epistemologies and models of human situations will demand different research methods.

Quantitative and Qualitative Research Methods

This section serves as my introduction to what have become known as the 'paradigm wars', a portrayal of two camps of basically opposite persuasion which became known as Positivism vs Interpretivism, or the quantitative or qualitative research methods. Each of these schools of thought paid homage to a contrasting set of first principles and over the last thirty-five years or so, the extent to which the qualitative revolution has overtaken the social sciences and related professional fields is most striking (Denzin & Lincoln, 2011). Prior to that, the approach to research was positivist, that is, it placed an emphasis on statistics, experimental design, and survey research. The social sciences

had originally adopted the methodologies of the physical sciences. Today, researchers in many fields including catering and hospitality management have opened up to ethnomethodology, observation, unstructured interviewing, conversational and textual analysis, historical studies, and many other theoretical paradigms of research. A third paradigm is Critical Theory, which holds that there is an objective world which the observer can stand apart from and investigate. But whose world, is it? For the purposes of my research is it the world of the long-term care home cook, the care home owner, the resident people living with dementia, the clinical and medical staff, or the general care assistants?

There are a variety of methods of data collection in qualitative research including observations, textual or visual analysis (e.g. from documents, books and/or video recordings), interviews (individual/group) and participant observation data, to understand and explain social phenomena. Some common methods used particularly in catering and hospitality research are interviews/focus groups. I explored these two methods in some detail, in particular how they work in practice, the purpose of each, when their use is appropriate and what they can offer catering and hospitality research. Qualitative researchers can be found in many disciplines and fields, using a variety of approaches, methods, and techniques. In catering and hospitality we study the managerial and organisational issues associated with innovations in catering and hospitality creativity, innovation, and technology, hence the interest in the application of qualitative research methods.

So called academic elites have had charge of the research agenda, setting the questions, funding the research, and interpreting the results. This challenges the purpose of research which aims to empower people to set their own action agendas and paradigms. The term “paradigm” was introduced into the literature by Kuhn in 1970 (1996, 3rd Ed.) who intended to convey the idea that research gets organised not just through rational adoption of particular strategies and methodologies, but rather, that all the contributory ideas get wrapped up into an overall “vision”, or “creed” or “doctrine” about the correct way to do research. Thus, methodology, Kuhn points out, can itself become a kind of dogmatism which includes identifying good practice, and thereby excludes, by vilifying alternative approaches as misguided, wrong-headed, dim-witted, and so on.

Each of these schools of thought pay homage to a contrasting set of first principles, and over the last forty years the extent to which the qualitative revolution has overtaken the social sciences and related professional fields is most striking (Denzin & Lincoln, 2011). Prior to that, the general approach to research was positivist, (quantitative/hard science) that is, it placed an emphasis on numbers and statistics, experimental design, and survey research. The aim of the positivist researcher is to seek generalisations and 'hard' quantitative data. The influence of the positivist

scientist paradigm continues to be strong and pervasive shaping expectations of what constitutes 'proper', 'valid', and 'worthwhile' research. Troyna (1994) described it as: "

> There is a view which is already entrenched and circulating widely in populist circles ..., that qualitative research is subjective, value-laden, and therefore, unscientific, and invalid, in contrast to quantitative research, which meets the criteria of being objective, value free, scientific, and therefore valid. (p.9)

Taking those comments at face value a researcher may conclude that qualitative research will be problematic.

The social sciences originally adopted the methodologies of the physical sciences. Today, researchers in many fields including catering and hospitality have opened up to ethnomethodology, unstructured interviewing, conversational and textual analysis, documents and historical studies and many other theoretical paradigms of research. The interpretative researcher accepts that the observer makes a difference to the observed and that reality is a human construct - the researcher's aim is to explore perspectives and shared meanings and to develop insights into situations, e.g., dining rooms, kitchens. Data will generally be qualitative and based on fieldwork, notes and transcripts of conversations or interviews.

Positivist Research in Catering and Hospitality

In catering and hospitality research, the quantitative or positivist research paradigm observes the so-called reality “out there”. These observations, according to Bassey (1999) are predictable and rational and perceived as little affected by the researchers’ interpretations of their experiences or without the researcher being considered a significant variable in the research. However, Wellington (1996) claims that he has yet to meet one, even among physicists, who believe in an external, objective reality which is rational and independent of the observer. The purpose of research is to advance knowledge by understanding and describing the phenomena and sharing the findings with others. Because of the barrage of criticisms (Alvesson & Skoldberg, 2009) levelled at the assumptions surrounding positivism, there is now, according to Carr and Kemmis (1986), a growing realisation that research based on positivist principles does not really conform to the image of a non-ideological activity that was once supposed. Carr and Kemmis (1986) further recognised that the contribution of positivism in determining laws to assist in the prediction and control of situations are almost non-existent and are not tenable epistemologically. They attribute this failure to the inapplicability of the purposes and methods of the natural sciences to the social sciences.

The interpretive paradigm assumes that social reality lacks any “out there” objective existence, that reality is seen as a construction of the human mind and interaction (Bassey, 1999). It

aims to understand the definitions, concepts, and meanings which participants in events attach to the social, including work situations, in which they find themselves and the social interactions in which they are involved (Burgess, 1985). Interpretive researchers also recognise themselves as potential variables in the enquiry, by asking questions or by observing, they influence and change the situation which they are studying, and when writing reports are more susceptible than positivists are to the use of the personal pronoun (Bassey, 1999). Qualitative research, in its simplest terms, is social or behavioural science research that explores the processes that underlie human behaviour using such exploratory techniques as interviews, surveys, case studies and other relatively individual techniques.

Qualitative research, according to Denzin and Lincoln, (2011), is multimethod in focus, involving an interpretative, naturalistic approach to its subject matter. This means that as a qualitative researcher I would study things in their natural setting, in this case the long-term care home, where I attempted to make sense of, or interpret, phenomena in terms of the meanings the staff bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials that describe routine and problematic moments and meanings in individuals' lives. Accordingly, qualitative researchers generally deploy a wide range of interconnected methods, hoping always to get a better fix on the subject matter at hand.

Researcher bias according to Bell (1993), need not cause the study to be adversely affected. I have already confessed to potential bias in this research with close family members being affected and my own fears for the future, however, inferences can be drawn. In some case study research, “objectivity” is not deemed a necessary requirement although the aim should always be to present a balanced study (Bell, 1993). I have long suspected that I would, through prior experiences, introduce a significant degree of bias into my research and was somewhat relieved to read Bell's opinions on this.

Action Research

This approach to research may be linked to practitioner and naturalistic research and is a well-established approach. It may be defined as a form of self-reflective enquiry or investigation undertaken by participants - in my own case, in catering and hospitality, that would be Chef, Hospitality Manager or Hospitality / Catering Consultant - in social situations in order to improve the rationale and justice of their own social and working practices, their understanding of these practices, and the situations and enterprises in which these practices are carried out (Carr and Kemmis, 1986). This is clearly linked to the practitioner research approach in that they may well involve a chef / caterer studying, researching into, or intervening in his own practice, habitus, or system. This could apply equally to a catering / hospitality worker engaging in participant

observation of his own professional practices in a long-term care home setting. The key aim of action research is critical reflection and awareness, improvement and/or a change of practice in the location. It involves reflection, critical analysis, planning and action as important elements in the research. Fortunately, or perhaps unfortunately, I am not employed as a care home chef so do not have access for such research.

Case study research

My pragmatic leanings, in many ways contradictory (I often have internal arguments with myself), recognise that a single ontological or epistemological position should be rejected as being untenable. Consequently, my research has not been able to be analysed through one viewpoint alone. I have taken an interpretive, subjective stance and followed a research design which allowed me to know what, as well as how. There have been several criticisms of case study research and Yin (1994) recognised that early descriptions of case study research had been stereotyped and decried as the 'weak sibling' within social science methods. In a later edition Yin (2013), highlighted the depth of challenge to be encountered by researchers intending to use the case study method.

Based on those observations I decided that the case study was the most appropriate method to follow in my research endeavours. From the Critical Theory perspective it is important to me to be able to make a difference. Before conducting the research, I had to choose between a single or multiple case study. This was quite a challenge. In simple form, the Single Case Study would have involved looking at one Long Term Care Home in great detail. One of the advantages of the single case study is that it would have led to an in-depth analysis, perhaps revealing complex research phenomena. However, that approach would also curtail the generalisation of the results.

The alternative, the Multiple Case Study approach, would involve investigating several Long-Term Care Homes, identifying similarities and differences. This would enable me to collect more comprehensive data for comparison and contrast, though perhaps not to the depth of analysis that the single case might provide. Finally, the choice was influenced by the MRQ and objectives. So saying, I had to take a lead from my MRQ, which helped steer me towards the case study method. Multiple case study research in hospitality businesses offers a valuable approach for exploring a wide range of topics within the industry. While it comes with certain limitations, its ability to provide in-depth insights, context-specific understanding, and contribute to theory development makes it a valuable method for researchers seeking to unravel the complexities of the hospitality sector.

Chapter 1, Introduction, and **Chapter 2, literature Review** has confirmed the stated MRQ and RSQ's of the research and has suggested a number of further research questions to be considered in the work and how they connect to the RSQ's.

1. *What gaps exist between what people living with dementia, or their relatives, expect of food service quality in long term care homes and what is actually delivered?*
2. *Would the philosophy of Resident Directed Foodservice (RDF) assist Caterers deliver a more hospitable, as well as cost effective, product?*
3. *What would be the implications for caterers in providing RDF in long term care homes?*

Consequently, the aims, objectives and research questions have led to business research which according to Bryman and Bell (2015) is regarded as Business Research in Care Home Catering, or as stated by Brotherton (2015), as exploratory research which may include descriptive elements but then proceeds to explore and identify the latent causes at the root of the effects and the relationship between the two.

Case studies are used extensively in catering and hospitality research. The case study approach has become such a pervasive approach in hospitality that its justification may be becoming unnecessary. When I look at the broader aspects of hospitality research, including tourism and events management, it is clear that the case study approach is often taken for granted. Multiple case study research is a qualitative research method that involves an in-depth investigation of multiple instances (cases) of a phenomenon to gain a deeper understanding of the topic of interest. In the context of hospitality related businesses, multiple case study research can be a valuable approach to explore various aspects of the industry, such as management practices, customer experiences, operational challenges, and strategic decision-making.

The use of mixed methods works well in multiple case study research allowing for the collection and analysis of the rich empirical data, through use of qualitative and quantitative methods on the data. This method helps to provide an insight into the often complex social, health and economic problems. Plano Clark et al. (2018) suggests the unique methodological advantages of combining case study research and mixed methods research help the researcher address those problems. Researchers gather data through various methods, such as interviews, observations, documents, and archival records. Interviews with key stakeholders, such as managers, employees, and customers, can provide insights into the operational dynamics and customer experiences within different hospitality businesses. Unfortunately, due to ethical restrictions, I was unable to interview the “customers”, the care home residents.

Carolan et al. (2016) contend that case study and mixed methods research should not be viewed as separate entities and that the fluid and permeable boundary between them allows each to lead or support in the research being carried out. I found this particularly helpful in my own research. The appeal of case study research is that it offered me a flexible approach, enabling in-

depth, holistic and a multiple perspective analysis of the care home catering environment (Abma & Stake, 2014).

Mixing methods - triangulation

As a Royal Yacht Association qualified yacht skipper (practical and theory), I learnt the technique of triangulation, as a physical measurement, to establish an accurate position in the sea and to aid plotting the ongoing passage, thereby avoiding costly mistakes or maritime disasters. Cohen et al. (2005), make an interesting analogy in that:

> Triangular techniques in the social sciences attempt to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint and, in so doing, by making use of both quantitative and qualitative data. (p. 265)

The triangulation methods used in this study helped to corroborate the ultimate findings, confirming the emergent themes, influencing the final conclusions and recommendations.

It has been interesting for me to note the changes in methodologies over the years. I started an Executive (Part Time) MBA, at Middlesex University, in 1990 and completed in 1994. Looking back at my dissertation and notes it seems that the notion of mixed, or multiple, methods would have been very much in its infancy during that period. On reflection, however, that is precisely the method I chose though did not relate to it, or name it so, as such. Nor did any of my tutors at the time. The research consisted of predominantly non-structured interviews and a smaller number of questionnaires. The quantitative element consisted of the collection of numerical data recording. The qualitative element was an analysis of the respondents' attitudes to, and understanding of, a new European Union (EU) Directive, the collection of words. Although I was not aware of a particular article at the time (pre-internet), Greene et al. (1989) had already defined mixed method designs as being exactly what I had done.

Since those early years there has been much discussion, debate, and definitions of mixed methods. A mixture of methods can often be adopted whether the study is large, or small and such an approach may be defined as "methodological pragmatism". Schatzman & Strauss (1973) state: "*The field researcher is a methodological pragmatist. He sees any method of inquiry as a system of strategies and operations designed - at any time - for getting answers to certain questions about events which interest them.*" (p. 7). Such a view therefore implies that both qualitative and quantitative methods can exist side by side in an enquiry: "... *there is no fundamental clash between the purposes and capacities of qualitative and quantitative methods or data*." (Glaser & Strauss, 1967, p. 17).

The concept of using multi or mixed method approach to collecting data, information or evidence is discussed in full by Cohen et al. (2005) under the heading Triangulation. They discuss types of triangulation and their advantages and define triangulation as using two or more means of collecting data whilst studying aspects of human behaviour. They observe that triangulation is a technique of research to which many subscribe in principle, but which only a minority use in practice. In catering and hospitality research, triangular techniques can be used to "map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint and, in so doing, by making use of both quantitative and qualitative data" (Cohen et al. 2005). We can use triangulation to demonstrate, in a powerful way, concurrent validity, especially in qualitative research (Campbell & Fiske, 1959).

The advantages of the multi-method approach in catering and hospitality research are manifold and here I examine two of them, which relate to my research. First, whereas the single observation in fields such as medicine, chemistry and physics normally yields sufficient and unambiguous information on selected phenomena, it provides only a limited view of the complexity of human behaviour and of situations in which human beings interact. As research methods act as filters through which the environment is selectively experienced, they are never theoretical or neutral in representing the world of experience. Exclusive reliance on one method, therefore, may bias or distort my picture of the particular slice of reality I am investigating. I needed to be confident that the data generated were not simply artefacts of one specific method of collection (Creswell, in Denzin & Lincoln, 2011). This confidence could only be achieved as far as normative research is concerned when different methods of data collection yield substantially the same results. (*Where triangulation is used in interpretive research to investigate different actors' viewpoints, the same method, e.g. accounts, will naturally produce different sets of data*). Taking this idea forward, the more the methods contrasted with each other, the greater was my confidence. If, by way of example, the outcomes of a questionnaire survey correspond to those of an observational study of the same phenomena, the more I would be confident about the findings.

A typology of triangulation has been suggested by Denzin (1970) who lists the principal types of triangulation which might be used in catering and hospitality research. The types can be summarised briefly as follows:

1. *Data Triangulation which is subdivided into: (a) time triangulation; the researcher attempts to consider the influence of time using cross-sectoral and longitudinal research designs, (b) space triangulation; researchers engage in some form of comparative study e.g. Of different regions, different countries, (c) person triangulation at the following levels of analysis; (i) the individual level, (ii) the interactive level among groups, (iii) the collective level.*

2. *Investigator Triangulation: more than one person examines the same situation.*
3. *Theory Triangulation: alternative or competing theories are used in any one situation.*
4. *Methodological Triangulation which involves "within method" triangulation, that is the same method used on different occasions, and " between" method triangulation when different methods are used in relation to the same object of study (Cohen et al. 2005): see also Denzin, (1970)*

Poth (2018) provides her useful definition of complexity in relation to mixed method research; “there is little consensus, and many definitions refer to complexity as a state or quality of being complex, which of course is not very helpful!” (p. 5).

The complex and multi-faceted management of resident feeding in long term care homes is such as to challenge medical, nutritional, dietician, culinary and catering management, and operational staff on a daily basis. Diagnostic and treatment options are continuously evolving and new nourishment imperatives for people living with dementia are being discussed, together with pharmaceutical and non-pharmaceutical interventions. See for example: Bakker, (2003). Baptiste et al. (2014), Biernacki et al (2001), Brush and Calkins 2008, Chang & Roberts (2011), De Bruin et al. (2010), Mathey et al. (2001), Remsburg et al. (2001), Wilson et al. (2000). Stemming from the above was the assumption that the dominant area of research in terms of improving the food intake for people living with dementia has been focussed on nutritional aspects – rather than on the more comprehensive, nourishment aspects.

The utilitarian aspects of food and cooking, as necessary for survival and as briefly discussed above, have tended to inhibit the study of catering services, culinary arts, and hospitality management as independent disciplines outside the more inclusive realm of general "hospitality research". By examining past efforts in catering and hospitality research we may understand the development and direction of that research and provide an indicator of where that research is based now. Hegarty (2016) suggests the value of current research efforts in culinary and hospitality:

> … will be judged by the numbers of hospitality practitioners who acknowledge that research is at the heart of hospitality and culinary education and training and, having acknowledged this, will become engaged in hospitality and culinary research that makes a difference to their professional practice. (p. 203)

It is ethnographic research, a qualitative method, which has the longest history of research in commercial hotel, catering, and hospitality organisations, borrowing their paradigms from the established disciplines of anthropology, geography and sociology and written predominantly for a social scientific audience, rather than the commercial operators (Lugosi 2009). Ethnographic

research has been described as essentially different from more traditional approaches to management research (Gill et al. 2010). Most of those early studies so identified were generally carried out by academics external to the management research community of the day. There had been little progress in this regard until relatively recent times and ethnography was for many years underused.

We are now seeing the emergence of ethnographic epistemologies again within the research communities in hospitality management. It is Lugosi (2009) again who raises the question of philosophical differences between hospitality researchers and brings to the fore the tensions found in the hospitality research community. Lashley et al. (2007) argues that hospitality studies can sit comfortably side by side with a more business school like philosophy, in which he proposes "*hospitality studies allow for the intellectual pursuit of the social dimensions. alongside those of an economic nature*" (p. 2). In an earlier debate Lashley (2004) contends that "*the study **of** hospitality allows for a broad spectrum of enquiry, and the study **for** allows studies that support the management of hospitality*" (p. 15), explicitly acknowledging the intellectual growth of hospitality as an academic field of study is better served through a critical analysis of the concept of hospitality as broadly conceived.

Baloglu and Assante (1999 p.69), recognising the developing field of hospitality research, studied five hospitality management journals in order to determine the dominant research areas studied and methodologies used. Their conclusions were somewhat vague, indicating that:

> Although most of the articles were found using descriptive and univariate techniques, there has been an increase in the number of articles using multivariate statistics during the years studied. However, the use of multivariate explanatory techniques was found to be minimal compared to other statistical techniques. (p. 69)

They close the article with the statement:

> What actually matters is how the findings are communicated to readers … Therefore, hospitality researchers should be encouraged to use more sophisticated methods to have a better understanding of topics studied and to provide richer information and more advanced knowledge to both scholars and industry practitioners. (p. 69)

They do not, however, provide any insight as to which methods they might consider to be more sophisticated. I would argue, however, that the use of ethnographic research, through the lens of observation presents an ideal method of understanding the cultural customs and behaviours found in long term care homes and as demonstrated by the various staff involved.

Lugosi et al. (2009), considered by some hospitality academics to be among the more prolific and respected authors on hospitality management in the UK, discussed the development of critical hospitality management research and how it has evolved significantly over the four decades. They consider the developments and diverse approaches and distinguish the traditional and emerging forms of research methodologies.

It would, in view of the above, be fair to contend that hospitality research has still not reached the same level of maturity as enjoyed in other social research fields, despite the above mentioned, and many other academics', best endeavours. On another note, very little has been done with regard to research into the main providers of nourishment for people living with dementia; the cooks, chefs, culinarians, call them what you will. There are several trade type journals, with advice and short term "fixes" but none that satisfy the academic journal criteria. But those short-term fixes do not, of themselves, make for advancement in catering theories. A theory should provide an explanation for a set of observed events and help predict events that may happen given certain, pre-determined, conditions.

Within Culinary Arts and Gastronomy, two lynchpins of the hospitality industry, the theories and research are an essential element of knowledge development. There are, however, debates on whether or not culinary and gastronomy research is "scientific" or not. Wellington (1996) does not see the need for concern in this respect for practicing scientists and identifies their actions as to "just get on with it". Hegarty (2016) refers to science as being *"a body of knowledge obtained by methods based on systematic observation, recording and, verification".* (p. 204). Hegarty (2016) also includes hospitality within the social sciences, alongside economics, history, anthropology, sociology, and political science, each of these sciences contributing to the greater understanding of the practices and principles of the hospitality industry.

On the other side of the hospitality research spectrum, foodservice management, as it is known in the USA, and hotel management research, have received considerable attention from researchers, falling into the qualitative corner. A more recent trend has been the emergence of "Gastrophysics: The new science of eating" (Spence, 2017). In this, Spence uses both quantitative and qualitative (mixed methods) research to demonstrate many of his findings, from the use of robotic chefs to 3D printed foods.

From the above it is but a simple step from the understanding that education, teaching and training in the culinary arts or practical cookery is not, and never has been, research based. That is not to say, however, that it never will be. For now though the status quo will continue. That presents its own problems in this research. Most, if not all, culinary staff subjects of my research had not been educated beyond the usual "wrist to fingertips" training required to put together a

reasonable meal. Certainly, some of the subjects were at a supervisory level but the educational requirement for such rôles is generally quite low and rarely above the England, Wales, and Northern Ireland qualification Levels 2 or 3. Consequently, the approach to interviews may not have been fully understood by the subjects and may have created suspicions about the purpose of the research leading, in turn, to resistance to answering or lack of total honesty in response.

Gill et al. (2010) introduce the complexities and diversity of management research and identify the competing approaches or philosophies taken in management research, specifically induction and deduction. From such readings we can also agree that business environments, in most situations, are complex. In recent years, and on a global basis, we have witnessed rapid and significant change within business organisations, not least in hospitality management, including long term care home catering management.

Hertog et al. (2009) discuss hospitality innovation and identify some of the many advances in recent years. Greater customer expectations, driven by new technological advances, are impacting on hospitality competition. This increasing competition will force many businesses to review their business processes in order to survive. Conversely, they highlight the failings in management research with regard to hospitality innovation.

I have recently come to the acceptance, from the above, that my research could not ignore a closer look at Business Process Improvement (BPI) for caterers involved in the production and service of nourishing foods for people in long term care home situations. Although the research has not been concerned directly with BPI a good part of it is concerned with process change, including people and attitude change in an attempt to determine business friendly approaches to the catering for people living with dementia within long term care homes.

Consequently, and leading up to the discussion on the range of research methods available, I should stress that my research needed to be both a critical and self-critical enquiry which aims to contribute to the advancement of wisdom and knowledge about the experiences and attitudes of the catering staff involved in the provision of catering services in long term care homes to people living with dementia. What is needed then, in the context of care home catering is a practical approach for the beginning of a theoretical and methodological framework for the further investigation of food as a healing, rather than merely a chemical process and, how the caterer can maintain their profitability and sustainability.

Stage 4: Form a plan.

In this section, I attempt to leave behind the philosophies of research and the accompanying paradigms, which turns out to be nigh on impossible, and concentrate on what I planned to do and how I eventually did it. The phenomena of catering services and hospitality within long term care homes caring for people living with dementia is bound to be laden with competing meanings and complex interpretations. Within these phenomena the reporting of lived experiences may utilise empirical research methods to extract results, which may be philosophically examined, through reflective research, thereby contributing to our knowledge base. Those lived experiences may be researched through a set of processes: seeing, reasoning, which may be described as natural cognition. These processes have been described by Smith (1995) as common sense. But that same common sense he again describes as a 'system of beliefs' and he even goes so far as to denigrate common sense as naïve physics, folk psychology, or folk physics.

Is *Common-Sense* really a dirty expression within the academic world of methodology, the varying schools of thought and conflicting paradigms? Descartes, in *Discourse on Method*, (translated by Clay, 1988), put forward the point of view that what is most equally distributed or evenly shared throughout mankind is good sense, in other words, common sense. Reynolds (2010) supports the veracity of common sense, in contrast to many 'continental' philosophers, and suggests that many 'analytic' philosophers 'explicitly invoke the value of common sense'. Although being of a suspicious nature myself, suspicious of the varying philosophies and the transcendental arguments, my own thoughts on common sense are positive and consider my stance to be mostly common-sense realist. So where does that place me in the paradigm debates?

Brotherton (2015) regards positivism and phenomenology as being two opposing paradigms in the process of carrying out research. He further asserts that those two internally cohesive groups are not representative of the real world, with many sub-groups each advocating alternative interpretations.

For a long time I imagined that my own position as a researcher tended to fall naturally in the positivist camp, rather than the phenomenological approach to the process of research. I do, however, have sympathy with, and an increasing preference for, the phenomenological approach. I maintain that positivism employs a natural scientific approach to studying the social sciences where there are cause and effect relationships. There needs to be a clear explanation of the cause before we can understand or truly know about any social phenomenon. The positivist approach is commonly used in psychology, business studies, sociology, health sciences, and law, taking various forms and may test observable evidence against theoretical statements or identifying causal factors. Positivism deals with observable empirical data, the social facts that can be recorded and verified.

Brotherton (2015) identifies positivism as a belief based on the view that "a 'real' world of tangible social and physical phenomena exists independently – that is, objectively – of how such phenomena are perceived" (p. 38). A simplified version of the above would be that 'the truth is out there' just waiting to be discovered – by applying the appropriate methodology. Bryman and Bell (2007) suggest positivism as being an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond.

Having said that, I will here argue the case for an ethnographic methodology for this research thesis. An interpretivist epistemology is one which can be used to understand and interpret the meaning and interactions associated with social situations. Silverman (2005) defines ethnography as the social scientific writing of folks, or the 'actors' in the situation. The phenomenological researcher understands that not all things can be known objectively and that our newly found knowledge will be tainted by our own sensitivities and ideals. I have already confessed to a personal and vested interest in this research due to familial connections and circumstances, not forgetting that I strongly believe I will one day be a permanent resident in whichever care home will take me.

A particular purpose of the phenomenological approach is to clarify the explicit, identifying phenomena by way of which they are perceived by the actors in a situation. This can often translate into gathering profound information and perceptions through inductive, qualitative methods representing it from the perspective of the research participants. The methods used in these cases could include interviews and observations. Phenomenology is concerned with the study of experience from the perspective of the individual, 'bracketing' taken-for-granted assumptions and usual ways of perceiving. Epistemologically, phenomenological approaches are based in a paradigm of personal knowledge and subjectivity and emphasise the importance of personal perspective and interpretation. As such they are powerful for understanding subjective experience, gaining insights into people's motivations and actions, and cutting through the clutter of taken-for-granted assumptions and conventional wisdom.

Early on in the research I prepared a simplified Plan of Work, including what I hoped to achieve and by when. Consequently, my common-sense plan is shown in Table 3.1. As may be understood and referring to the line in "*To a Mouse*", by Robert Burns (1785): "*The best laid schemes o' mice an' men. Gang aft agley*" (Often go awry). Table 3.1 shows what was planned and what actually took place.

Table 3.1: Simplified Plan of Work – revised and updated July 2023

Phase 1	
2014	*DB2 Presentation*
2014	*Research delayed due to hospitalisation and second Total Knee Replacement.*
Jan 2016 – ongoing	*Initial literature search for articles related to care home catering. Early results show little reported. Extend search to hospitals. See what is generalizable / transferable to LTCH operations. Continue search throughout project.*
May – Sept 2016	*Field work / Initial Data Collection: Mapping exercise, observations in Long Term Care Homes. Initial interviews.*
July – Nov 2016	*First Analysis: Compare and contrast data with what has been found in the literature.*
Phase 2	
Jan 2017 – Aug 2017	*Main field work: Go back and interview again, using revised questions from initial data collection.*
Sept 2017 - *Dec 2017*	*Transcription starts*
Jan 2018 - Apr 2018	*Initial writing up of Literature Review and Methodology; Continuance of transcriptions; some initial analysis. Decision - further interviews needed*
2019 – 2020	*Second period of research delay due to poor health and substantial suspension of studies.*
2021 – 2023	*Initially due January 2021 but further suspension of studies granted on health grounds. Final write-up, July – October.* *Further delay, November 2021 to August 2023*

Source: Adapted from Gill et al. (2010)

Within Phase 2, I had an idea of what I wanted to achieve, and how to do it, it was time to find participants to the study.

Stage 5: Selection of Participating Care Homes, Staff and Collecting Information.

I consider myself to be relatively fortunate in that previous and preliminary consultancy work had opened doors and dis-armed gatekeepers of the typical institutions and businesses that I investigated. A major UK based care home caterer, for whom I had carried out a consultancy project, agreed to grant access to some of the care homes where they provide catering and facilities management. We agreed to a trial interview and questionnaire session in one of the care homes where they provided the catering services. This was carried out in April 2017. The results from that trial revealed a number of changes that would be required before embarking on further research visits to other care homes.

The type of information collected included a series of "Mapping" exercises, whereby walk-around observations were carried out, going in cold, and identifying the systems and steps in the catering and hospitality operations. These first steps **recorded** the "what's there", rather than **debating** the "what's there", the intention being to describe the current systems.

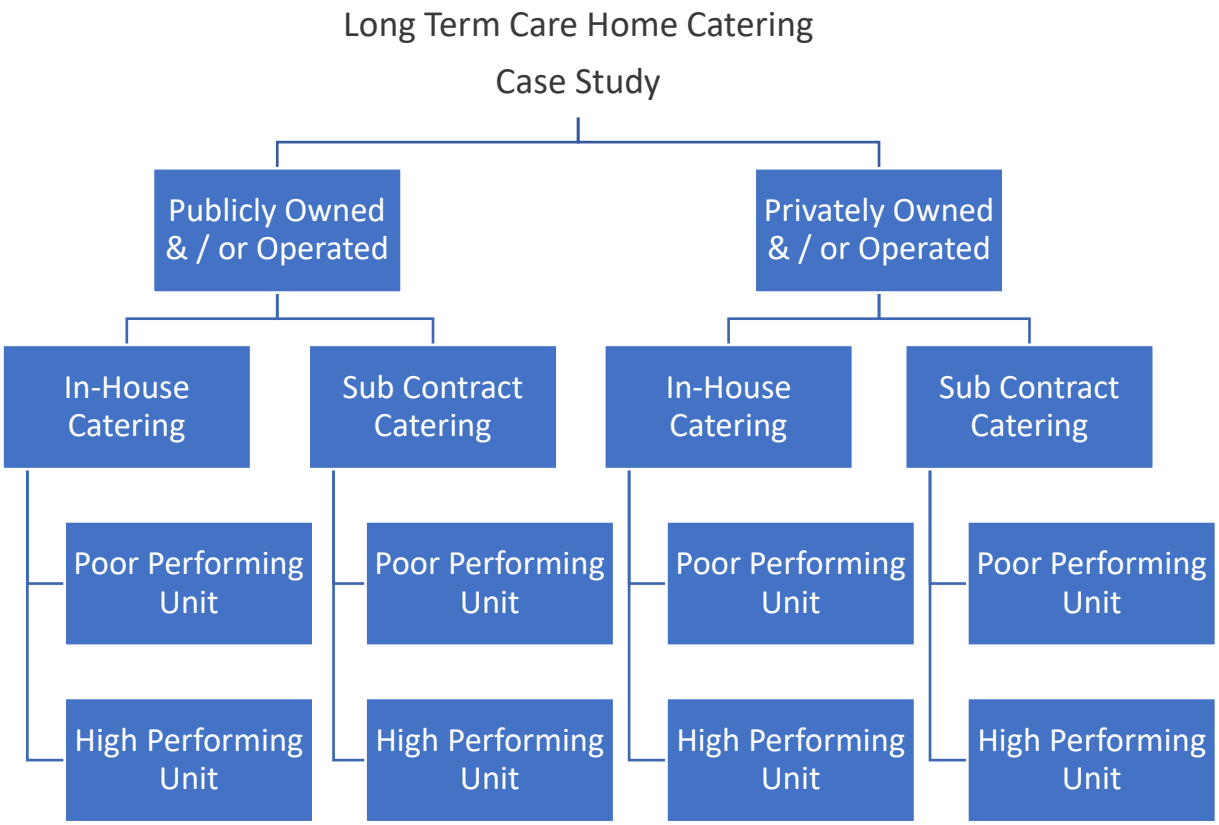
The second step involved unstructured interviews with the catering, hospitality, facilities, nursing, and ancillary staff. The intention at this point was to consider the available alternatives, being aware that inappropriate questions may highlight all the key stages in F&B service delivery but not identify all the potential problems, what actually happens in practice.

After these preliminary steps there was a period of simplistic analysis and comparison and contrasting of those findings to what had previously been identified within the relative literature. This did presuppose that there would be sufficient data of interest and relevance within the literature. If all went well, I then intended to visit other units to carry out interviews with the Long-Term Care Home managers, catering managers and relevant staff, using questions and / or questionnaires based on data received during the original mapping exercise and interviews.

Unfortunately, due to circumstances beyond my control, the number of care homes available to me, where the catering company provided the catering services, was restricted to just one, the regional manager being unable to identify other care homes where the owners would agree to the visits or finding it difficult to identify suitable homes. I then had to review my plans and how to contact other care homes and determine their willingness to take part. I also decided to include interviews with individuals who had recent experience of the care sector in senior, regional rôle s, within the NHS or with the foodservice catering supply sector.

At this stage I decided, with support from my supervisors, to develop a schematic plan, outlining the type of care home catering operations I would need to access as the basis of the case study. The schematic is shown in Figure 3.5:

Figure 3.5: Long Term Care Home Catering Type Selection



In this, it was decided to view the two predominant types of care homes - The privately owned and operated and the publicly (predominantly local authority) owned and operated. Within each of these, the catering services were carried out either by an in-house catering team or by a sub-contacted catering specialist company. The intention was to identify both poor and high performing units within each using the Care Quality Commission (CQC) public ratings for long term care homes within the South Yorkshire, Nottinghamshire, and Lincolnshire areas. This soon became apparent that this route would be problematic, as those homes considered to be "failing" were reluctant to take part in any type of survey and were found to be very defensive during exploratory telephone conversations. My “sales pitch”, or powers of persuasion were clearly inadequate.

Hennink et al. (2020) confirmed my previous understanding of sampling methods in social science research and the different strategies used in qualitative and quantitative studies, with each being driven by different paradigms. In terms of generating a research sample a purposive sampling method was used, in order to recruit participants who can provide rich information (Patton, 2014).

It was now time to abandon the first plan and use a purposive sampling register of potential participants. A particular benefit of using a register is the convenience of being able to return to the register and select additional participants if the original selected participants decline to take part., (Hennink et al. 2020). Using the NHS **National Institute for Health Research** sponsored; **Enabling Research in Care Homes** (ENRICH) on-line register of care homes within the Sheffield, Nottinghamshire, and north Lincolnshire areas I created a small database of those homes which fit the research criteria - minimum resident numbers of 25 and offering facilities for EMI residents. Fortunately, the ENRICH register is open-access and kept up to date. A negative aspect to the use of the ENRICH register is that there are many care homes who have not joined the research community. As the research did not involve direct or indirect contact with NHS patients or care home residents the SHU research ethics committee approved the approach.

Having created the database in MS Excel, I used the Random Function to generate the care homes which would be approached within the sampling frame shown in Appendix 5.

Contact was made by either a 'phone call, followed by a confirmatory email, or with an exploratory email, without prior notification to the potential participants, followed up by a 'phone call. There was an initial hesitancy from some prospective participants, some of which did join, though others remained reluctant to take part. Some reasons given for non-participation were lack of time; lack of interest; being short staffed; or the owners or regional directors and owners would not give permission. These reasons given were despite having signed up to the ENRICH programme in the first place. This reluctance created within me a degree of scepticism about WHY they had originally signed up to the ENRICH programme.

The eventual outcome of the random process was the following list of care-home participants as shown in Table 3.2 and in greater detail in Appendix 5:

Table 3.2: Participating Care Homes.

Care Home Code	Group or Private	Rooms / Residents	CQC Rating
LN8	Group	26	Requires Improvement
W01	Group Ch	31	Good
SY4	Group	36	Good
LN11	Private	60	Good
NOT3	Group	82	Good
SY10	Group	66	Requires Improvement
OL 1	Group	93	Good

There was also a slight "snowball" effect from the original participants developed from the ENRICH data base, with one of the care home managers offering to provide access to another care home in the group for which she was responsible. Questionnaires were sent to the care home catering and care staff.

There was also one care home and care home group who responded following my contribution at the Westminster Food and Nutrition Forum conference, "*Food in hospitals and the care sector - clinical standards, meeting the economic challenges and preventing malnutrition. 14th July 2016*". At this conference I delivered a presentation, *Meeting the challenges of care home catering provision: The Sex and Drugs and Rock n Roll Generation (*Dinsdale, 2016b). During the conference I distributed a QR-Code flyer inviting delegates to contribute. There was just one care home who responded fully. Several other attempts were made but were incomplete and invalid.

Figure 3.6: QR-Code invitation to participate.

A full schedule, including a set of interview questions, was prepared in advance using the flexible, predominantly semi-structured interview techniques, shown in Table 3.3, together with verbally administered questionnaires.

***Table 3.3*: The verbal Data Dimension (Source: Gillham, 2008, p. 3)**

Unstructured						Structured
Listening to other people's conversation; a kind of verbal observation	Using 'natural' conversation to ask research questions	'Open-ended' interviews; just a few questions, e.g. 'elite interviewing'	Semi structured interviews; i.e. open and closed questions	Recording schedules; in effect, verbally administered questionnaires	Semi structured questionnaires; multiple choice and open questions	Structured questionnaires; simple, specific, closed questions

As previously indicated, during these early interviews I was introduced to current and former senior executives within the NHS Food Service providers and the Care Home Industry. These volunteered their participation and were an invaluable addition to the research data collection providing a great depth and breadth of background knowledge.

Volunteer 1 was originally a hospital chef, and worked his way up to Regional Operations Director, and Innovations Director within the NHS and now operates his own Food Services Catering Consultancy to hospitals, care homes, and schools. He is also a past Vice President and President of one of the related hospital food services associations (name redacted).

Volunteer 2 was a Registered Nurse, Midwife, Registered Children's' Nurse, Forensic Nurse, specialist in elder care and Registered Manager of a 246-bed care home in London. Whilst in that position she attended a Hospitality and Catering NVQ Level 3 course at the local college. This was followed by the City and Guilds Food Safety Management course. To her total credit she also completed a PhD in Health Care Management. These qualifications and experiences placed her in a unique position within care home management, understanding not just the medical or clinical needs of her patients and residents but also of the softer needs within the care home. She was later made Director of Nursing for two national care home chains where she implemented several changes and innovations.

Extracts of the interview data with these two volunteers will be found in **Chapter 4: Results of Interviews and Questionnaires**.

3.3 The Development and use of Questionnaires.

As in any new social situation, where the environmental mores or participants are unknown, it is best to keep a low profile. Consequently it was my intention to carry out this research with the staff whilst they were at work and questionnaires administered in the place of work or via the internet based Qualtrics programme.

Regardless of which academic tomes, academic articles, or business 'How To' books are read, questionnaires are seen as the most commonly used method of collecting data. Rowley (2014) suggests that given the considerable use of questionnaires that many would assume the design and creation of such would be relatively simple and easy to use. However, Rowley (2014) does emphasise that a good questionnaire requires a great deal of effort and time.

The use of questionnaires is compatible with my philosophical stance of interpretivism, but it requires careful consideration and adaptation to align with interpretive principles. Interpretivism

is a research paradigm in the social sciences that emphasises understanding and interpreting the subjective meanings and perspectives of individuals.

The use of questionnaires can fit the philosophical stance of interpretivism in some cases, but not in others. As an interpretivist I believe that social reality is created through the interactions of individuals, and that meaning is subjective and context dependent. Interpretivists typically use qualitative methods such as interviews and participant observation to gather data. However, in many cases, questionnaires can be used to gather data that is consistent with an interpretivist approach, which is the route I took.

The questionnaires I used asked participants about their experiences, beliefs, and values within the care home settings. The questionnaires were not highly structured, with the intention of being able to capture the subjective experiences and meanings of the individual participants.

The design of a research questionnaire is normally such that they are intended to be completed independently of the researcher, either remotely or in person. In fact, Bryman and Bell (2011) refer to the use of self-administered or self-completed questionnaires. These may be distributed by hand - Face-to-Face, post, e-mail, or on-line. In the fifth edition, Bryman et al. (2019) compare the advantages and disadvantages of the differing types and distribution methods of questionnaires. Interviewing can be an expensive business, especially in terms of time expended. Consequently the use of self-administered questionnaires has the advantage of being cheap to administer.

Self-completed questionnaires were developed for the trial research and administered to the care staff, responsible for serving the food and beverage provision to the residents. These were handed out during the visit, collected at the end of the visit, and later analysed. It was later noted that some of the respondents would have benefited from prompting or me being available to answer any questions. On the second day of the visit, I assisted the new respondents to complete the questionnaires. Veal (2011) suggests a questionnaire can also act as a script for the interviewer, which is what I did on that second day. Minor changes were then made to the questionnaire content for future research visits to other care homes. I also decided to use an online questionnaire program, Qualtrics, for future respondent completion and analysis. The questionnaires can be found in Appendix 9.

3.4 The use of Interviews

Interviews are generally considered to be a better fit for an interpretivist viewpoint than questionnaires. This is because interviews allow for more flexibility and interaction between the researcher and the participant, which can help to capture the subjective experiences and meanings

of individuals (Walsham, 2006). Additionally, interviews were used to follow up on interesting responses to the questionnaires and to ask clarifying questions, which helped to ensure that I had a deeper understanding of the participant's perspective. Not all participants were given sufficient time by their employers to take part in the face-to-face interviews so were asked to participate by completing the questionnaires.

1. *The interview style I used, for care home managers, senior catering staff, dieticians and / or nutritionists, had three main elements.*
    a. *face-to-face participants with a set of semi-structured interview questions.*
    b. *listening to what they say in response.*
    c. *sometimes asking them to clarify responses.*

The study used low profile interview techniques throughout the periods on site in an attempt to avoid disruption or intimidation of the staff being interviewed. The interview technique used was semi-structured, using a prompt to lead the direction of the sessions, but not to the extent that might be used in quantitative research. Bryman et al. (2019) define the differences between the unstructured interviews and the semi-structured interviews. The semi-structured interviews would use little more than an *aide-memoire* to cover a range of topics. I used the revised questionnaires as an interview guide. Depending on the respondent's answers to the questions I would ask the questions in differing order, or probe more into a particular response.

All interviews were carried out face to face within the participants care home environment, each interview lasted approximately 20 to 30 minutes.

A link to request access to the on-line interview recordings can be found at Appendix 10. In this connection, I now go to the transcription and analysis of the data.

Stage 6: Transcription and Analysis of the Data

Digital recordings were considered to be the best and most appropriate method of collecting voice data during interviews and, as many researchers will attest, will usually provide clear and understandable results. They also serve to provide confirmation of any written part response which may be discussed during the interviews. In reality, however, voice recordings were often conducted whilst the interviewees were busy at their jobs, being unable to devote too much time for one to ones, and usually in a relatively noisy environment. In some scenarios, this would be in a busy kitchen, with other kitchen staff, care assistants or delivery people wandering in and out during preparation time and service. One interview took place in a very busy and noisy hotel lobby and the sound recording was, at times, difficult to follow. The transcription software used did not cope very well with these noise blighted scenarios and careful editing, line by line, had to be done.

The use of a Computer Assisted Qualitative Data Analysis (CAQDAS) application, such as NVivo was briefly considered early in the research programme. However, the additional need to learn a new software programme, in a relatively short period of time, was a significant deterrent. I was also drawn to the use of manual coding and data analysis as I believe the quantity of accumulated data was not too large to manage or code. I was also drawn to Hammersley and Atkinson's (1995), comment "*there is no mechanistic substitute for those complex processes of reading and interpretation*" and that using CAQDAS "*does not provide 'automatic' solutions to problems of representation and analysis*" (p. 203). Davies et al. (2009) suggests "A lack of software-related flexibility during the simple coding process means that researchers may need to spend more time adjusting simple codes when using CAQDAS than during the use of manual data analysis". (p. 122). Being already on a tight schedule the thought of additional work on coding would be too time consuming. In a final observation I would much rather rely on my own fading memory and One Drive filing system than an untried app.

A Thematic Analysis (King, 2004) was carried out to identify emergent substantive themes from the interviews and questionnaires. My field notes and transcripts of the interviews were read over and over again in order for me to fully understand the project as a whole. I utilised open coding analysis to get to the heart of the responses and identify the emerging key patterns. Constant and repetitive analysis helped me to identify and contrast the commonalities and differences found in the responses.

In wrapping up the Methodology chapter, it becomes evident that the decisions I made regarding my research approach, design, and tools play a pivotal rôle in shaping the outcomes of the investigation. The careful selection of methods has laid the foundation for my exploration into the realm of perceptions and experiences, as illuminated by the voices of my participants. By establishing a methodological framework that aligned with my MRQ, I have set the stage for a comprehensive analysis of the data gathered through interviews and questionnaires. RSQ 4: What is the optimal methodological approach for exploring of this topic? Has also been answered in this section.

To summarise, the methodology chapter discussed the role of food service staff in care homes and the need for research methods in the context of care home catering. I emphasised the importance of choosing appropriate research methods and justified those choices. I discussed various research methodologies proposed by different authors, highlighting their strengths and limitations.

The methodologies discussed include Kothari's structured approach with a focus on quantitative data, Gill et al.'s systematic review of literature, Saunders et al.'s comprehensive

research approach, Sharp et al.'s seven-step research sequence, Gummesson's qualitative business research approach, Silverman's emphasis on qualitative research, and Bryman's mixed-methods approach.

I acknowledge that each approach has its merits and drawbacks and advise researchers to consider their specific research objectives and expertise when selecting a methodology. I also mention the importance of understanding epistemological stances and embracing methodological pluralism to effectively address complex research questions.

In conclusion, the chapter highlights the need for a thoughtful selection of research methodologies and encourages researchers to be aware of the strengths and weaknesses of different approaches, adapting them to their specific research context to achieve robust findings. I also emphasised the importance of embracing various epistemological perspectives and methodological pluralism to gain a holistic understanding of research phenomena.

The forthcoming chapter will delve into the insightful results obtained from engaging with the participants, shedding light on the multifaceted landscape that surrounds my MRQ and RSQ’s.

Chapter 4 - Results of Interviews and Questionnaires

The stoic generation would generally eat everything they cooked; waste not want not being a common mantra. If not eaten there and then they would find a way of preserving the leftovers for use later. In the current era of excess and waste there is much to be learned from the historical associations and philosophies.

With a solid methodological groundwork now in place, I turn my attention to the heart of the study: the Results of Interviews and Questionnaires. In this chapter, I embark on an exploration of the narratives, perspectives, and insights shared by the participants. Through a meticulous analysis of their responses, I aim to uncover patterns, variations, and key themes that will contribute to a deeper understanding of my research inquiry.

This ties in to the MRQ, "**What is the rôle of caterers in the provision of nutritious food and drink within elderly care homes?"** In order to further explore the MRQ, I formulated a set of RSQs that guided the research into the nourishment and food experiences of elderly care home residents, particularly those with dementia and dysphagia. These RSQs not only determined the content of the thesis but also informed the selection of participants and the methodology employed. It is noteworthy that a significant portion of the empirical research involved direct engagement with catering staff, those directly involved in food service, rather than solely relying on managerial perspectives. The thesis is structured to provide a logical progression of the research process, with each chapter building upon the preceding one to create a seamless narrative.

It is recognised that presentation of results, from research of an interpretivist viewpoint, in a DBA thesis differs somewhat from a PhD. This is because, as discussed in the previous chapter, interpretivism is a philosophical stance that emphasises the subjective nature of reality and the importance of understanding the perspectives of individuals. As a result, the presentation of research findings from an interpretivist viewpoint is typically more narrative and descriptive, and it often uses quotes from participants to illustrate the researcher's interpretations. My focus is on presenting the results in a clear and concise way with occasional Tables used to present the quantitative results. The results of the interviews are presented in narrative form, in a way that captures the complexity and nuances of the research findings.

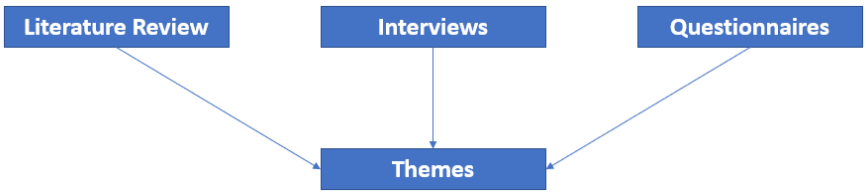
The careful integration of qualitative and quantitative data offers a comprehensive view of the phenomena under investigation, allowing me to draw meaningful conclusions and implications, which will be discussed further in **Chapter 5 – Discussion, Conclusion and Recommendations**. As I journey through this chapter, I am attentive to the voices that guide me towards the essence of the research, enriching my understanding of the subject at hand.

By utilising this approach, I am smoothly transitioning you, the reader, from the Methodology chapter to the Results of Interviews and Questionnaires chapter. These opening paragraphs of Chapter 4, reflect on the importance of the methodology's rôle and sets the stage for data analysis, while the introduction to this chapter previews what you can expect in terms of content and insights. This bridge maintains the narrative golden thread and ensures a cohesive reading experience for you, the reader. Following in-depth discussions and external feedback it was decided to integrate the interview and questionnaire data within this same chapter, enabling me to compare and contrast the findings from both data sources. This approach has enabled a cohesive and transparent analysis for discussion in the following chapters.

Consequently, this chapter has been written in a style to ensure that the participants' voices are heard as fully as possible. I believe this to be an essential element in exploring the participants' perceptions of their reality in care home catering. As stated in the methodology section, the truth is '*out there*'. But what is their truth? Am I able to determine whether their responses, beliefs, judgements, and stories are right or wrong from listening or reading? These are naturalistic responses from the participants, with no apology for the subjectivist ontology of the responses, and I must take those responses at face value. That is to accept that the responses may include the participants' adaptation to their own reality, with or without embellishment, in an effort to acquire and understand the knowledge and reality within care home catering services.

The purpose of this chapter then, is to present an in-depth insight into the workings and procedures of the care home catering services observed and researched in the participant care homes. There are also insights provided by senior nursing and hospitality staff who are, or have been, directly involved in both NHS and Care Home facilities. Coupled with the analysis of the Literature Review, the coding and analysis of the interview and questionnaire data resulted in a number of "themes".

Figure 4.1: Process of Identification of the Themes (Dinsdale. 2019)



As already discussed in **Chapter 3 - Methodology**, manual coding was carried out using open coding analysis. The themes emerging from the participant responses are shown in Table 4.1,

overleaf. These are presented in no particular order, but the themes are then further sub-divided into sub-themes and grouped according to best fit, see Table 4.2.

Table 4.1: Emergent Themes from Data Analysis

Catering Systems in Place	Overview of the varying food production and service systems in place, linked very closely with menus and food choices
Menus, Culinary Innovation and Food Choices	Each home has their own style of food production following classical menu compilation techniques.
Professional Standing	RMs believe their Head Chefs are on an equal professional standing to nutritionists, but that nutritionists do not consider chefs to be on an equal level. Head Chefs do not believe nutritionists consider them to be of equal standing.
Equipment needs	Significant advances have been made in kitchen and service equipment in recent years, together with a greater dissemination of knowledge in the use of hydrocolloids and other techniques.
Training and Development Needs and Technical Knowledge	Little training is offered to staff in situ with regard to F&B production and service.
Nutritional / Dietetic related	None of the participating care homes directly employed either nutritionists or dietitians.
Food Costs & Labour Costs	In many cases it was difficult for the care home management to determine food costs as they were often subsumed into general operational costs. However the chefs did keep track of weekly expenditure. Increasing labour costs have impacted on standards of delivery as many care home owners only pay the absolute minimum wage, deterring staff from seeking employment with them.
Sources of Funding	To determine whether there are differing standards for those homes whose residents are funded by the Local Authority or privately.
Perceptions of Hospitality and Hospitableness	In which respondents remark on their own perceptions of hospitality and hospitableness in the care home in relation to Resident Directed Food Services.
The Care Home Environment	In which respondents discuss the care home environment including dining facilities. Specialist service equipment

The themes identified above have been sub-divided into two groupings. These are **Human related,** and **Business Structure related**. See Table 4.2., overleaf. Towards the centre of the table there is some convergence of the themes.

Table 4.2: Theme Grouping

Theme Grouping	Theme	Evidence
Human Related.	Professional Standing	Discussions with medical and service staff.
	Training and Development Needs and Technical Knowledge	Feedback from questionnaires and interviews.
	The Care Home Environment	Concerns for the residents raised during discussions with medical and service staff
	Perceptions of Hospitality and Hospitableness	Feedback from questionnaires and interviews and discussions.
Business Systems Related	Catering Systems in Place	Discussion with managers and on-site observations
	Menus, Culinary Innovation and Food Choices	Feedback from questionnaires and interviews and discussions.
	Food Costs & Labour Costs	Feedback from interviews
	Equipment needs	Feedback from questionnaires and interviews.
	Sources of funding	Feedback from interviews
	Nutritional / Dietetic related	Feedback from questionnaires and interviews and discussions.

Selected extracts are taken from the interview transcripts and questionnaires in the following sections, addressing the emergent themes from the research analysis. Not all responses were relevant throughout. Individual care homes respondents' responses are identified within each section. An overall analysis of the combined responses is given at the end.

Prior to starting the interviews I read out the preamble to the interview question scripts and explained the **Informed Participant Consent** forms. The participants read the forms and signed their respective form, countersigned by me. An example IPC form is in Appendix 8.

I will first address the Human Related themes.

4.1: Professional Standing

Perhaps one of the more problematic dilemmas to solve in the identified themes is the relationship between the culinary and nutritional or dietetic staff. The following extracts present a varied response but all point to the lack of trust and / or understanding between the players. The purpose of this section was to answer RSQ's 3, 5 and 6.

4.1.1 Volunteer 1

The interview with Volunteer 1 did not elicit any particular viewpoint other than the NHS Hospital chefs had to work to strict dietetic and nutritional standards determined by the in-house dietetic and nutritional staff, who instructed the culinary staff on what to prepare and how to prepare it.

4.1.2 Volunteer 2

Interview with Volunteer 2: "A big question here, erm, still regarding food, but do you believe a chef is on an equal professional status with nursing staff, nutritionists or dietitians?" "*Yes*." "Why do you say that?"

> *"Because it is this Chef who is responsible for food quality, it's the chef who looks over the food before he purchases it and says yes this is right. It is the chef who will follow the menu. Who will cook it. Who will talk to the residents about their food preferences? For example in this particular care home we had two Jamaican gentlemen who liked a lot of spice, who liked Jerk Chicken cooking for them, who liked rice and peas. Now it was important for them to have that. I couldn't cook that. Most of the staff couldn't cook that. The chef could cook it for them and, he spoke to them about when they cooked it for themselves or when their wife cooked it for them, or when their mother or whoever cooked it for them, what did they put in it for you that you especially liked? So, in that sense I think the chef is just as important because he is helping residents to eat and eat what they like. And he is also informing them in memory."*
>
> "Which is very important." "*Very important*."

4.1.3 Care Home W01

This care home is owned and operated by a well-known national charity organisation. The catering services are sub contracted out to a national contract catering company. There are just 31 rooms, set in four individual suites, each with their own dining room and service kitchen. I asked the chef, "Do you believe that your occupation is viewed as being "professional" by the carers, clinical, nursing, dietetic and nutritional staff? Do you believe they view the job of a chef as being professional?" His response was:

"Er, yes I think so, yes, especially where when they realise you know what you are talking about, in terms of erm, such things like nutrition, dysphagia. Then I think, think, yes, yeh."

4.1.4 Care Home LN8

Question to the cook regarding professional standing: "Do you consider yourself to be a valued member of staff essential to the wellbeing of the residents and patients?"

Response, "Well yeah because if they don't get the correct food their health doesn't stay ... er."

And do you believe a chef is on an equal professional status to nursing staff, nutritionists, and dieticians?

"Because we have to listen. Yes, we all have to listen we all have to have an input. And again it's us preparing those meals. And if we don't help to keep those healthy meals, how do they stay fit, well, healthy?" "We are just as equal as what they are. Every member of staff is even a carer."

Care Home LN8 did not employ their own dietician or nutritionists relying occasionally on the services provided by the community dietician and Speech and Language Therapist (SALT).

4.1.5 Care Home LN11

Care home LN11 did not employ their own dietitian or nutritionist, once again relying on the community services.

When the Head Cook was asked, "Do you consider yourself to be a valued member of the staff essential to the well-being of the residents … and are you consulted with regard to aspects of food production and service by either the dietetic or nutritional staff?" his response was:

"yeah, yeah that's how you get to know, you get to know your residents and for those staying here all the time you probably would know."

With regard to status, and whether he believed a chef is on an equal status to nutritionists and dietitians, the Head Cook responded:

"Should be." But are they? "No. I think even though we've got one of the most important jobs in the home, it's, for some of the residents the highlight of their day."

Asked the same question, the RM responded:

"In my, in my eyes, yes, erm I don't think the other workforce would think so and I don't think perhaps our current cook would think so."

Thank you very much. And whose advice would you first seek regarding ways to improve your residents' food intake? Would you please rank those in order of preference Who would you go to first: (pause whilst RM completes Ranking)?

Ranking LN11

Staff	Ranking
Chef	3
Dietician	1
Doctor	4
Food Service assistant	6
Nurse	5
Nutritionist	2

4.1.6: Care Home NOT3

This care home is part of a growing private group. The first meeting was with the Regional Operations Manager (ROM) who then introduced me to the RM. It was established that the home or group did not directly employ any dietitians or nutritionists, relying on the local GP Speech and Language Therapist (SALT) teams and LA dieticians.

With regard to equal professional status there were differing views. When asked, "do you believe a chef is on an equal professional status with nursing staff, nutritionists, or dieticians?", the RM responded:

> *"No. In his own right, in his kitchen, he's equal not, not fall into what they're doing, and same applies to the nurse. They can't teach the chef how to cook as much as they can't teach the nurse how to nurse, so he's got his own status in his own right."*

"And what about the nutritionists? Do you think they have the right to tell the chef how to cook food?"

> *"I do. Yeah, I think nutritionists will say how it should be cooked to benefit that person. It can't just be generic across the board. So for a soft diet and homogenised diet, they have to listen to a nutritionist, specific to the person and bespoke."*

"Thank you very much. And whose advice would you first seek regarding ways to improve your residents' food intake? Would you please rank those in order of preference Who would you go to first: (pause whilst RM completes table)?"

Ranking NOT 3

Staff	Ranking
Chef	3
Dietician	2
Doctor	4
Food Service assistant	6
Nurse	5
Nutritionist	1

The Regional Operations Manager's response to the professional status question was:

"Absolutely yeah absolutely. What he does is vital to the well-being of these how he operates his kitchen what he provides is vital for the well-being of the residents."

The chef's response to the professional status question was:

"Well, it's got to be, I think, especially in this environment, because you've got to, the nursing staff, nutritionists, and dietitians they're the professionals in the field. So you would have to work with SALT. They're the professionals of people eating. So we have to provide. The standard to which that person can intake the food. So obviously, as I said earlier, if somebody comes in slightly underweight and needs to get their weight up, they'll come to us and we'll suggest would be the milk shake and we'll suggest we'll do this or do that for that resident or made up for that or maybe give them fruits instead of cakes if it's for diarrhoea or something like that. So you have to work with them all together as one, because at the end of the day, it's the resident. Yeah."

4.1.7 Care Home SY4

This care home is a relatively new build property owned and managed by a private group. The RM was new to the property having taken over the management some seven months previously. There are 36 rooms and at time of interview had 34 residents. When asked if she believed a chef is on an equal professional status with nursing staff, nutritionists or dietitians, her response was:

"I believe it should be. But. I don't think they are. I don't think they sort of. I mean we aint got any nursing staff on here. Because they're all carers because they're residential."

The chef was not available to interview at time of visit, instead completing the Qualtrics questionnaire on line. His narrative response to the question was:

"I believe we should be, if we have the right qualifications at a higher level, but with a Level 2 NVQ in Catering I don't think we will. It takes much longer to train to be a nurse or a dietitian. I remember my dad, who was also a chef, telling me that when he qualified at college, back in the 50s or 60s that nutrition was an essential part of the training. We don't get that now."

4.1.8 Care Home SY10

A larger care home with 66 beds, which had recently been inspected and rated "*Requires Improvement*". Both the RM and Chef were new to the property. Unfortunately, interviews were difficult to arrange for the RM and Chef on the same day so it was agreed that the chef would respond by on-line questionnaires, with the RM giving a brief interview before completing her responses on-line.

The RMs response to the professional status question was:

"Although chefs play a very important rôle in keeping our residents well fed, with tasty and nutritious meals, their training does not match that experienced by a nutritionist or dietitian. They may know their food, but I always have to check what ingredients they are using and ensure they are following our guidelines."

The chef's response to the professional status question was:

"I don't think so. Perhaps we should be, but we'd need a lot more training. At college, I had minimum input on nutrition."

4.1.9 Care Home OL1

The questionnaire responses from this care home and care home group were in response to a QR-Code leaflet, distributed at a conference in which I was a speaker, inviting delegates to take part (see Figure 3.6: QR-Code invitation to participate. Chapter 3. Methodology).

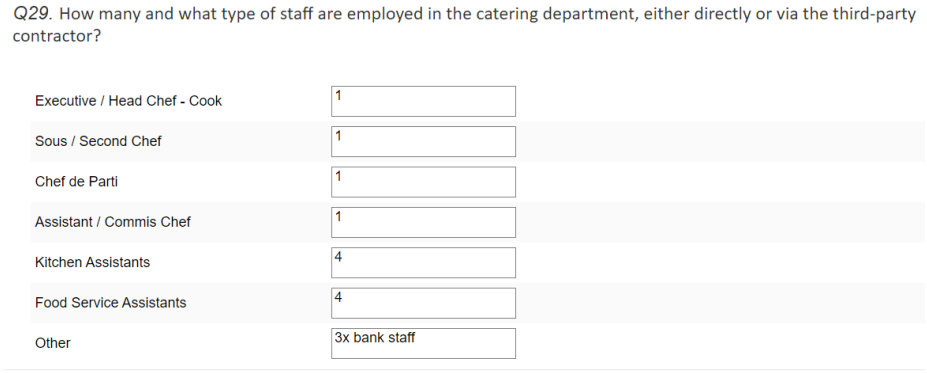
This care home group has a specialist Head of Nutrition and Hydration, who described her main duties as: "*Linking care with catering. Working with chefs and care. Leading on policy and training in this area*". When asked if she believed a chef is on an equal professional status with nursing staff, nutritionists or dietitians, her response was:

"Yes, but they need the recognition and tools".

This was further underpinned by her comments on training needs, which is discussed in the next section.

The care home under discussion has 93 rooms and a large kitchen brigade of 15 staff:

Figure 4.2: Staff Level at Care Home OL1



Q29. How many and what type of staff are employed in the catering department, either directly or via the third-party contractor?

Executive / Head Chef - Cook	1
Sous / Second Chef	1
Chef de Parti	1
Assistant / Commis Chef	1
Kitchen Assistants	4
Food Service Assistants	4
Other	3x bank staff

This was by far the largest kitchen brigade reported in the survey. With regard to the chef's response to the question of professional standing his narrative response was:

> *"We understand that nurses, nutritionists, and dietitians have much more intensive training, which takes longer than ours, but we do know what we are doing from our understanding of what food is. What really bugs many of us is that the dietitians and nutritionists haven't got a clue about the processes involved in prepping and cooking at such a large scale. It's very different to what happens in a domestic kitchen."*
>
> *"The same can be said of training received in colleges and universities. Whilst being exceptionally focused, the quantities of food prepared is usually for three or four portions, which hardly tests the students' capabilities. The same, however, must be said for those catering colleges which do not operate a commercial style restaurant."*

4.2: Training and Development Needs

The purpose of this section was to answer RSQ 6. All participating managers raised several negative and positive issues surrounding the subjects of training and development. This also came to the fore with questionnaire responses, and interviews, from supervisors and the care giving staff. Of particular interest were the comments made by Volunteers 1 & 2.

4.2.1 Volunteer 1

During the interview with Volunteer 1, the types of training and education available to catering staff and chefs was discussed, going back several years, and noting how many initiatives had come and gone and the changes made. His comments were:

> *"The reason I joined the NHS was because I could see, I could see, for me, a journey of where I wanted to get to, if I wanted to stay as a chef, I knew they would train me, and pay for my training. Sadly, that's now … OK, you've got the apprenticeship levy, but I think that's more of a tick box exercise, for companies, let's do it, more than … it's like your YTS, isn't it? The YTS was a stigma in the 80's."*
>
> ND: "It didn't have a good name, did it? But it produced the work."
>
> *"It did, it did, because … but the marketing was wrong on it. Get rid of the Y, call it a Training Scheme, and it would probably have, been trumpeted 'look what we're doing for the individuals', but you went and put that Y in front of it.*
>
> *They had a national chefs' training scheme, which I was on, one for domestics and then one for managers who wanted to go down the clinical route at the time. So, it was about this national training scheme, about five, probably longer now, it was about six years ago, when I was Chair of the (redacted), no I was Vice Chair, was vice chair of the association and I stood up on the stage … in front of them and said 'Tony Blair when he used that slogan, education, education, education, he was right, but I'm going to use 'NHS education, NHS education', if we educate and train our people they'll stay with you."*

We also discussed the types of training provided in Australia and Canada of which the respondent had experience.

> *"In Canada, the provincial governments have really embraced it, so in Ontario you can't work in a care home (as a chef) unless you are a member of the Canadian Society of Nutritional Managers and have taken their training course. You can apply for a job but must take the course within a year. What a fantastic thing."*

ND: “And who pays for the training?”

“The care homes.”

4.2.2 Volunteer 2

During the interview with this respondent it was noted that as a retired RM and nurse, she had taken part in many training courses and encouraged her former staff to also attend training courses.

ND: “I see you have a catering qualification.”

“Yes.”

ND: And that you have **Safer Food for Better Business** training as well.”

“Yes, erm, and I also went on, well, I didn’t go on the course, the course actually came to us. A Nurse Specialist in dementia was doing a project, over a year. Erm, communication with people who have dementia and food for people who have dementia. So over the year, myself and all the staff attended sessions with her, to help her with her research. And also, we found it a really good opportunity to exchange ideas, myself with other Operations Managers and Directors of Nursing, and chefs. And the staff found it wonderful for exchanging ideas, for making a dining experience, and that’s where it took place in the home. A little bit more enhancing and exciting for the residents.”

ND: “And I think it’s fascinating that you started off as a qualified nurse, is that right? And then you took catering qualifications?”

“No, Qualified Nurse, Midwife, Registered Sick Children’s’ Nurse, Forensic Nurse, Specialist in Elder Care, and it wasn’t until I became manager of a care home, in London, which was 246 beds, that they said, ‘do the catering course, (Volunteer 2’s name redacted)’. So I said OK. I got that at the local college in the evenings and got the NVQ level three in Hospitality and Catering. And then I got the City and Guilds further course in Food Safety Management.”

ND: “That is really unusual in the care home industry.”

“You have to have someone in management who has to know every single course the staff have been on, I have done. So I know what their learning should have been. So when I come to do their supervisions and appraisals, I find a weak area. I know which bits of the training they need to update, or they need to discuss.”

4.2.3 Care Home W01

The type of training provided by the catering contractor was discussed with the head chef.

"We have a company dietitian, (name redacted), who has done training with us and assigned us to the (name redacted) Nutritional and Hydration Forum, which just started off with myself and one of the nurses and care staff, aimed at training Nutrition Champions within homes."

ND: "And have you received any further qualifications or training whilst in company employment with regard to food and beverage management or culinary management?"

"So, I suppose we have our mandatory (company name redacted), erm, leaders, it's on our system, so it gives you all the mandatory, such as mine, with the management of food safety, management of health and safety. All the things, there are opportunities, for more and more, in depth courses but it's just finding the time to do it."

None of the staff responsible for serving the meals to the residents had received any training from the catering contractor as they were employed directly by the care home. They did, however, receive some training on nutritional aspects but none on plating or presentation skills.

4.2.4 Care Home LN8

The RM of Care Home LN8, when asked if any training was given to the chef with regard to food and beverage management or culinary innovation and management, responded,

"yes, the chef has, yes."

The next question asked was: ND: "And have they received any specific training on cooking or serving people with dementia*?"*

The response was, "yes", which prompted the next question,

ND: "And what was, what sort of training would that be*?*". The response was,

"You'll have to ask (name of cook redacted)".

When I interviewed the cook about her background and training needs, and if she wanted to access further training, she was hesitant, stating:

"D'you know what. Probably a few years ago I would have said yes. But my life at the moment. I just plod along."

She did not give further detail on this, and I did not probe.

"I did the City and Guilds many years ago (laughter), level one and two."

The next question to the cook was, “And do you think, or believe a care home catering qualification should be a compulsory element of a chef's training to be employed in the care home?” The response from the cook was:

> *“I don't think it's compulsory 'cos I think, er, my relief (holiday relief name redacted), came in with no training whatsoever. She did her training and that. So I don't believe that you do, you maybe have to have a passion for cooking, but I don't believe that they have to be trained.”*

This was probed further, “There are some movements within the Care Quality Commission. That they are going to start asking for, cooks and chefs who work in these environments to be specially trained, how do you respond to that?”

> *“I mean, yeah, maybe there's no reason why they shouldn't be. But I don't think it's compulsory that they have to be. I think if you have a passion to do it and you care. Because we're such a small home, I think majority of us. Look at them, as they are our parents, grandparents. So if you have a passion to be those, like I say, my relief did her training in there (pointing to kitchen).”*

Probing further, my next question was, “But If the CQC eventually brought in legislation to make it compulsory, what would, would you then go on that course?”

> *“Yeh. I mean I would have to if I wanted to stay in job, wouldn't I? You know, so I would have to, and I know things change day to day, year to year.”*

It was clear from the RMs response that training was not high on their agenda and the cook had a very laid-back attitude towards training and was reluctant to take part. This was contrary to responses from other care home participants.

4.2.5: Care Home LN 11

The RM did not elucidate on the culinary training, other than for regular updates for Food Safety. The RM was not aware of the recently launched Level 2 Award for Care Home Catering staff. There was no specific budget for training in F&B or Culinary Management skills.

The Kitchen Manager was more forthcoming. “Do you believe care home catering qualifications should be a compulsory element of the chefs’ or cooks’ education and training before being employed in a care home?” “*Yes*.” “Could I get you to expand on that, do you think the type of foods you have to cook in these environments is different from what is taught on a standard college catering course, chefs’ curriculum?”

"I mean, some of it is, I mean, generally, it's the same sort of thing, but. You do have, you know, new stuff coming into the kitchen. You can't say, oh, I didn't realise you had to do that."

"So who do you think should pay for that education? Should it be the chef, yourself, your employer, should it be part of the Government's strategy, or an industry association? A combination?"

"I suppose it depends if it's something you want to do, erm. It should be yourself. Erm. But then if you went to work somewhere, somewhere, you know. And the employer is willing to do that, then yeh. It would be nice for the government to pay, yeh."

"And have you received any special training or education related to cooking for people living with dementia?" "*No.*" "And have you received any special training or education related to nutrition or dietetics?" "*No special training, no."* "Are you aware of any specific educational training courses available for care home catering staff? Specifically for Care home catering."

"No, no, no, never heard of anything like that, not for care home catering, no."

4.2.6: Care Home NOT3

Both the ROM and RM of this care home were positively responsive to questions on training. The ROM said:

"In my previous job I was in hospitality, having been in hotels, restaurants, bars … so I was … We cover all the mandatory training … healthcare certificates and then we go through a separate sort of food service training."

ND: "And have your staff received any further qualifications or training regarding serving people living with dementia?*"*

"Yes, we cover that all the time, it's ongoing. The hospitality staff are encouraged to do a hospitality qualification. We would like the chef to get additional training, maybe some one-day courses."

4.2.7 Care Home SY4

In a question to the RM, "And have you or your catering staff received any further qualifications or training whilst in the care home in regard to food and beverage management or culinary management?", her response was:

"*No as far as I am aware*."

With regard to chefs' knowledge of nutrition and hydration, her response was:

"I think all the chefs need a lot more training, I believe."

ND: "And do you have a particular budget for training?"

"Only just … we didn't have budgets before, and we've just started with budgets. Within the last month. So yeah, we do have a budget for training now. But we didn't have one before, it was just ..."

ND: "And is that budget for general training or anything in particular?"

"We've got a budget now for training and entertainment. That's another thing the owner is passionate about."

"The entertainment or the training?"

"Both."

"So what if I may ask you. You don't have to answer, what is your budget?"

"I can tell you what the entertainment one is. Ten and a half thousand a year. He's very passionate."

4.2.8 Care Home SY10

Responses to the question on training and development from both RM and Head Chef, was encouraging. The RM responded,

"As you know, I've only been here a short while and when I arrived there was no training in place, other than the mandatory health and safety. The chef is keen for his kitchen assistants to get more training on feeding and serving people living with dementia. I'm asking head office for a budget, but I don't know yet if we'll get one."

The chef's response was more direct:

"When I took over, the kitchen was a mess. No policies in place as far as I could tell. None of the cooks could tell me the nutritional content of the meals they were cooking, no standard recipe files, just cooking from memory. That's not on. (RM's name redacted) tells me she has asked for a training budget so we can get up to speed. Things have changed so much over the past few years."

4.2.9 Care Home OL1

Extracts from the survey questionnaire demonstrate a positive reaction to training issues and needs. With regard to knowledge of the Level 2 Award for Care Home Catering staff, neither respondent had heard of it but would investigate.

The chef had already sent some of his team on proprietary course offered by their suppliers. His online response was, “I can’t remember the exact name of the courses, but they were about food and nutrition for the elderly. We also had some training from the local SALT team.”

4.3: The Care Home Environment

The purpose of this section was to establish the respondents' opinions on the care home environment with regard to F&B services, and to help answer RSQ 5. This to include the physical, architectural, and aesthetic environment and the physical equipment in use (service equipment, plate, and glass ware, etc.). This also includes the social and ambient environment.

4.3.1 Volunteer 1

With regard to coloured plates and glassware, the volunteer responded:

"Stirling University have done some great work on their dementia. There's no clear evidence that blue is … the reason, apparently that they came up with the rationale of blue, is because there's no blue food. To me, blue's cold, a cold colour. I've got nothing, nothing wrong with blue."

"And I was involved with, in an NHS supplies. And again, this was a great way to getting everyone together. So instead of just saying, let's, let's, look at the crockery, yeh, we looked at it, but we got supply chain involved, nurses, caterers, SALTs, patients, getting patients involved. So we came up with this new product crockery. And it came about from when I was in hospital. Because I'm there, and I get a white plate, with an NHS logo on it. I call it the Skid mark plate. You know, it's white and it's got blue stripes down the side and it's got an NHS logo on it. I know, I'm in the NHS, don't keep reminding me I'm in hospital, because I don't want to be in hospital. People know they're in hospital, they're ill for God's sake. You don't go in hospital if you're not ill."

I set off on this campaign crusade to get the NHS plate revitalised. So we did. We worked with various companies and it's out there now. So we've got this two-tone blue. And we went with two tones, so the rim is darker and the inside's lighter. And the reason we did that, became visually for the patient, they can see where the edges of places is. So if you've got dementia again, it gives them that reflex."

"Again, it's about dignity because you aren't going to solve a smaller portion, or somebody only gets a scoop of mashed potato because that might be the order on a nine-inch plate. The Daily Mail got a picture saying that look at this disgusting potato on a white plate, that's all the NHS are feeding them. Actually, that's all the patients might have ordered. And if it's a coloured plate, it looks a lot better, right? It's. It's the physics of gastronomy."

"So we did some trials, and the trials were inconclusive of who ate more. However, what we did find, a Morecambe Bay hospital totally then, that got, they got some money from charity

into the trust that followed it. They put the two-tone yellow in together and because what they found; patients ate more."

"Although the tests were not carried out under strict research conditions, it was reported from three hospitals that patients tended to eat more from yellow, two-tone plates."

No discussion took place regarding physical dining facilities in hospitals.

4.3.2 Volunteer 2

Questioned on the physical and service environment: "Did you have any environmental interventions such as blue plates or red glasses to help increase nutritional intake?"

"We had a red plate service (for those who needed assistance to eat)."

ND. "Had you considered using different coloured glasses to improve intake in any way?"

"No, we hadn't. And. Unfortunately, most care homes have to use plastic. And they get discoloured quickly, so we use one so we could just throw away."

ND. "OK. Right, and then physical environment, … there's been a complete refurbishment."

"Yes."

ND. "Was that designed with any particular outcome in mind or … ?"

"Yes, when I went to this care home, the dining room was pieces of wood, like that. There was no, not even a head nod towards King's fund colour schemes, erm, to residents having things from their home, you know, the odd tureen here and there. You know, I said, an odd bowl there, whatever. The tables were too large, so we got rid of the large tables of, two large tables, nine round each one."

ND. "Intimacy?"

"None at all. So it was done in threes and threes and fours and threes, so many permutations. The radio was on, and it was always on the Radio 2, so we changed that. We got a new music system. We then as a team looked at the music that we were playing and how it affected residents. We did that just for our own interest. We found what worked best at mealtimes was birdsong and sounds of outside, rather than music. Erm. And when we played, marching music. We. People were behaved in a particular way. When we played brass band music, when we played things like Jerusalem, lunchtime took longer.

4.3.3 Care Home W01

Question to the chef: “to your knowledge, have any changes been made to the physical environment of the dining areas to improve nutritional intake and hydration? By that I mean in terms of colours, lighting.”

“In terms of the actual rooms themselves, erm, no, not really. We have to have our standard crockery, that’s why our plates are all blue.”

ND. “And what, may I ask, why is it you are using blue plates (to check if the chef knew the underlying theories)?

“Well, the theory is that there aren’t any foods that are naturally blue, so it gives a good contrast between the food and the plate. And we’re trying red mugs, it’s a hydration thing, I think it might be by Portsmouth University.”

It was clear that the chef did have some basic knowledge of the theories but little more. Care Assistant 1 was asked, “Are you aware of any changes in the physical environment of the dining areas to improve nutrition hydration, colours on the walls, for example doors?”

“They are on about doing that, changing the colour scheme, but not at the moment. They have got glasses … for hydration, but they do an experiment at the moment white and red, trying to talk about water.”

4.3.4 Care Home LN8

In this care home there was little awareness of the need for positive environmental changes as an aid to increase the intake of nourishment and hydration. Differing coloured plates or drinking vessels were not in use.

However, the following comments were made regarding the physical environment: “Now, you’ve got four dining areas in the home. And each one, so is this where we're sitting now, a typical dining area?” Cook?

“We probably should have separate dining areas. Where you could probably put everyone, though we are trying to be a home from home. And I know there are a lot of homes that do have separate dining areas, but we believe if they want to sit at the chair with a table in front of them. Which probably a lot of them would have done at home why not.”

4.3.5 Care Home LN11

The RM was asked whether any changes had been made to the physical environment of the dining areas to specifically improve nutritional intake and hydration.

"Erm, yes when I first arrived, the, erm, the tables in the upstairs were in a banquet style and I thought it would be undignified and not very personal erm, and from personal experience I was ill, very ill, and I was on a ward, erm, as a young person and I had a neurological problem and I went to put the food to my mouth when I was first in as an in-patient when they were trying to find out what was wrong with me and I went to put the food in my mouth and my mouth wouldn't close and the food fell out of my mouth so I. And then I was on a ward, well I was in an ICU where I was fed so that's very undignified to be fed, so I do try to support that. So we now have smaller tables and people should be assisted, erm, you know, for me, if I'm in a care home, please don't feed me in a communal area. Erm, we're not quite at that stage yet because also the benefits of social interactions we don't have banquet tables now and people should be assisted with dignity, we're not a hundred percent there to the standard I'd like it but its erm it is important. So yeh, the tables have been moved."

4.3. Care Home NOT3

The chef was asked about service plates and glassware.

"Some of the residents have the blue plates … then we've got the plate guards, and the double handed beakers with the lids. Some are just a drinker; some have a hole for a straw, er, specialised cutlery."

Figure 4.3: Plate Guard. To enable single handed eating. Source. NRS Healthcare

"And do you use red glasses?"

"No, they all have the same."

"And have you heard of that?" "*I haven't, no.*" "There's some very good, recent, research come out of Canada and the United States. And a couple of hospitals in the UK are experimenting with it." "*Really?*" "And it seems to be doing a good job." "*That's strange, int it!*"

The RM was asked about interventions used to increase nutritional intake and hydration, and in particular about the use of service ware and glasses.

"I was told by the chef that there are a couple of blue plates in use … but he hadn't heard about the use of any red glasses."

Have you heard about red glasses to increase hydration?

"I have, yes. I've heard, we had it in another care home, we actually, on our dementia unit we use …... Because we want to keep everything, samey. I ordered some really lovely yellow pot cups with handles on each side, which I felt was more dignified than plastic beakers although blue is a good colour and for the reason behind it all. And there's none of our residents on food and drink charged intake an outtake. So we've got no one that's dehydrating. They're all maintaining renal function and the amount of fluid that they should, should have. So, but I'm always open to anything that enhances."

"Have any changes been made to the physical environment of the dining areas to improve nutrition?"

"I would say because the dining area, and we're talking about the dementia unit now. I have enhanced that, we have enhanced that area, sorry, us, when I moved a lot of stuff. They did have like a Snoezelen [a controlled Multisensory Environment (MSE)], down a corridor, at the very end, with a door. It's like a sensory room, with different things on the wall. It's for the five senses. And it was right at the end of a corridor, and it was just probably, from a person's perspective with dementia, it would be a punitive, because to take them down, the going to take this room, shut the door and go in with them. So what I did was I asked for it to be incorporated into the dining area and fluidly into the lounge."

"We've just also purchased a magic table. Have you heard about that? It's interactive. I mean, it's suspended from the ceiling. And when we trialled it, everyone's nearly crying because the residents are interacting in it, like sweeping up leaves with a feather (makes swooshing sound). And it's all, it's fantastic. I thank God, it's so good. Yeah, and you should have seen some of the residents. There's a resident in there that never interacts for long, and she sat there for an hour on all the various activities that came on, and no one had to encourage her to stay. And she just, she just participated."

And how many changes have been made to the social and ambient environment of the dining areas?

"I would say again, the ambience has changed because of the stuff that's been put onto the walls and we put music on at lunch times and calming music. And if you look at the dining area, there's a patio, outside patio area and we've enhanced that with new furniture and little tub of pot of (undecipherable). And one of the things I've got to do is I want to put up a washing line because I did that at my last home and the, the people, the ladies with dementia loved it, some of the gentlemen, and I just bought a basket and some pegs and some clothes from the second hand, and baby clothes and things, and they'd go out, ladies, and peg them out. And they'd say, oh, it looks like rain and they're going to bring em in and fold em up. And it's all enhancers. You know, all these little things that bring em, ladies, that've always worked all their life or done all their washing, the washing and all the ironing. And, and it's just great that we've got that patio where they can walk out and get little about that, though I know that sounds excellent."

4.3.7 Care Home SY4

ND. "Do you use interventions such as blue plates or red glasses to increase nutritional intake and hydration?" "*No.*" "Have you heard of those?"

"Yes, we had the yellow dementia plates, they didn't go down very well."

"With the residents, or the staff?"

"Both of them. And extremely breakable and extremely chippable and not good at all."

"OK, have you heard about the use of blue plates?"

"Well, it's red in (name of town redacted) normally. You mean for identifying people that are at risk?"

"No, no, for increasing, for actually making the food look more attractive."

"Oh no, I haven't heard about that. … (laughter) I told you this would benefit me as well; I know it will."

"Would you like some information sending on to you about the use of these plates?" "*Yes, please.*" "And about how well it has improved nutritional intake? People tend to eat more from a blue plate than they do from any other colour." "*Really?*" "And they tend to drink more out of a red glass, and there's scientific evidence for that." "*Oh, yes please*."

"Have any changes been made to the physical environment of the dining room?" "*Yes*." "To specifically improve nutrition?" "*Yeh, we've just decorated it.*" "So how important, in your opinion, is the physical environment as an aid to increasing intake of nourishment and hydration?" "*Extremely, extremely.*" "Do you say that because, erm, you've seen it, and you've made changes and you've seen the improvements?"

> *"Yeah. I don't want to sit in somewhere that I won't go and choose a nasty place to go and sit and eat, and I want to choose somewhere where it's nice to sit and be comfortable. --- It just makes you feel more like eating to me."*

"And on a similar note, have any changes been made to the social and ambient environment of the dining room?"

> *"Yeh. And we're now playing music and everything."*

4.3.8 Care Home SY10

There are plans to introduce some environmental changes to the dining areas, though these are still in the development stage. The chef has recently bought some new feeder bowls, with sloped sides.

> *"I looked at the plate clips, that attach to the edge of a standard plate, but they look so bad, I can't see any dignity in using those in front of other people."*

With regard to coloured plates and glasses, the chef indicated that they had just started using some blue plates.

4.3.9 Care Home OL1

This home had implemented the use of coloured, melamine, plate ware and red beakers and glasses. It was reported that the blue plates were not used for all residents but specifically for those living with dementia and were at higher risk.

4.4: Perceptions of Hospitality and Hospitableness

In which the respondents indicated how important the theories of hospitality and hospitableness are in the delivery of care and F&B services within the care home environments and how those theories are delivered with regard to resident directed food services. The responses were intended to answer RSQ's 1, 5 and 6.

None of the respondents could clearly define the differences between hospitality and hospitableness. The following comments are a select few from the sample.

"What does the word "Hospitality" mean to you in general?" "*[Pause] Erm, the catering and domestic services, hotel services.*" And how does your understanding of the word Hospitality differ from the words Hospitable and Hospitableness?

> *"Yes, er ……. I'd say hospitality was the …….. product so the meal, the quality, the drinks, the cleanliness but hospitable was how welcoming the environment was by the staff, that's what I'd say."*

Question to RM at Care Home LN 11: "And what do you understand the principles of hospitality to be, with regard to residents of the care home? "*Yeh. Meals and beverage, domestic services, all the hotel services*." "And how do you apply those principles in the care home context?"

> *"…… Yeh, it's quite difficult because we're wanting to deliver hotel services erm, quality for hospitality, as if someone's paying for it but then also, we're wanting to make people, residents feel that this is their home, so it is a fine line, so we don't want someone coming in as a butler and silver servicing and making people feeling that they're being waited on in the old style. So yeh, it's quite difficult erm … yeh I think it is quite difficult and also communal living's quite difficult because we have you know I used to have an ex-resident, he was a retired high court judge and when he first came to the care home, he wanted calves' liver and etc and erm, you know how difficult it is to get calves' liver fresh."*

"And what about residents being involved in determining the food services, would you be happy with that? Would the residents have the capacity to do that?"

> *"Yes, I think some would enjoy it. Certainly not all would have the capacity, but some would, definitely."*

Other responses included a desire to involve their residents and families in deciding the F&B offer. Although most care home participants created what could be termed '*resident food passports*', or something similar none had asked the residents' families to be involved via a Food

Preference Questionnaire, relying instead on word-of-mouth input. This effectively ignored the fact that people's tastes and desires change over time. There were discussions around '*All Day Grazing*', as an alternative to fixed meal times. Although recognised as an excellent way of maintaining a healthy level of nutritional intake, there were several concerns. These included the additional costs of equipment; of staff and wages and food safety aspects if foods were left out, on buffets, and out of safe temperature.

4.5: Catering Systems

This section is to identify the most commonly used catering systems in place in care homes and to establish what knowledge exists among the catering staff of new equipment and systems. The purpose of this section was to answer the RSQ's 1, 3, 5 and 6.

4.5.1 Volunteer 2

ND to Volunteer 2. "You said the catering services were always carried out in-house rather than through a third party, was there a particular reason for that with the group?"

*"Yes, a couple of the other care homes which have outside contracts with [**redacted**] or whatever, that we felt with this particular care home as part of people's dementia care and helping them maintain independence and memory that they should be involved with the cook."*

"So that the residents themselves got involved as well?"

"Yeah, I mean they didn't have any hot cooking, they did things like sandwiches, salads, mixing up sponges talking to the cook, sitting having a cup of tea with the cook. So we felt that that was better for people with dementia and not excluding them from kitchen life."

4.5.2 Care Home W01

Catering services in this charity owned, long term care home, are provided by an outside catering contract company. They operate on a predominantly '*cook-hold-serve'* basis and utilise some pre-cooked ready meals which are re-thermalised prior to service. Service is carried out using a traditional Ganymede style heated trolley system for distribution to the dining areas.

4.5.3 Care Home LN8

The cook here works alone but has her two days off and holidays covered by an additional, part-time, cook. The food preparation and service systems are very basic. There is a tiny kitchen, with a service hatch facing into an internal corridor. There are two food delivery systems in place.

1. *The cook pre-plates food in the kitchen according to the residents' choices, covers the plates with cloches and places the covered plates in the service hatch for the carers to collect and deliver to those residents who eat in their rooms, or who need additional care. For those residents who are unable to make their own considered choice, the carer will consult the resident's file, for information provided by their family as to preferred and favourite foods and drinks.*
2. *The cook prepares multi-portion trays of the menu food of the day. The trays are then transported to the dining rooms where the carers portion the food onto plates according to the residents' wishes. The food, which leaves the kitchen hot, is kept at ambient temperature during service, as the home does not have a heated servery.*

The system is very basic. The equipment in use is very dated. The food production system is '*cook – hold – serve'*, though there is a significant time lag between cooking, holding, and serving of some dishes which may impact on final food quality and safety. The appearance of the food is not very appetising. Little effort is made to present the food in an attractive manner, especially when the food is plated by the carers.

4.5.4 Care Home LN11

In the interview with the RM, prior to meeting the kitchen manager / head chef, I asked "What is the style of service for food and drink?" The response was:

> *"it's a heated trolley and then erm, in theory I would like to think that residents would be asked if they wanted everything, you know do you, if you want fish & chips, do you want peas with that? Or, you know if it's a roast dinner do you want broccoli with it do you want carrots with it instead of just, which choice is it and plating up a full dinner."*

From observation during the site visit, and conversation with the kitchen manager, the system in use was predominantly '*cook-hold-serve'*, with Ganymede style heated trolleys transporting food to the various dining areas. During the service times observed, the residents were indeed offered options from the heated trolleys sent to the service areas.

4.5.5 Care Home NOT3

Again, observation and interview with the head chef was used to determine the systems in place. The system was a mix of '*cook – serve*', '*cook-hold-serve'* and '*cook- chill / freeze – store - rethermalise – serve'*. The chilled foods were identified with 'use by' date stickers and held in cold storage for a maximum of three days after production. Some of the foods were also frozen. This seemed to be used predominantly for texture modified meals. These were pre-plated, in a quite attractive manner, by piping or quenelling, resembling the original foods as closely as possible. These were later defrosted and rethermalised and sent from the kitchen, under a plate cloche, directly to the resident.

Ganymede style heated trolleys were used to transport bulk food to the various dining areas, where the carers would plate up the food for the residents.

4.5.6 Care Home SY4

Once again, this care home was operating the popular '*cook – hold – serve*' system utilising Ganymede style trolleys for service.

4.5.7 Care Home SY10

As above, the popular '*cook – hold – serve*' system was in place.

4.5.8 Care Home OL1

This care home reported the use of a blended system, utilising both '*cook – hold – serve*', '*cook – chill (or freeze) – rethermalise – serve*'. They also used some ready meals bought in from a specialist supplier.

4.6: Menus, culinary innovation, and Food Choices

The purpose of this section was to assist in answering RSQ's 1, 2 and 5.

As the two volunteers were no longer involved directly with either hospital or care home catering, choosing menus or being involved in innovative projects, they are not included in this section.

Participants were polled to establish their awareness of Menu Engineering techniques and its use in effectively guiding the residents to select healthier food choices, from their menus offering meals with alternative nutritional attributes. Menu Engineering, as discussed in Chapter 2: Literature Review and Research Scope, though traditionally used in commercial restaurants to evaluate the restaurant's menu item popularity and profitability, using sales data, is a clear example of culinary innovation management, and can also be adapted for non-profit organisations in order to guide residents to healthier choices and minimise and control food costs and wastage.

With regard to the use of Texture Modified Meals, for residents living with Dysphagia (swallowing difficulties), the original Dysphagia Diet Food Texture Descriptors in place for measuring the texture of modified foods, in the UK, was developed by the NHS National Patient Safety Agency (NPSA), together with The British Dietetic Association, the Royal College of Speech and Language Therapists, the National Nurses Nutrition Group and the Hospital Caterers Association. The descriptors provided standard measures of the textures, and were:

Texture C - Thick Puree Dysphagia Diet

Texture E - Fork Mashable Dysphagia Diet

Texture D - Premashed Dysphagia Diet

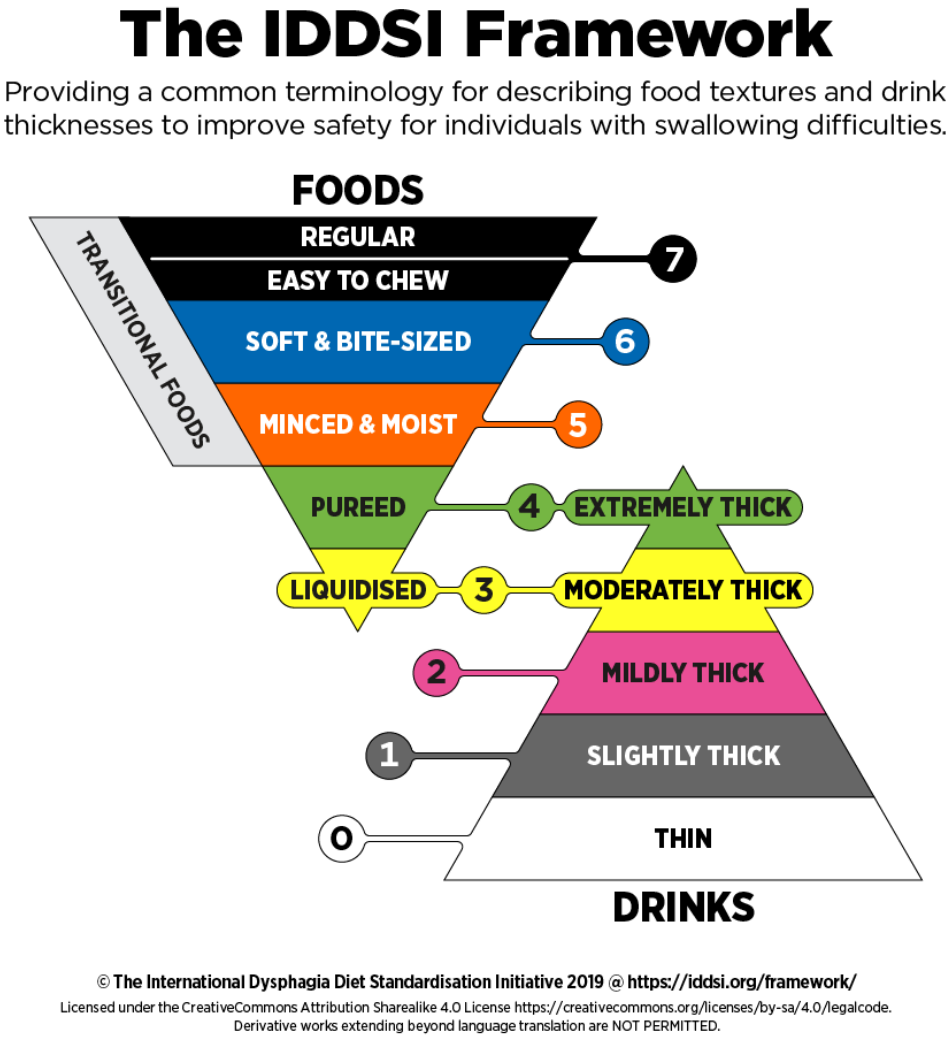
Texture B - Thin Puree Dysphagia Diet

Fluids (drinks) were not originally included in the descriptors. Instead, users were directed to an NHS website for further guidance. In June 2012, the NPSA became part of the NHS Commissioning Board Special Health Authority.

These were the protocols in place before the development and launch of the new International Dysphagia Diet Standardisation Initiative (IDDSI). This was developed globally because most countries had their own systems in place, sometimes with conflicting advice. The initial IDDSI committee was convened in 2013 with the goal of developing an international standardised terminology. Following three years of research and development the IDDSI framework was

published in 2015, together with IDDSI Testing Methods documents. The IDDSI Framework was not adopted in the UK until April 2019. The original IDDSI Framework was updated in 2019 with the addition of Level 7 Easy to Chew. A brief description of the framework is portrayed in Figure 4.3 overleaf. Further information can be found at: https://iddsi.org/

Figure 4.4: The IDDSI Framework Pictorial



Unsurprisingly, none of the care home chefs, carers, nurses or RMs had heard of the initiative as the roll-out was comparatively slow in the UK and many care home staff were so used to the old NPSA system. There is no legal or mandatory requirement to follow either the old NPSA system or the new IDDSI framework.

Some of the chefs were using proprietary thickening agents, such as Nutilis Clear, Nestlé ThickenUp, or Hormel Thick&Easy, though had not considered the use of basic hydrocolloid thickening and gelling agents themselves, despite them being considerably more economical. This may indicate a fear of using unknown ingredients. However, these proprietary brands use

hydrocolloids such as maltodextrin, xanthan gum, and carrageenan for thickening. Another reason why care home management may be reluctant to make their own is that the proprietary brand is often supplied on prescription by the residents' GP's and cost the home nothing, though there is a significant cost to the NHS. There is also the added complexity of knowing **exactly** how much of each hydrocolloid, and in what blend, would be needed to achieve the desired thickness. This may need to be approved by a dietitian or registered nutritionist.

4.6.3 Care Home W01

The menus in this care home are all developed by the company executive chef in the head office. The head chef in the unit does have some freedom to offer an occasional '*chef's special*' to satisfy the residents' requests. When questioned on innovation, the chef responded,

> *"I don't get much opportunity for that. I have attended a couple of company workshops but there was nothing really special. I've also been on a few courses run by Nestlé using their special thickening powders for our dysphagia residents."*

When asked about the use of menu engineering techniques, to establish and track the most popular dishes on the menu, the chef responded, "*sorry, what is that?*"

There were a number of residents who needed texture modified meals due to swallowing difficulties, brought on by dysphagia. No special meals were prepared for these residents. The chef took a selection of the foods from the daily menu, blended them, and sent them to the dining room pantries, in thermos jugs, for plating and service by the carers. No attempt was made by the carers to present the modified foods in an attractive manner. See Figure 4.5 for an example.

Figure 4.5: Texture C - Thick Puree Dysphagia Diet. Pureed roast chicken, potatoes, and carrots.

No test was made of the food to determine texture suitability, using the NPSA Dysphagia Diet Food Texture Descriptors. The Chef was not aware of the forthcoming IDDSI Framework.

Despite being operated by one of the largest care home catering companies there was little evidence of innovation taking place here.

4.6.4 Care Home LN8

I asked the cook: "Do you change the menus on a regular basis?" Response:

"We try, and we go with ... the residents themselves really. If I set, the set menus, we don't change majorly, regularly. But if we come across things that they're getting fed up of, or, you know they seem to go off. We'll just swop it and change it each … You know just like if we had been trying to put in like, Chicken Chow Mein and things like that. Because, when we have a different turnover of residents. We find one lot didn't like that kind of thing …. (interruption) …. we'll try it again a little bit later. And you've got another set of residents, ... (interruption) .... What are they like? So we, you know we sort of continually try and put something a bit different and try and find things a bit different. Erm. And we go, we ask the residents is there anything you'd particularly like?"

Right, OK and you have, I understand, you do have some non-British residents?

"Yes, we do. We do, erm, but their family tend to bring them bits in as well because the family were adamant, they don't like British food and we gave it a try. You know, as you do. And we were like, yeh they do! Really. So when they visit, obviously they're having their food of their choice from their religion and everything and we try them on everything British."

You're not the first chef to say that. "*You know that erm. Tastes change*."

Asked about her knowledge of modern culinary techniques and ingredients, or if she was using any, the cook responded, "*No*."

There is a three-week cycle of menus available with some very basic dishes, including Spam Fritters and Hot Dogs. An example is shown overleaf in Figure 4.6. The cook does much of her food procurement through visits to local supermarkets. She contends that this is more cost effective. Only bulk purchases are made through large wholesale delivery and some from local cash and carries.

"Do you use Menu Engineering techniques to track popular items? Have you heard about menu engineering?" "*No.*" "It's not a concept you're familiar with?" "*No.*"

Figure 4.6: Care Home LN8 Menu Cycle Example

Texture modified foods were occasionally required, which were prepared on the day, by the cook, using whatever featured on the menu for that day. Neither she nor the RM had heard about the forthcoming IDDSI launch.

4.6.5 Care Home LN11

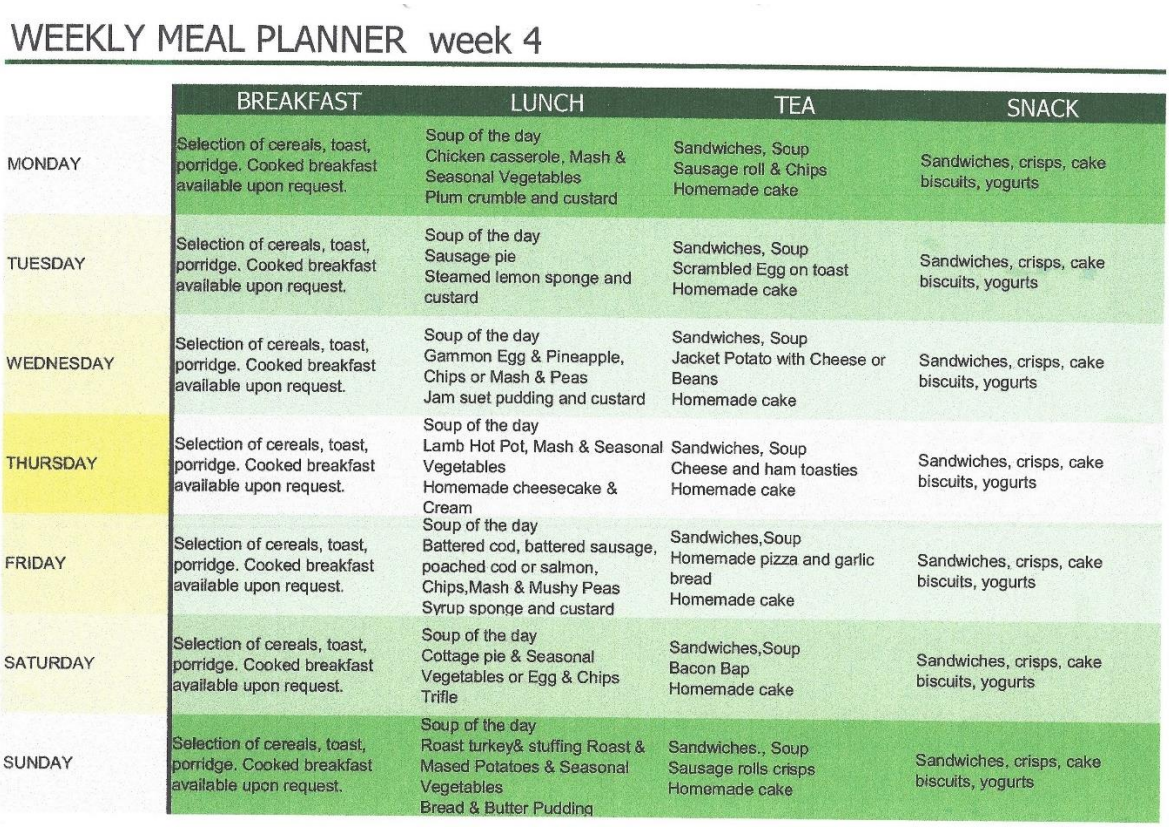
The menus here are based on a four-week cycle, developed by the Kitchen Manager. The main meal of the day is lunch, with a soup, choice of hot main course, and a pudding. The menu choice is very traditional. The last meal served is Tea, with a choice of soup, sandwiches, hot light dish, and cake. Snacks are available all day and an evening drink and biscuit if required. A copy of the week 4 menu is displayed in Figure 4.7 overleaf.

A question to the Kitchen Manager, "And how often do you change these?"

"Erm. It's sort of an ongoing thing, you see things that maybe aren't going down so well, so we might change that … or try some of that."

"Having said that, having said what you just said, I'm going to jump forward a couple of questions here because, er, do you use menu engineering techniques to keep track of popular menu items and help plan for future production? You know what I, do you understand what I mean by Menu Engineering?" "*No, no*."

Figure 4.7 Example Menu. Care Home LN11



WEEKLY MEAL PLANNER week 4

	BREAKFAST	LUNCH	TEA	SNACK
MONDAY	Selection of cereals, toast, porridge. Cooked breakfast available upon request.	Soup of the day Chicken casserole, Mash & Seasonal Vegetables Plum crumble and custard	Sandwiches, Soup Sausage roll & Chips Homemade cake	Sandwiches, crisps, cake biscuits, yogurts
TUESDAY	Selection of cereals, toast, porridge. Cooked breakfast available upon request.	Soup of the day Sausage pie Steamed lemon sponge and custard	Sandwiches, Soup Scrambled Egg on toast Homemade cake	Sandwiches, crisps, cake biscuits, yogurts
WEDNESDAY	Selection of cereals, toast, porridge. Cooked breakfast available upon request.	Soup of the day Gammon Egg & Pineapple, Chips or Mash & Peas Jam suet pudding and custard	Sandwiches, Soup Jacket Potato with Cheese or Beans Homemade cake	Sandwiches, crisps, cake biscuits, yogurts
THURSDAY	Selection of cereals, toast, porridge. Cooked breakfast available upon request.	Soup of the day Lamb Hot Pot, Mash & Seasonal Vegetables Homemade cheesecake & Cream	Sandwiches, Soup Cheese and ham toasties Homemade cake	Sandwiches, crisps, cake biscuits, yogurts
FRIDAY	Selection of cereals, toast, porridge. Cooked breakfast available upon request.	Soup of the day Battered cod, battered sausage, poached cod or salmon, Chips,Mash & Mushy Peas Syrup sponge and custard	Sandwiches,Soup Homemade pizza and garlic bread Homemade cake	Sandwiches, crisps, cake biscuits, yogurts
SATURDAY	Selection of cereals, toast, porridge. Cooked breakfast available upon request.	Soup of the day Cottage pie & Seasonal Vegetables or Egg & Chips Trifle	Sandwiches,Soup Bacon Bap Homemade cake	Sandwiches, crisps, cake biscuits, yogurts
SUNDAY	Selection of cereals, toast, porridge. Cooked breakfast available upon request.	Soup of the day Roast turkey& stuffing Roast & Mased Potatoes & Seasonal Vegetables Bread & Butter Pudding	Sandwiches., Soup Sausage rolls crisps Homemade cake	Sandwiches, crisps, cake biscuits, yogurts

When questioned on the use of innovative culinary techniques, the Kitchen Manager responded that he only used the traditional techniques he had learned at catering college.

There were a number of residents with a need for texture modified meals. These were prepared on the day by the chef, using whatever featured on the menu for that day. Neither he nor the RM had heard about the forthcoming IDDSI launch. Hormel Thick&Easy was in use for the texture modified meals and drinks.

4.6.6 Care Home NOT3

In this care home, the Head Chef started the interview by taking me round the kitchen and explaining his menu system."

"I'll start this side, this is our specials menu, that we do, er, for lunch time and tea time every day. So the residents have the main menu, and we also send out second choice and each floor have a copy of this menu. So the residents are aware of what the other choices are."

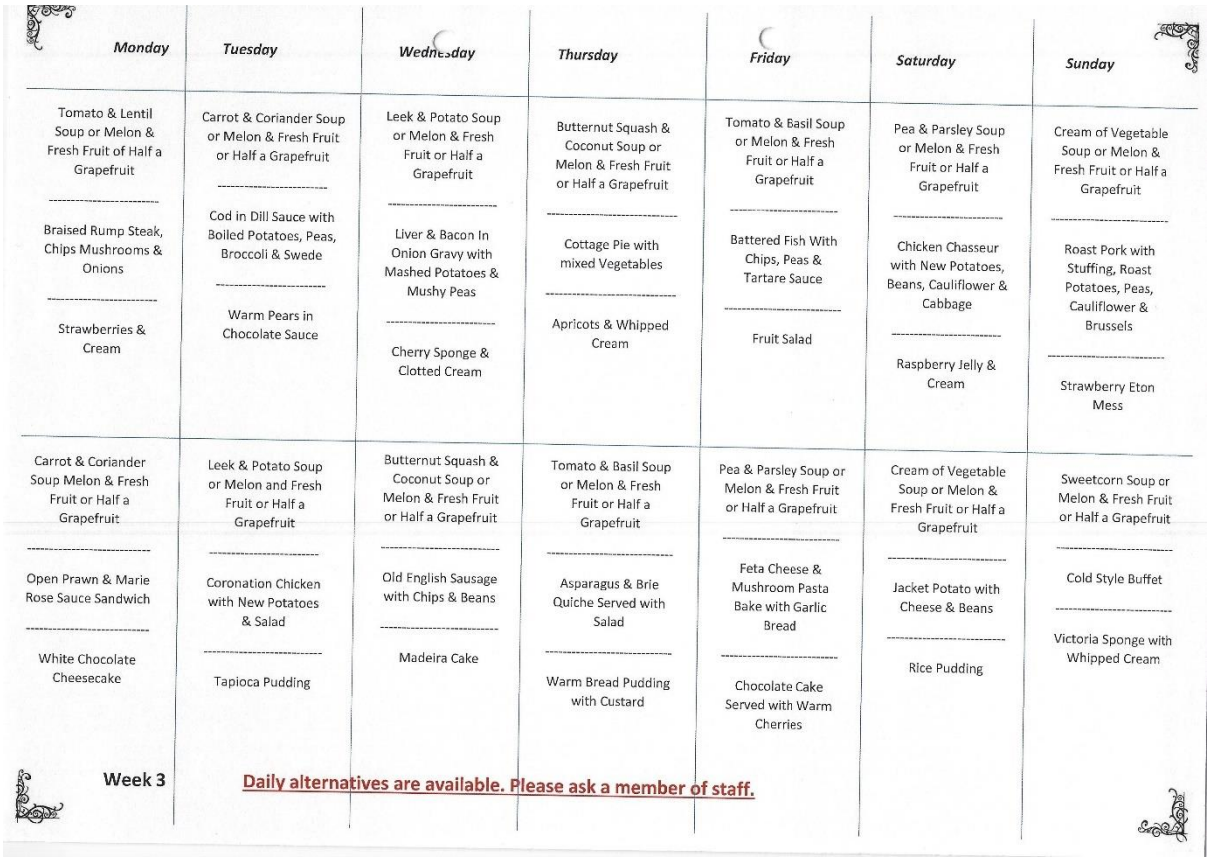
"Are they cooked to order?"

"This is, this is generally, erm, if we've got anything left, it's a sort of use it up. Because we're still giving the residents a second choice. I mean, they can still have a sandwich. They can still

have a jacket potato so they can pretty much everything else that they like. Yeah. If we can accommodate it. The breaded goujons, the gluten free ones, for when they can't have the battered fish, so we send the gluten free goujons out as well. And that might change every day, we might find something else, and we'll change the menu again, reprint it."

An example menu, from the four-week sample, is shown in Figure 4.8.

Figure 4.8: Care Home NOT3 Menu Example



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Tomato & Lentil Soup or Melon & Fresh Fruit of Half a Grapefruit --- Braised Rump Steak, Chips Mushrooms & Onions --- Strawberries & Cream	Carrot & Coriander Soup or Melon & Fresh Fruit or Half a Grapefruit --- Cod in Dill Sauce with Boiled Potatoes, Peas, Broccoli & Swede --- Warm Pears in Chocolate Sauce	Leek & Potato Soup or Melon & Fresh Fruit or Half a Grapefruit --- Liver & Bacon In Onion Gravy with Mashed Potatoes & Mushy Peas --- Cherry Sponge & Clotted Cream	Butternut Squash & Coconut Soup or Melon & Fresh Fruit or Half a Grapefruit --- Cottage Pie with mixed Vegetables --- Apricots & Whipped Cream	Tomato & Basil Soup or Melon & Fresh Fruit or Half a Grapefruit --- Battered Fish With Chips, Peas & Tartare Sauce --- Fruit Salad	Pea & Parsley Soup or Melon & Fresh Fruit or Half a Grapefruit --- Chicken Chasseur with New Potatoes, Beans, Cauliflower & Cabbage --- Raspberry Jelly & Cream	Cream of Vegetable Soup or Melon & Fresh Fruit or Half a Grapefruit --- Roast Pork with Stuffing, Roast Potatoes, Peas, Cauliflower & Brussels --- Strawberry Eton Mess
Carrot & Coriander Soup Melon & Fresh Fruit or Half a Grapefruit --- Open Prawn & Marie Rose Sauce Sandwich --- White Chocolate Cheesecake	Leek & Potato Soup or Melon and Fresh Fruit or Half a Grapefruit --- Coronation Chicken with New Potatoes & Salad --- Tapioca Pudding	Butternut Squash & Coconut Soup or Melon & Fresh Fruit or Half a Grapefruit --- Old English Sausage with Chips & Beans --- Madeira Cake	Tomato & Basil Soup or Melon & Fresh Fruit or Half a Grapefruit --- Asparagus & Brie Quiche Served with Salad --- Warm Bread Pudding with Custard	Pea & Parsley Soup or Melon & Fresh Fruit or Half a Grapefruit --- Feta Cheese & Mushroom Pasta Bake with Garlic Bread --- Chocolate Cake Served with Warm Cherries	Cream of Vegetable Soup or Melon & Fresh Fruit or Half a Grapefruit --- Jacket Potato with Cheese & Beans --- Rice Pudding	Sweetcorn Soup or Melon & Fresh Fruit or Half a Grapefruit --- Cold Style Buffet --- Victoria Sponge with Whipped Cream

Week 3

Daily alternatives are available. Please ask a member of staff.

Although very traditional in style, the menu is well balanced in terms of colour and texture. Nutritional analysis was not conducted. Menu engineering techniques were not in use, nor heard of.

There is, however, a very effective system for managing special dietary needs and residents living with dysphagia. The chef receives patient data from the administration office and collates a daily and weekly list of the required diets for each dining area. This facilitates the production and service timings and ensures the correct foods are sent to the appropriate dining area. The chef reported, there had been, unfortunately, an incident when a new resident's information was incorrectly logged.

"This was an example of why we need tougher communication of what's on. She passed away because no one had told them that she was a pureed diet, and we gave her fish and chips, so that was the worst-case scenario."

The head chef and his team made every effort to present the texture modified foods using traditional piping and molding techniques. They followed the NPSA system, as suggested by their community dietitian. The chef had not heard of the new IDDSI Framework. Proprietary thickening agents were in use and the chef had not heard of the generic hydrocolloids and how they could be used to reduce costs and still maintain a high standard of food production, service, and safety.

4.6.7 Care Home SY4

A copy of the menus in use was not available to take away and was being updated at the time of visit. The food observed, however, looked to be of good quality with a varied choice available. There was a need for texture modified foods, which were mostly bought in, pre-prepared from one of the major frozen food companies. These were defrosted and re-thermalised as required. Consequently, presentation was of a good standard as all the foods had been created in food grade silicone molds, resembling as close as possible the foods they were supposed to be. An example of the type of pre-prepared texture modified meal is shown in Figure 4.9.

Figure 4.9: Puréed Cottage Pie. Source: https://www.oakhousefoods.co.uk/

The new chef was not aware of the new IDDSI Framework and relied upon his suppliers to ensure all puréed meals were appropriate. He had no intention of making his own as he, and the residents, were very satisfied with the products used. Consequently, he was not familiar with the various hydrocolloids available, nor had any intention of experimenting with them or seeking alternative culinary innovations.

4.6.8 Care Home SY10

As previously mentioned, this care home had been rated "*Requires Improvement*". In an attempt to make rapid improvements to the food quality, new menus were being introduced making significant use of bulk, frozen, ready meals from a number of frozen food wholesalers, rather than the previous regime of all being cooked in house. The meals chosen were predominantly the main course protein dishes. Salads, vegetables, and accompaniments were prepared and, or, cooked, in-house avoiding frozen vegetables as much as possible, except chips. It was hoped that full production of in-house foods would resume soon. Texture modified ready meals were also used. There was no evidence of any culinary innovation, in either techniques or products. Menu engineering was an unknown term and not in use.

4.6.9 Care Home OL1

The Head Chef reported that their menus were rotated over a four-week cycle and had seasonal variations, taking account of market availability. The menus were mostly developed by head office though he did have considerable opportunity to take advantage of local special offers from suppliers. The menus included a wide choice of breakfast dishes, both hot and cold; Lunch was the main meal of the day, with three choices of starter, main course, and desserts. Tea time consisted of sandwiches, scones, cakes, and biscuits. The residents did not need to order their food in advance.

Temperature stable foods were available 24 hours a day, on service sideboards in the main dining area. Carers had access to cold and hot drinks from their serveries. The home provided a number of special meal themes throughout the year, such as sports events, festivals and visiting entertainment.

Texture Modified meals were mostly bought in from a frozen food supplier. The chef was not aware of the new IDDSI Framework initiative and was not familiar with the use of thickening gels and hydrocolloids used by the manufacturers. He had not heard of most of the hydrocolloids and gelling agents available but would be interested to learn more. He indicated, however, that he had little time available for culinary innovation and creativity.

4.7: Food Costs and Labour Costs

In this section I report on the F&B budgets, and where possible, on the actual F&B costs incurred by the care home management. The purpose of this section was to analyse the implications of RSQ's 5 and 6. With regard to labour costs all homes were offering minimum pay rates to their care staff and the going market rates for chefs and other trained staff in their areas. It proved impossible to get more detail.

4.7.1 Volunteer 1

In this interview the respondent commented on the research questionnaire distributed to chefs and catering managers.

"On this, the chefs might not know their daily food costs."

"You don't think they would?"

"No, I don't think they would, especially in the NHS, they wouldn't have a clue. The catering manager would, but the chef wouldn't. They're just cooking it, they wouldn't have a clue how much it is, and that's from experience. One project I'm working on at the moment, we asked the chefs what their menu is and the costs. They didn't even have a clue; they didn't know what they were looking at."

This throws an interesting light on standards of business acumen required of chefs and cooks within the NHS. The respondent did comment that Care Home chefs were probably more aware of their food costs than those in the NHS hospitals. One particular point to draw from these comments is the perceived lack of training for chefs with regards to business matters, food costing etc., and whether or not enough is included in the curriculum of UK college catering courses.

4.7.2 Care Home W01

The reported daily food cost budget here was approximately £7.00 per person per day. This was significantly higher than other care homes in the survey. The catering contractor charges the care home owners a fixed management fee and re-charges the food costs to the care home charity. It is a common occurrence in contract catering to charge a fixed fee for managing the operation and gain further income from bulk discounts obtained directly from the suppliers, rather than pass on the potential savings to their clients. This may explain the significantly higher food costs.

No information was available with regard to labour costs.

4.7.3 Care Home LN8

"Who has a responsibility within the home for the food beverage costs? Is it yourself? Is it the cook?" RM response,

"It's myself, but I don't have ultimate say the, it's the directors' ultimate decision."

ND. "And you have a set budget for those costs?"

"Yes, it's £300 a week at the moment. Yeah, yeah."

When questioned about what she enjoyed most about her job, the response from the cook was,

"Being creative with the budget."

"And what do you like least about your job?"

"Yeah. Having to stick to a small budget (laughter)."

"And if there's one thing you could change about your job. It would be?"

"Budgets. But. I know that we have to have them. There are lots of other overheads besides the kitchen and I know this kind of place is not really well-paid."

"So you are responsible for all food and beverage costs in the home, yeah?" "And the RM tells me that you do have a set budget of £300 a week.

"It's, two pounds fifty combined food and beverage costs per person per day and that's to give them a breakfast, mid-morning snacks; lunch; afternoon tea, dinner, supper or whatever it might be. Of that two pounds twenty goes on food costs and 30 pence on beverage costs.

Do you pretty much stick to that?"

"Try. Not always. But. Try. Can't get away with it so much now I'm getting the cash but when it was going onto an account (laughter)."

*"*Do you get a cash allowance every week?"

"Yeah. At the moment, as I say we're trying to source out another company. Erm, but yet at the moment he's bringing me a cash allowance, I take it weekly. And go and do what I want with it."

"That's a pretty tough budget, isn't it?"

"It is but to be fair. There's always food there, they don't pine. They don't starve, you can go and ask any one of them and like I've said to you, if I wouldn't eat, I wouldn't bring it."

There is a small discrepancy between what the RM and cook believe their food costs to be. The RM, states £300 per week, with current occupancy of 19 beds filled, that's a budget of £15.79 per resident per week, or £2.25 per day, for both food and drink. The Cook suggested the costs were £2.50 per resident per day. Items on the two weekly menu cycle included main course choices such as Spam Fritters or Pizza with chips and Peas and Chicken Drummers or Corned Beef Hash with potatoes and vegetables. The rest of the menu is very carbohydrate heavy, relying on pies and puddings.

The carers who are responsible for service of food and drink are predominantly on minimum hourly rates with some on zero hours contracts. There were two carers on enhanced pay for additional duties. The cook and RM did not reveal their salaries.

4.7.4 Care Home LN11

The daily food cost budget, as reported by the RM, was £2.15 per resident, per day. This did not include beverages. The menus seen, offered a broad and traditional choice over a four-week cycle. There was little by way of exciting or unusual food on offer and the reported food costs at the time would seem reasonable. However, see 4.9.3 for further comment on food offered. No information was available on labour costs.

4.7.5 Care Home NOT3

This care home had an unusually high F&B cost budget reported of £5.50 per resident per day, though this included all drinks, including wines. For the week previous to the visit their actual F&B costs were reported as being £5.11 per resident, though no distinction was made between food and drink. All staff were able to eat what was available and care staff were expected to dine with the residents. Consequently, as there was no separate budget for staff food, the true F&B cost per resident would be significantly lower than £5.11 per resident. Unfortunately, this was impossible to determine accurately due to the lack of financial data. No information was available on labour costs.

4.7.6 Care Home SY4

The care home did not have a set budget for food, and residents could have what they wanted, basically. There were efforts to improve the quality of food served and this was of prime importance to the RM, her preliminary estimates of food costs were £2.75 per resident per day. Of other concern to the RM was portion control.

"Portion control, erm, our portions at the moment, even the relatives are saying it's too big and I think we need to get portion control, but it's something that's in the pipeline, so obviously I'll concentrated on first getting them to get the varied meals because the choice wasn't there. When I came, either, they didn't have choices, where they are having any sandwich that's two sandwiches every day."

No information was forthcoming on labour costs.

4.7.7 Care Home SY10

The reported food cost here was an average of £2.40 per resident, per day. This included standard beverages. With the efforts being made to increase the food quality it is likely that the food costs will increase.

4.7.8 Care Home OL1

Apart from NOT3 and WO1, the two outliers, care home OL1 had the highest reported food cost of £2.75 per resident, per day.

Food Cost Averages

Table 4.3: F&B Average Costs

Care Home	PRPD	PRPD
NOT3		£5.11
W01		£7.00
LN8	£2.25	£2.25
LN11	£2.15	£2.15
SY4	£2.60	£2.60
SY10	£2.40	£2.40
OL1	£2.75	£2.75
Ave	**£2.43**	**£3.47**

As can be seen in Table 4.3, there are two average figures. The first column shows the averages for the majority of care homes, whilst the second column shows the average cost including the two outliers.

Determining the true food costs in every care home was problematic as most were reluctant to share that information, being viewed as being commercially sensitive.

4.8: Equipment needs

This section partially answers RSQ's 5 and 6. None of the surveyed care homes were making use of any modern kitchen equipment and relied entirely on traditional gas and electric stoves and ovens. One care home had a steam convection oven whilst only one had a blast chiller / freezer. When questioned about their knowledge of the various pieces of plant equipment, the chefs demonstrated a remarkable lack of knowledge. Figures 4.10 and 4.11 show one typical response to questions regarding kitchen plant in use and knowledge of other equipment readily available in the market.

Figure 4.10: Current kitchen plant in use

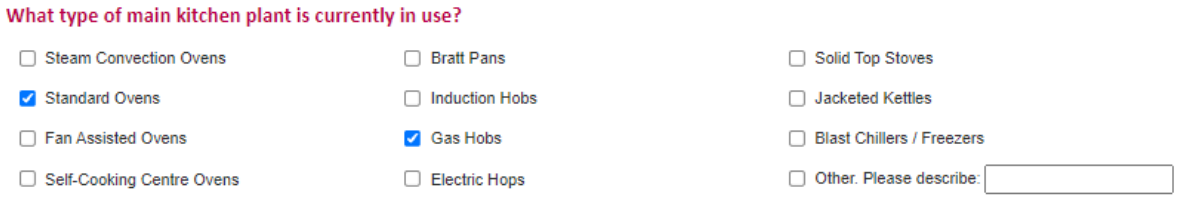
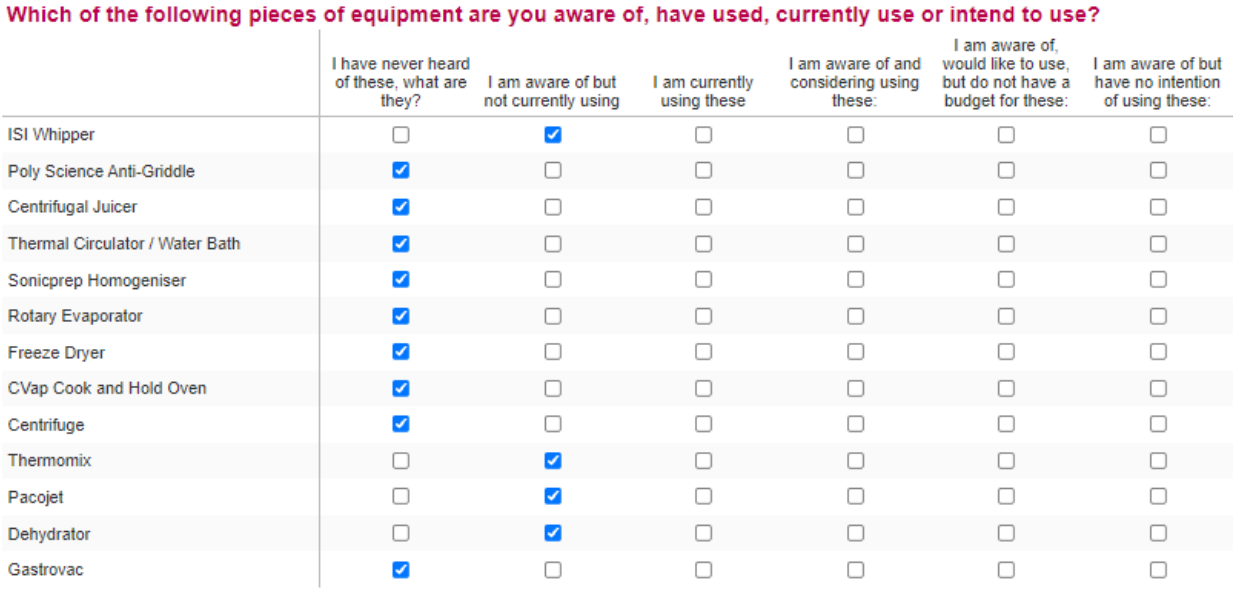


Figure 4.11: Knowledge of culinary equipment readily available



Whilst many care homes face financial difficulties it is not surprising that investment in new equipment is restricted. However, depending on use and maintenance, and with an average life span of seven to ten years use for medium duty kitchen plant, and applying a basic straight line depreciation policy, all but the newest care home should be ready for replacement of ageing equipment, with potential labour and energy savings to be enjoyed.

4.9: Sources of Funding

The purpose of this section was to determine the source of funding for the care home residents, being private, charity, or local authority and whether this had any impact on the quality of F&B services. This addresses the RSQ 5, changes that might lead to an improvement of F&B service.

The subject of social care and care home funding is complex and outside the main scope of this research. However, I set out below a brief explanation of the situation as it applies currently in England. As all care homes charge different amounts, it mostly depends on the facilities and degree and type of care required.

The resident, often supported by a relative, applying for care home funding has to undergo a **financial assessment**, and the amount the resident may have to pay is related to how much they are able to pay. If the potential resident has less than £23,250 (2021 figure) in investments or savings, then they may be eligible for assistance. That figure does not, generally, include the value of the residents own home (Lincolnshire County Council. 2021).

In all cases, where a local authority pays for the home, if the home charges more than the local authority's standard and usual costs, then a **Top Up Fee** may be payable. This could be paid by the resident, or a third party such as a relative. Some local authorities offer a loan service, set against the value of the resident's own home which would be paid back in full at a later date. This is called a **deferred payment**. Repayment is not written off and the resident or someone on their behalf must repay the loan at a later date. This deferral may end on the death of the resident, though many people will choose a deferred payment much like a **bridging loan** giving them the flexibility and time to sell their home at a time convenient to themselves (Sheffield City Council, 2021).

4.9.1 W01

All the residents in this care home were funded by the charity running the home. This did not impact on the quality of food prepared and served. In fact, as already established, the charity had subcontracted the catering services to an international catering and food service company and were paying a substantial sum for food costs.

4.9.2 Care Home LN8

There was a split in the source of funding at this home of approximately 60% of residents being funded by the local authority and 40% being funded from their own resources. As the food served and the quality being equal, this did not impact on the quality of F&B services.

4.9.3 Care Home LN11

The source of funding at this care home was not recorded during the main interview but during un-recorded conversation was said to be predominantly privately funded, with a few local authority top-up fees being applied, due to the additional costs charged by the home. As previously reported, one of the residents of this care home was a retired high court judge, who had a liking for calves' liver, game, and other high-quality foods. The RM went out of her way to visit the nearest Waitrose supermarket, on a regular basis, to purchase these items, as their local butcher was unable to supply them. It was clear that the food costs were not influenced by source of funding, with all residents being offered the same menus.

4.9.4 Care Home NOT3

At the time of visit, all residents in this upmarket care home were privately funded. This care home was offering a high-quality meal experience, with the reported food costs adequately covered by the fees charged to the residents.

4.9.4 Care Home SY3

This care home received funding for their residents directly from the residents, with some receiving top-up loans from the local authority.

4.9.5 Care Home SY10

This care home received funding for all their residents directly from the local authority.

4.9.6 Care Home OL1

The sources of funding at this care home were reported as being predominantly private though with some residents receiving top-up loans.

4.10: Nutritional / Dietetic related

In this section the questions related to the relationships between care home staff, chefs / cooks, the RM, nursing and medical staff and the nutritionists and dietitians. The purpose was to determine which professional would be asked to provide advice on nutritional input. Extracts from each interview or questionnaire response are shown below and relate to RSQ's 1, 2 and 6.

4.10.1 Volunteer 1

"That's why I've always said food if we get the food right. Our rôle is not only to get the food right, our rôle is to get the patients out of hospital, not delay them. That's why I got involved in nutrition, hydration. Hydration is just as important as food. And we always have to follow the dietitians, nutritionists, and SALT team, though the dietitians hold more sway!"

4.10.2 Volunteer 2

"We always felt the need for good access to dietitians, we didn't use nutritionists in this particular home very often."

4.10.3 Care Home W01

"All our dietary and nutritional advice comes from Head Office. We have occasional visits from the company dietitians, who are held in high regard here."

4.10.4 Care Home LN8

Question to the cook. "When it comes to seeking advice regarding improving residents' food intake. Who do you go to? You have ranked the following (shows feedback form)."

Table 4.4. Source of Nutritional Advice LN8

Staff	Ranking
Chef	X
Dietician	2nd
Doctor	4th
Nurse	3rd
Nutritionist	1st
Registered Manager / Matron	6th
Resident / Patient	5th

I see you put the nutritionist first, followed by the dietician, and then you put the nurse third and the doctor fourth, why is that? "*Cos, I think we work more closely*." "With nursing staff and doctors?" "*Yeah*." "Do you think that doctors are sufficiently trained in nutrition?"

Probably not, no, a lot of doctors, and I shouldn't say this, but a lot of doctors when they get to a certain age, I sometimes believe that they …. It's not worth it! But that's probably wrong of me to say that. But.

"And last of all. You go to the Registered Manager or Matron."

"Yeah. (laughter) Is that bad?"

4.10.5 Care Home LN11

Question to the RM. "Would you please rank those in order of preference Who would you go to first?" pause whilst interviewee completes table.

Table 4.5. Source of Nutritional Advice LN11

Staff	Ranking
Chef	3
Dietician	1
Doctor	4
Food Service assistant	6
Nurse	5
Nutritionist	2
Registered Manager / Matron	X
Resident / Patient	7

"It's interesting to see the dietitian and nutritionists in first and second place, but closely followed by the chef, ahead of the doctor or nurse. Why is that?"

"I just think they are the best placed to give that advice, dietitians and nutritionists know the science of the food, but the chef knows what to do with the food, and what can be done with the food."

4.10.6 Care Home NOT3

When questioned on whose advice to take on improving the residents' food intake, the response from the RM was:

Table 4.6. Source of Nutritional Advice NOT3

Staff	Ranking
Chef	5
Dietician	1
Doctor	2
Food Service Assistant / Carer	6
Nurse	4
Nutritionist	3
Registered Manager / Matron	X
Resident / Patient	X

"I see you have put the dietitian and doctor ahead of the nutritionist, and the nurse ahead of the chef, why is that?"

"Well, the dietitians are the best trained in food and diet, more so than the nutritionists. Sure the chef knows how to cook the food, but they don't fully understand the science."

4.10.7 Care Home SY4

When the RM was questioned about advice on whose advice to take on improving the residents' food intake, the response was:

Table 4.7. Source of Nutritional Advice SY4

Staff	Ranking
Chef	6
Dietician	3
Doctor	2
Food Service Assistant / Carer	1
Nurse	5
Nutritionist	4
Registered Manager / Matron	X
Resident / Patient	7

"I see you have put the food service assistant in first place for giving advice, why is that?" "Well, the carers see the residents every single day. They get to know their likes and dislikes. They spend a lot of time with them."

And do you believe the doctor knows more about food than the dietitian or nutritionist?" "Well yes, don't you?"

My response. “I don’t believe they do.”

4.10.8 Care Home SY10

The RM was questioned about who she would turn to for advice, if needed. The response here was similar to that of respondent NOT3

Table 4.8. Source of Nutritional Advice SY10

Staff	Ranking
Chef	5
Dietician	1
Doctor	2
Food Service Assistant / Carer	6
Nurse	4
Nutritionist	3
Registered Manager / Matron	X
Resident / Patient	X

4.10.9 Care Home OL1

Similar to care home LN 11, the respondent here placed the dietitian and nutritionists at the top, with the chef, a surprising third.

Table 4.9. Source of Nutritional Advice OL1

Staff	Ranking
Chef	3
Dietician	1
Doctor	4
Food Service assistant / Carer	6
Nurse	5
Nutritionist	2
Registered Manager / Matron	X
Resident / Patient	X

A very rough analysis of favoured ranking for sources of information is shown table 4.10. As different questionnaires were used, depending on respondent’s rôle in the care home, this is far

from an exact science but does give a broad, and expected, result, with the dietitians being in top place, closely followed by the nutritionists and doctors.

Table 4.10 Favoured ranking as source of information

Dietician	1
Nutritionist	2
Doctor	3
Chef	4
Nurse	5
Food Service Assistant / Carer	6
Registered Manager / Matron	7
Resident / Patient	8

A total of six care homes were visited and one care home responded by online questionnaire and the two volunteers were interviewed separately.

Table 4.11 Care Home Interview numbers

Care Home Code	**Interviews and/or Questionnaires**
W01	Five Interviews. RM, Head Chef, Kitchen Assistant and two care assistants
LN8	Two interviews. RM and Head Chef.
LN11	Two interviews. RM and Kitchen Manager
NOT3	Two interviews. RM and Head Chef
SY4	One Interview. RM. One Q. Head Chef
SY10	One interview. RM. One Q. Head Chef.
OL1 Group	Two Q online responses, Head of Nutrition and Head Chef

With the results of interviews and questionnaires completed I will now move forward to **Chapter 5 – Discussion, Conclusion and Recommendations**, creating a clear and seamless link, to conclude the thesis. Here I reiterate the purpose of the research, via the MRQ: **What is the rôle of caterers in the provision of nutritious food and drink within elderly care homes?** Finally, to close this chapter a brief analysis indicates that caterers do have a huge rôle in the provision of food and drink. However, in the current operational situation, they are not being recognised, empowered, nor utilised. This is discussed in greater depth in the following chapter.

Chapter 5 – Discussion, Conclusion and Recommendations.

The aim of argument, or of discussion, should not be victory, but progress. Joseph Joubert.

In opening this Chapter, I recap for you, the reader, the **Golden Thread** of my journey so far. As a reminder, the MRQ was: **What is the rôle of caterers in the provision of nutritious food and drink within elderly care homes?** Chapter 2 – Literature Review and Research Scope, delved into the world of care home catering for people living with dementia and answered some of the RSQ's. Chapter 3 – Methodology, presented the various methods of research and how I went about it. This was followed by Chapter 4 – Results of Interviews and Questionnaires, in which the main findings were presented. That chapter clearly answered the MRQ and some of the RSQ's were addressed.

Having presented the evidence and key findings of this study, I now turn to a critical analysis and interpretation of these results in the context of existing literature. This now goes beyond the presentation of raw data, and statistical analysis, providing a narrative that will help you, the reader, understand the patterns and trends discovered. The chapter aims to provide a comprehensive analysis of the implications of my findings, discussing their significance in relation to established theories, previous research, and the broader field of study. In common with many other DBA theses, this final chapter is a combination of in-depth discussion of the research results, conclusions in each section and a set of recommendations.

In presenting the conclusions and recommendations emerging from my research into the examination of the roles of caterers in the care home experience, and their impact on the provision of nourishing food on the wellbeing of people in care homes living with dementia, a number of disturbing findings included that of a lack of communication arose. Further, there was an absence in decision-making of the voices of the people directly responsible for the actual provision of food services to people in care homes living with dementia. These voices were neither sought, nor was due attention paid to their professional advice when articulated. This led to the further conclusion that those providing the meals and drinks were seen as unequal in professionalism from the medical and associate practitioners. For many years, the provision of food was seen as too quotidian and belonging to the domestic sphere, at best linked to the study of Home Economics, which excluded it from any serious study or consideration in academia (Nestle and McIntosh. 2010. p. 161).

Addressing the emergent themes from the research analysis, one of the key findings was that nobody from the dietitian, nutritional or medical / nursing group really listened to the people at the ground level. This, again, reflects the initial findings of Donelan (2000). My research is finding out and understanding their experiences, realities, and practicalities of food and drink provision in

care homes. Consequently this has, in turn, influenced how I am presenting my findings as their insights are so powerful.

My conceptual framework developed over this research journey and was formed by both my own values and perceptions prior to undertaking this journey; by the literature review and through my experiences in the interview phase of the project.

Prior to this endeavour my perspective was that expert catering professional practice occurs primarily through practice and little else. But now I understand that when the care home caterer is capable of viewing the meal situation from different perspectives, either through critical reflective observation or through consultation with others, and contextualising current and past occurrences, the professional caterer reflects critically on the objectives to be achieved and the action appropriate to attain them. This allows the caterer to identify areas requiring further deliberation and research or improvement to ensure the gastronomic needs of the individual patient /consumer /diner /client are met. The catering profession has not articulated well the skill-set caterers and foodservice providers bring to the table in the plethora of circumstances in which they operate.

This Chapter also serves several important purposes and is the platform on which I engage in a critical examination of my findings and provide a deeper understanding of the significance of my research in the context of the original problem: **How can catering organisations, either In-House Not for Profit or Commercial operations provide improved nourishing food and hydration, to people living with dementia in a care home environment.** Here are some key purposes of the discussion chapter:

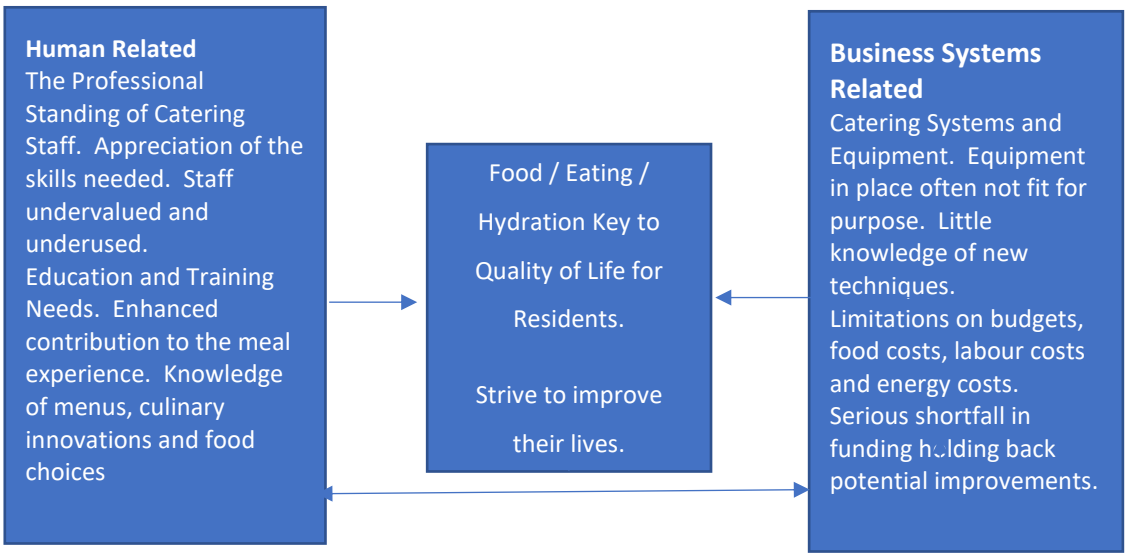
The primary purpose of this discussion chapter is to interpret and analyse the results presented in Chapter 4. I have attempted to explain what my findings mean, their implications, and how they contribute to the existing body of knowledge in this field. I have placed my findings in the context of existing literature, theories, and concepts. Furthermore, this is my opportunity to critically analyse the results and assess the strengths and weaknesses of my research design. Having formulated specific research questions and hypotheses at the outset I address these, explaining how my findings support or contradict my initial expectations and provide explanations for these outcomes.

I then present overall conclusions based on my research findings, summarising the main takeaways from the study, discussing their significance, and offer insights into their potential real-world applications and theoretical contributions within care home catering services. It is important to acknowledge the limitations of my study here, demonstrating my awareness of potential

weaknesses or constraints in my research design, methodology, or data collection. Ultimately, it is my opportunity to showcase my analytical skills, my depth of understanding and provide to you, the reader, with a comprehensive view of the implications and significance of this research.

The framework shown in Figure 5.1, presents the issues revealed in the journey of feeding and hydration of the care home residents. Each part of the journey will now be examined to determine where, if appropriate, improvements can be made. This does not hold true for all areas as some aspects are not relevant to this study.

Figure. 5.1: My Conceptual Framework, repeated for reference – Matched to emergent themes



5.1 Summary and Interpretation of Key Findings

The following subheadings are taken from Table 4.1: ***Emergent Themes from Data Analysis***. Each section will discuss the results of the findings in order.

Professional Standing

The identified dilemma in this context revolves around the relationship between culinary staff and nutritional or dietetic staff in healthcare settings. The extracts from Volunteer 1 and Volunteer 2 highlight the lack of trust and understanding between these two groups. **Volunteer 1's** interview reveals that in the NHS hospital, chefs are expected to strictly adhere to dietetic and nutritional standards set by in-house dietetic and nutritional staff. This suggests a hierarchical relationship where culinary staff are directed by dietetic and nutritional professionals without much room for their input or expertise. **Volunteer 2** presents a different perspective. She believes that chefs hold an equal professional status with nursing staff, nutritionists, or dietitians because they

play a crucial rôle in ensuring food quality and meeting residents' dietary preferences. Chefs not only follow menus but also engage with residents to understand their food preferences and cater to their needs, even in terms of cultural and personalised dishes. This perspective emphasises the chef's importance in enhancing the dining experience for residents and contributing to their well-being.

The relationship between culinary and nutritional/dietetic staff in healthcare settings is a complex issue. **Volunteer 1's** viewpoint reflects a more hierarchical and directive relationship, while **Volunteer 2** highlights the importance of chefs in understanding and meeting the dietary preferences of residents, suggesting a more collaborative and equal status approach. This dilemma points to the need for improved communication and understanding between these two groups to provide the best possible care to residents.

The chef at **Care Home W01** was asked if he believed that his occupation is seen as "professional" by various groups, including carers, clinical, nursing, dietetic, and nutritional staff. The chef responded affirmatively, stating that he believes his profession is considered professional, particularly when his colleagues recognize his knowledge and expertise in areas such as nutrition and dysphagia. This response suggests that the chef feels respected and valued for his professional competence in addressing dietary and nutritional concerns within the healthcare context.

At **Care Home LN8**, the cook was asked about their professional standing and whether they believe they are a valued member of staff essential to the well-being of the residents and patients. The cook responded by emphasising the importance of their rôle in providing correct and healthy food to maintain the health of the residents and patients. They believe that their contribution is vital to the overall well-being of the individuals in their care.

Furthermore, when asked if she considered herself to be on an equal professional status with nursing staff, nutritionists, and dieticians, she expressed the view that all members of the healthcare team, including chefs, should listen, have input, and collaborate in providing healthy meals. She asserts that the rôle of a chef is just as important as that of other healthcare professionals in maintaining the health and well-being of the residents and patients. It's also noted that Care Home LN8 doesn't employ its own dietitian or nutritionists, occasionally relying on the services of community dieticians and Speech and Language Therapists (SALT). This context highlights the cook's rôle in providing nutritionally appropriate meals in the absence of dedicated in-house dietetic and nutritional staff. n this interview with the Head Cook, he was asked if he considers himself a valued member of the staff essential to the well-being of the residents. He acknowledged

that being consulted about food production and service is a way to build a deeper understanding of the residents' needs, particularly those who stay in the facility regularly.

Regarding his professional status compared to nutritionists and dietitians, the Head Chef at **Care Home LN11** expressed the belief that chefs should be on equal footing. However, he noted that, in practice, chefs often don't receive the same recognition or status as these other professionals, despite the vital rôle they play in brightening the days of the residents through their meals. Interestingly, when the same question was posed to the Registered Manager (RM), she shared a contrasting viewpoint. She personally believes that the Head Chef is on equal status with other professionals, but she acknowledges that others on the staff and even the current chef may not share this perspective, highlighting a potential disparity in perceptions of professional status within the healthcare team.

At **Care Home NOT3**, the RM was asked about her perspective on the professional status of chefs in comparison to nursing staff, nutritionists, and dietitians. The RM expressed that chefs have their own unique professional status within their kitchen, separate from the rôles of nursing staff and nutritionists. She emphasized that just as nurses can't teach chefs how to cook, chefs can't instruct nurses on nursing practices. Each profession has its specialized domain. However, when it comes to the rôle of nutritionists, the RM held a different view. She believed that nutritionists have a legitimate rôle in guiding chefs on how to cook food. According to her, nutritionists provide valuable input on how food should be prepared to benefit individual patients, especially for specific dietary needs like soft or homogenized diets. She stressed the importance of tailored, person-specific guidance from nutritionists to ensure the well-being of the residents.

In the same care home, in response to the question about professional status, the **Regional Operations Manager** strongly emphasized the chef's vital rôle in ensuring the well-being of the residents. She expressed a clear belief in the importance of the chef's work and how it directly contributes to the residents' health and overall quality of life.

The chef's response acknowledged the collaborative nature of healthcare settings. He recognised that nursing staff, nutritionists, and dietitians are the professionals in their respective fields, and it's essential to work together as a team. The chef highlighted their rôle in providing dietary recommendations and adjustments to meet individual residents' needs. They stressed the importance of a unified approach, focusing on the residents' well-being as the ultimate goal.

At **Care Home SY4**, in response to the question about the professional status of chefs in comparison to nursing staff, nutritionists, or dietitians, the RM expressed the belief that chefs should

be on an equal professional status with these other healthcare professionals. However, she noted that in her specific setting, they didn't have nursing staff; instead, all the personnel were carers due to the residential nature of the facility. This suggests that in her context, the distinctions between professional rôles might not be as pronounced. The Head Chef, who responded to a questionnaire online, believed that chefs should be considered on par with nursing staff, nutritionists, or dietitians if they possess the right qualifications at a higher level. However, he pointed out that achieving this status would be challenging, given the comparatively shorter training period and qualifications required for chefs, particularly with a Level 2 NVQ in Catering. He also mentioned that nutrition was a more significant part of chef training in the past, indicating a shift in educational focus over time.

In **Care Home SY10**, which had recently received a "Requires Improvement" rating after an inspection, both the Registered Manager (RM) and the Chef were new to the facility. Due to scheduling difficulties, they provided their responses separately, with the Chef completing an online questionnaire. The RM acknowledged the significant rôle that chefs play in ensuring residents receive well-prepared, tasty, and nutritious meals. However, she also noted that the training of chefs doesn't match the extensive education and expertise of nutritionists or dietitians. She expressed the need to verify ingredients and ensure chefs adhere to dietary guidelines.

The Chef's response indicated a similar perspective. They doubted whether chefs are on equal professional status with nutritionists and dietitians, even though they believed it should ideally be the case. The Chef highlighted the need for more extensive training for chefs to attain such a status. They also mentioned that their college education provided minimal input on nutrition, suggesting a potential gap in culinary training regarding dietary expertise.

In **Care Home group OL1**, there is a specialist Head of Nutrition and Hydration who plays a crucial rôle in connecting care and catering, collaborating with both chefs and care staff, and taking the lead on policy development and training in this area. When asked about her perspective on the professional status of chefs compared to nursing staff, nutritionists, or dietitians, she expressed the belief that chefs should be on equal professional footing. However, she emphasized that for this equality to be realized, chefs need to receive the recognition they deserve and be equipped with the necessary tools and resources. Her comments on training needs further underscored the importance of providing chefs with the training and support required to meet the standards and expectations of their rôle within the healthcare setting, thus reinforcing her stance on achieving professional parity for chefs in this context.

From the above discussion and analysis of the **Professional Standing Results** it is clear that although the chefs seek equitable recognition, they are being denied the opportunity. This links to the RSQ 6, what is the potential of catering staff to make better use of catering staff knowledge in improving the residents' experience?

It was evident that the RMs hold a common opinion that chefs still have a considerable distance to go to achieve equal standing with nurses, nutritionists, and dietitians within the healthcare setting. This viewpoint is concurred by the chefs themselves. The primary reason behind this perception is the varying levels of education each group undergoes, with most chefs typically achieving a Level 3 education at best. The issue of education and professional standing among these groups will be explored further in the next section.

It is clear that most catering care workers within care home environments consider themselves, and are considered by other staff, to be at the bottom of the pecking order. Consequently, and perhaps one of the more problematic dilemmas to solve in the care home, is the professional standing of the catering and hospitality staff. As was seen in Chapter 4, and reinforced above, nobody listens to the caterers, chefs, servers, or general care assistants. This is perceived as being:

1. *Their lack of professional recognition. Chefs and cooks do not have a comparable professional association, accredited via examination, such as the British Nutrition Foundation or The British Dietetic Association. Nor are the culinary arts regulated by government. There are a number of 'professional' or 'craft' associations, such as 'The Royal Academy of Culinary Arts', 'The Master Chefs of Great Britain', 'The Craft Guild of Chefs', or 'The British Culinary Federation'. None of these offer academic underpinning or seek academic qualifications as a requirement of membership. The Royal Academy of Culinary Arts do hold a Master of Culinary Arts practical test every two years, though this is presented in a practical competition style, rather than an examination.*
2. *Due to a lack of high enough level of education. There is no recognised theoretical base other than the established and traditional apprenticeships or college courses, teaching the craft skills, the wrist to fingertip approach, as discussed in the Literature Review.*

It is time for these staff to be recognised for what they are, vital cogs in the care home system. This reappraisal of the rôle of the catering staff in feeding the residents is overdue and will be addressed here.

In past years many opinions on the status and rôle of the caterer and the chef have been implied or expressed. The commentators have varied from politicians who urge the improvement of catering and food services generally in hotels and restaurants, and especially in hospitals and care/nursing homes, with the accompanying improvement in the training of personnel working in

this field on the one hand, and on the other a Minister for Education in the Republic of Ireland's (*Poblacht na hÉireann*) government who indicated that culinary arts and catering management courses at undergraduate and postgraduate levels were non-starters (Hegarty, 2021).

We should also consider the professors of Hospitality Catering Management and Culinary Arts, who feel threatened in the academy because their "discipline" does not have an (equal) status with the established disciplines of Law, Medicine, Dietetics, Engineering, Computing and Sports Science. Clearly, Ozga's (2000) assertion that the rôle of state agencies is nearly always malign, and they tend to make things worse, rather than better, whatever their stated intentions, still holds true.

My research found that the experiences of caterers, their realities, and the challenging practicalities of providing food and drink in care homes went unrecorded. These findings are stark and need further investigation at a policy level.

Overall, five care home specific conclusions were drawn with regard to professional standing:

(i) the need to plan for the resources needed to support collaborative teams to engage with collecting, processing, and interpreting data.
(ii) create encouraging and safe working environments to help collaborative team members feel valued.
(iii) recruit collaborative teams; quality assurance policy and practices leaders, and facilitators who have established relationships with care homes.
(iv) regularly check project ideas are aligned with team members' job rôle s, responsibilities, and priorities; and,
(v) work flexibly and accept that planned activities may need adapting as the project progresses.

These conclusions are targeted at all teams delivering services in care homes. These conclusions demonstrate the need to consider the care home context when applying improvement tools and techniques in this setting.

Farrer, et al. (2019) conducted a study involving 38 chefs, cooks, and food service managers with the aim of determining how dietitians, chefs and cooks could work together, contributing to best practice. One of the main conclusions was that "*participants commented that it was not unusual to receive conflicting information from different dietitians*". An example of which, from one interviewee was, "*we will get one dietitian that will say diabetics can have foods high in fat but no sugar and the next one will say they can have sugar but no fat*". Who to believe?

From the above, and from conversations on site, it is clear there is a degree of mistrust between the actors in food service and dietary and nutritional advice. It is strongly recommended

that care home catering staff, if they don't have their own, call-in assistance from the local authority dietitians and nutritionists at least quarterly. The professional standing of the catering staff is an area of contention which needs to be addressed, not only, but especially, by the catering staff themselves, but critically so, by the care home owners, managers, and clinical staff.

For the practicalities of a food service protocol to be effective it is essential that open channels of communication are maintained, demonstrating confidence to the residents, their families, and carers, that all that is possible is being done for them. There are missed opportunities in the sector to reappraise the input of the catering and support staff to improve both the business efficiency and the lot of the care home residents.

Adding to the above, it has been shown that often times the nutritionists will advise which type of foods to offer but have little, if any, knowledge of how certain foods are prepared and cooked. Even more so, what effect different levels of thermal manipulation or physical manipulation can have on foods. As a consequence of the above it is suggested that the dietitians and nutritionists explain more thoroughly what they are trying to achieve with each individual resident and maintain an open and collaborative, open minded attitude. There is a fundamental gap in knowledge, with chefs and cooks demonstrating little knowledge of nutrition or the nutritional and dietetic staff demonstrating purely basic culinary skills or understanding. It is strongly suggested that any dietitian or nutritionist who aspires to work in the care sector consider undertaking a Culinary Nutritionist degree at both Undergraduate and Postgraduate level. To close this section it is also strongly suggested that any aspiring care home chef or catering manager should undertake a similar course of education combining both the culinary arts and nutrition.

Recommendations – Professional Standing

Based on my analysis of findings related to the professional standing of culinary staff in healthcare settings, here are some practical recommendations:

1. ***Enhance Communication and Collaboration:***
    - *Encourage regular meetings and open communication channels between culinary staff and nutritional/dietetic professionals to bridge the gap in understanding.*
    - *Promote a culture of collaboration where both groups value each other's expertise and input in providing the best care to residents.*
2. ***Professional Development:***
    - *Invest in ongoing professional development for culinary staff, including training in nutrition, dietary needs, and special diets.*
    - *Explore opportunities for culinary staff to attain higher-level qualifications in nutrition or culinary arts.*

3. ***Recognition and Acknowledgment:***
    - *Acknowledge and celebrate the important role that culinary staff play in residents' well-being and overall quality of life.*
    - *Implement recognition programs to appreciate the expertise and contributions of culinary professionals.*
4. ***Tailored Nutrition Guidance:***
    - *Ensure that nutritionists provide personalized guidance to culinary staff, especially for residents with specific dietary needs like soft or homogenized diets.*
    - *Foster a cooperative approach where chefs and nutritionists work together to create nutritionally appropriate meals.*
5. ***Review Educational Curricula:***
    - *Collaborate with culinary schools to review and update educational curricula to include more comprehensive training in nutrition and dietary requirements.*
    - *Encourage chefs to pursue additional certifications or courses related to healthcare nutrition.*
6. ***Resource Allocation:***
    - *Provide culinary staff with the necessary tools, resources, and access to dietary guidelines to enable them to meet the required standards for healthcare settings.*
7. ***Equal Professional Status:***
    - *Initiate discussions within the healthcare team about the recognition and professional status of culinary staff.*
    - *Work towards a consensus on the equal importance of all healthcare professionals, including chefs, in ensuring residents' well-being.*
8. ***Quality Assurance:***
    - *Implement quality assurance processes to ensure that meals prepared by culinary staff meet the dietary and nutritional standards set by healthcare professionals.*
9. ***Cross-Training:***
    - *Explore opportunities for cross-training between culinary staff and nutritional professionals to promote mutual understanding and respect for each other's roles.*
10. ***Feedback and Evaluation:***
    - *Establish feedback mechanisms where residents, staff, and families can provide input on the quality of food and dining experiences.*
    - *Use feedback to continuously improve food services and address residents' preferences.*
11. ***Advocacy and Leadership:***
    - *Encourage culinary staff to advocate for their profession and the importance of their role in residents' well-being.*
    - *Foster leadership among culinary professionals to take on more active roles in healthcare decision-making processes.*
12. ***Policy Development:***
    - *Develop and implement policies that explicitly recognize the expertise and value of culinary staff in healthcare settings.*

By implementing these recommendations, healthcare facilities can work towards improving the professional standing of culinary staff, promoting collaboration among healthcare professionals, and ultimately enhancing the overall experience and well-being of residents and patients.

My final observations in this section is that there are also many benefits to improving the professional recognition of culinary staff in care homes and hospitals by dietitians, nutritionists, clinicians, and medical staff. For example, when culinary staff are recognised as professionals, they are more likely to be included in discussions about meal planning and preparation. This can lead to better communication and collaboration between all members of the care team, which can ultimately benefit residents. When culinary staff are recognised as professionals, their skills and expertise are more likely to be respected by other members of the care team. This can lead to a more positive work environment and improved morale for culinary staff.

When culinary staff are given the opportunity to use their skills and creativity, they can create meals that are both nutritious and delicious. This can lead to improved appetite, weight gain, and overall health for residents. When residents are satisfied with their food, they are less likely to waste it. This can save money and help to reduce environmental impact. Overall, improving the professional recognition of culinary staff in care homes and hospitals can have a positive impact on the health, satisfaction, and well-being of residents. It can also lead to improved communication, collaboration, and job satisfaction for culinary staff.

These are just a few examples of the many benefits of improving the professional recognition of culinary staff in care homes and hospitals. By recognising the important rôle that culinary staff play in the care of residents, we can improve the quality of life for everyone involved and these examples answer the RSQ's 3, 5 and 6.

Training and Development Needs and Technical Knowledge

Discussions and responses regarding training and development needs brought out both positive and negative aspects. These themes emerged from interviews, questionnaire responses, and discussions with supervisors and care staff, with notable insights from Volunteers 1 and 2.

Volunteer 1 shared thoughts on training and education available for catering staff and chefs. They recalled initiatives that have come and gone over the years, mentioning the apprenticeship levy as potentially lacking depth. They discussed the importance of training within the NHS, drawing parallels with the YTS program's perception. They highlighted the impact of a national chefs' training scheme, emphasizing the value of education and training to retain staff. The interviewee also spoke about training in Australia and Canada, highlighting the positive approach in Canada, where membership in the Canadian Society of Nutritional Managers and a training course were mandatory to work in care homes as a chef.

Volunteer 2, who was a retired RM and nurse, shared her experience with various training courses. She discussed her catering qualification and the Safer Food for Better Business training. She noted a project involving dementia care and food, during which staff attended sessions to contribute to research and enhance the dining experience. The interviewee talked about her journey from a qualified nurse to obtaining catering qualifications due to managerial responsibilities. She emphasised the need for a manager who understands staff training to ensure weak areas are addressed during supervisions and appraisals. Both Volunteer 1 and 2 highlighted the significance of training and its impact on staff competence and resident care within the care home setting.

In **Care Home W01**, the training provided by the catering contractor was discussed with the Head Chef. The Head Chef mentioned the presence of a company dietitian who had conducted training and assigned them to the Nutritional and Hydration Forum. This forum aimed to train Nutrition Champions within the homes and initially involved the Head Chef, one nurse, and some care staff. Regarding qualifications or training related to food and beverage management or culinary management, the Head Chef mentioned that there were mandatory training modules provided by the company, including topics like food safety and health and safety management. He also noted the availability of more in-depth courses but cited challenges in finding the time to undertake them.

However, it was noted that none of the staff responsible for serving meals to the residents had received any training from the catering contractor since they were employed directly by the care home. These staff members did receive some training related to nutritional aspects but did not receive training on plating or presentation skills.

In the interview with the RM of **Care Home LN8,** questions were asked regarding the training provided to the chef in terms of food and beverage management, culinary innovation, and management. The RM confirmed that the chef had received some training in these areas. When asked specifically about training related to cooking or serving people with dementia, the RM indicated that such training had been given but deferred further details to the chef.

A subsequent interview with the chef revealed that she had City and Guilds training, specifically levels one and two, many years ago. When asked if she believed that a care home catering qualification should be a compulsory part of a chef's training for employment in a care home, the chef expressed that she didn't believe it should be compulsory, citing an example of a colleague who had started without any training but eventually received it. She emphasized the importance of passion and care in this line of work.

Further probing about potential regulatory changes by the Care Quality Commission (CQC) making such training compulsory prompted the chef to acknowledge that she would have to undergo the training if it became mandatory to keep her job. Overall, the interview indicated that both the RM and the chef had a somewhat relaxed attitude toward training, with the RM seeming unenthusiastic about it. This perspective contrasted with the responses from participants in other care homes who appeared to place greater importance on training.

The results for **Care Home NOT3** indicate a positive response to training-related questions. The RM mentioned their background in hospitality, including experience in hotels, restaurants, and bars. She stated that they provide mandatory healthcare certificates and specific food service training. Additionally, staff at the care home receive continuous training in serving individuals with dementia, and hospitality staff are encouraged to pursue hospitality qualifications. There is also a desire for the chef to receive additional training, possibly through one-day courses.

In response to questions at **Care Home SY4**, the RM indicated that neither she nor the catering staff have received further qualifications or training related to food and beverage management or culinary management during their time at the care home. Regarding the chefs' knowledge of nutrition and hydration, she expressed the belief that they require more training. It was also mentioned that the care home recently implemented a budget for training within the last month. This budget covers both training and entertainment, as the owner is passionate about investing in both areas. The entertainment budget was specified to be ten and a half thousand pounds per year.

Both the RM and the Head Chef, at **Care Home SY10**, expressed encouraging views on training and development. The RM, who has recently joined, noted the absence of training except for mandatory health and safety when she arrived. The chef is eager for their kitchen assistants to receive more training, particularly in serving people with dementia, and the RM is in the process of requesting a budget for this purpose.

The Head Chef highlighted significant issues upon taking over, such as the lack of policies and nutritional information for meals, with cooking primarily relying on memory. They emphasised the need for proper training and noted that the RM has initiated steps to secure a training budget, acknowledging the considerable changes that have occurred in recent years.

The survey questionnaire responses from **Care Home Group OL1**, revealed a positive response to training-related issues and needs. Neither respondent was aware of the Level 2 Award for Care Home Catering staff, but they expressed a willingness to investigate it. Furthermore, the chef had taken proactive steps by sending some of his team on courses provided by their suppliers. These courses focused on food and nutrition for the elderly, although the exact names were not recalled. Additionally, they mentioned receiving training from the local SALT (Speech and Language Therapy) team, demonstrating a commitment to enhancing their team's skills and knowledge in catering for elderly residents.

The discussion and analysis of the **Training and Development Needs Results** above, reveals a unanimous agreement among the respondents. They believe that for chefs to be held in higher regard in terms of professional standing within the care home setting, they need to undergo more intensive training. This training is seen as essential to improve the perception of chefs among other care home staff, answering RSQ's 5 and 6.

It is clear from respondents' responses that much more focus on education and training is needed. There exists a massive, missed opportunity to improve the care home experience and both the catering business needs and the catering staffs' training needs, all at relatively low additional costs. Continuous Professional Development (CPD) is a positive step to ensure standards are set, managed, and maintained. However, it must be recognised that staff education and training by itself will not compensate for low staffing levels.

Since the late 1990s CPD has been the core area of study in the academic programmes in culinary, gastronomy, catering, and hospitality management. Some of the learning activities have been evaluated and the findings have helped to refine the learning activities with which catering students are engaging. Further work needs to be undertaken to develop the curricula to prepare

graduates more effectively for the wide variety of businesses, start-ups, and the employment opportunities available to them, perhaps even more so in the care sector.

Following on from the comments made in the Professional Standing section, and if we accept that each of the commentators were attempting to present views in the continuing debate on the vocational/academic relationship in higher education, there is a further element to be considered, namely the relevance of the study of Catering, Culinary Arts and Science, and Gastronomy in contemporary society. An appropriate question at this point is whether catering, hospitality, culinary studies and/or gastronomy are disciplines worthy of full academic recognition to the highest level, or are they careers open to those who lack talent and a refuge for second rate minds?

To date there has been too much expostulation and too little exposition, too much protest and too little prescription. A debate in which one side adopts a moral tone while the other denounces events without further thought can only be a sterile debate. In the present economic and social climate when this debate affects the very fabric of society, such sterility can only be dangerous. Whilst it is true that there can be little hope of devising a remedy without first preparing a diagnosis of the condition this is not really the point. What is so depressing is that all the efforts and talk of the past might fade into thin air. I feel that at least an ad hoc committee might be established with terms of reference to review the rôle and status of catering and culinary personnel, in this country, not only in care homes but in every catering unit, in the hospitals, hotels, restaurants and in the community, and further facilitate a process of integration of education and training in order that best use be made of available manpower, and the needs of an integrated catering service.

Catering and hospitality vocational education in general has low prestige because it is perceived to lack the qualities traditionally associated with liberal education. However, liberal education at its best has a vocational dimension and vocational education at its best has a liberal dimension, hence it makes good sense to integrate the two. Examples of such integration may exist already, but they need to be examined critically and articulated more clearly.

Catering whether in care homes, hotels, restaurants, hospitals, canteens, schools, prisons or wherever it occurs, is a socio-technological system. On the social front it deals with people properly trained with dignity, serving people with dignity, by producing and serving meals in response to expressed needs.

On the technological front the caterer in satisfying these needs makes use of available technology on a scale hitherto unknown or even contemplated. In preparing future caterers/chefs

leaders, managers, scientists, technicians, and operatives the discipline of catering is of necessity a multidisciplinary study.

My research study draws nourishment not only from the physical and chemical sciences but from the social sciences, economics, law, and philosophy. To each of these, catering will contribute the stimulus of ideas and avoid some of the difficulties which have manifested themselves in some of the specialist disciplines, that of communication. Many disciplines have evolved in the recent past to which full academic status has been awarded. When one carries an investigation through, each can be enveloped in the phrase "the study of man". Nowhere is this truer than in the disciplines of catering and hospitality. If this were sufficient there is no doubt, but academic halls would be filled to overflowing with applications from scholars to offer higher degree programmes in their particular study of man. Catering and hotel keeping, with law, are recognised as the second oldest professions, and of the three, catering is the one profession which has served, and continues to serve, man in its endeavour to engage with everything that pertains to the nourishment and well-being of man.

While it is true that academics go where their interests lead them; they study what they like, when they wish; they tend to straddle boundaries of "intellectual endeavour" with the agility of poachers. Students and professors of catering and hospitality must be generalists who can coordinate an interdisciplinary team while recognising their own specialised component in the world.

> To say that the consumption of food and drink is a vital part of the chemical process of life is to state the obvious, but we sometimes fail to realise that food is much more than vital. The only other activity we engage in that is of comparable importance to our lives and the life of our species, is sex. Appetite for food and sex is natural, but these two activities are quite different. (Dinsdale, 2016a).

We are, I believe, much closer to our animal base in our sexual endeavours than we are in our eating habits. Also, the range of variations is infinitely wider in food than in sex. In fact the importance of food in understanding human culture lies in its infinite variability - variability that is not essential for species survival - an essential requirement for culinary arts to become recognised *officially* as *art*.

The utilitarian aspects of food and cooking as necessary for survival has tended to inhibit the study of culinary arts and gastronomy. For survival needs, all men and women everywhere would eat the same food to be measured only in calories, fats, carbohydrates, proteins, and vitamins. But no! People of different backgrounds eat very differently. A publication on gastronomy in Irish literature

and culture entitled *Tickling the Palate* (Mac Con Iomaire & Maher, 2014) uses the concept of food culture in a classificatory sense, exposing a pattern of behaviour of a group of people who share it. Food habits are identified as an important, or even determining criterion in this connection. People who have the same culture share the same food habits, that is, they share the same assemblages of food variables. But in this book, it can be seen that even within the same culture, food habits are not necessarily homogeneous. In fact as a rule they are not. People of different social classes or occupations eat differently. People on festive occasions, when ill, in mourning, or on daily routine eat differently. Different religious sects have different eating codes. Men and women at various stages of their lives, eat differently. Different individuals have different tastes. Some of these differences are ones of preferences, but others may be downright prescribed. Thereby, identifying some of the future challenges for serious further scholarship in catering, culinary arts, and gastronomy.

The current growth in Doctoral studies in many fields offers catering as an academic discipline, the opportunity of being objectively studied and assessed on its own merits. To date the fashion of including and thereby, excluding various subjects in the catering degree courses has caused the lives of lecturers to swing with the pendulum of fashion, causing them to suffer from intellectual schizophrenia.

As discussed in the previous sections, a more focused and integrated training curriculum is needed for aspiring care home catering staff, encompassing nutritional elements, together with budgetary aspects. This is also relevant within the section on costs.

Recommendations – Training and Development Needs

Based on my analysis of the findings related to training and development needs and technical knowledge in care homes, here are some practical recommendations, addressing RSQ's 5 and 6:

1. ***Assess the Current Training Landscape:***
   - *Conduct a thorough assessment of the existing training programs, qualifications, and certifications available to staff, particularly catering and kitchen personnel.*
2. ***Standardise Training for Catering and Kitchen Staff:***
   - *Colleges and catering companies should develop standardised training modules for catering and kitchen staff that cover essential topics such as food safety, health and safety management, and nutritional aspects.*
   - *The government should consider making certain training modules mandatory for all catering and kitchen staff.*
3. ***Consider Specialised Training:***
   - *Recognise the need for specialised training, especially in areas like serving individuals with dementia. Encourage staff to pursue relevant courses and certifications voluntarily.*

4. ***Encourage Passion and Care:***
    - *Acknowledge that while formal training is valuable, passion and care are essential qualities in this line of work. Emphasise these qualities during the hiring process and in staff development.*
5. ***Stay Informed About Regulatory Changes:***
    - *Keep abreast of regulatory changes, especially those proposed by organizations like the Care Quality Commission (CQC). Be prepared to adapt training programs to meet new requirements if they become mandatory.*
6. ***Allocate Budget for Training:***
    - *Allocate a dedicated budget for training and development. This budget can cover various aspects, including staff training and entertainment, as seen in Care Home SY4.*
    - *Caterers should consider budgeting for one-day courses and workshops to enhance staff knowledge and skills.*
7. ***Engage with Professional Associations:***
    - *Collaborate with professional associations, to explore best practices and potential training opportunities, as noted in Volunteer 1's insights.*
8. ***Promote Continuous Learning:***
    - *Encourage a culture of continuous learning among staff. Provide incentives or recognition for those who pursue additional qualifications or certifications.*
9. ***Management Involvement:***
    - *Involve managers in understanding the training needs of their teams. Ensure that managers understand the importance of training and its impact on staff competence and resident care.*
10. ***Evaluate Training Effectiveness:***
    - *Regularly assess the effectiveness of training programs through feedback from staff and residents. Adjust as needed to address any shortcomings.*
11. ***Share Best Practices:***
    - *Encourage care homes, and relevant trade associations, to share best practices related to training and development. This can be done through regular meetings or forums where managers and staff can exchange ideas.*
12. ***Explore Supplier-Supported Training:***
    - *Investigate supplier-supported training opportunities, as seen in Care Home Group OL1. Suppliers may offer courses on food and nutrition that are beneficial to staff.*
13. ***Consider Offering Qualifications Internally:***
    - *Explore the possibility of offering care home catering qualifications internally, especially if existing external options do not adequately meet the needs of your staff.*
14. ***Prioritise Nutrition and Hydration Training:***
    - *Given the emphasis on nutrition and hydration in care homes, prioritise training in these areas to ensure staff can provide the best care to residents.*
15. ***Document Policies and Procedures:***
    - *Develop and document policies and procedures for meal preparation and nutritional standards to reduce reliance on memory, as emphasised by the Head Chef in Care Home SY10.*

16. ***Seek Funding for Training:***
    - *Actively seek funding opportunities for training initiatives, particularly from owners or governing bodies who are passionate about investing in staff development.*
17. ***Encourage Training for All Relevant Rôles:***
    - *Extend training initiatives beyond kitchen staff to include servers responsible for meal presentation and delivery to enhance the overall dining experience for residents.*

By implementing these recommendations, care homes can enhance the knowledge and skills of their staff, ultimately improving the quality of care provided to residents.

The Care Home Environment

In this section, the aim was to gather the opinions of respondents regarding the care home environment, specifically focusing on Food and Beverage (F&B) services. This assessment encompassed various aspects, including the physical setting, architectural design, aesthetics, and the equipment used for serving (such as plates and glassware). Additionally, it considered the social and ambient atmosphere within care homes. Overall, this section addresses the RSQ's 3, 5 and 6.

Volunteer 1 discussed the use of colored plates and glassware, citing research from Stirling University related to dementia. He mentioned that there is no conclusive evidence that blue is the ideal color, but it was chosen due to the absence of blue foods. They shared their involvement in a project that brought together various stakeholders, including supply chain professionals, nurses, caterers, Speech and Language Therapists (SALTs), and patients, to develop new crockery. This initiative was inspired by their personal experience in the hospital, where they found the standard white NHS plates unappealing. They advocated for a new design with a two-tone blue scheme, which they believed would enhance the dining experience, particularly for patients with dementia. The goal was to promote dignity and improve the perception of portion sizes. Although trials regarding plate color and food consumption were inconclusive, it was noted that some hospitals reported increased food intake when using two-tone yellow Notably, there was no discussion in this section about the physical dining facilities within hospitals.

Volunteer 2 discussed various aspects of the care home's physical and service environment. When asked about environmental interventions to enhance nutritional intake, she mentioned the use of red plates for those requiring assistance with eating but noted that using different coloured glasses wasn't considered due to the need for plasticware that tends to discolour quickly.

Regarding the physical environment, the care home underwent a complete refurbishment. The renovation aimed to address the lack of attention to aesthetics and comfort in the dining room. The old setup featured basic wooden furniture and lacked any design considerations. She emphasised the importance of creating a more intimate atmosphere, which led to replacing large tables with smaller ones to facilitate smaller group interactions.

The conversation also touched upon music in the dining area. Initially, the radio was always set to Radio 2, but this was changed. The care home invested in a new music system and experimented with different types of music to gauge their impact on residents. Interestingly, they found that birdsong and outdoor sounds were more effective during mealtimes than traditional music genres like marching or brass band music. These findings influenced the choice of music played during meals to create a more pleasant dining experience for the residents.

In **Care Home W01**, questions were asked about whether any changes had been made to the dining area's physical environment to enhance nutritional intake and hydration, particularly in terms of colors and lighting. The chef mentioned that there hadn't been significant changes to the actual dining room itself. However, he explained that the use of blue plates was based on the theory that naturally blue foods are rare, which creates a strong contrast between the food and the plate, potentially making it more visually appealing. Additionally, he mentioned an ongoing experiment with red mugs, possibly related to hydration and possibly associated with Portsmouth University.

On the other hand, when the same question was posed to **Care Assistant 1**, she indicated that there were discussions about changing the colour scheme in the dining areas, but no such changes had been implemented yet. She also mentioned an ongoing experiment with white and red glasses, likely related to hydration, but didn't provide further details.

Overall, it appears that Care Home W01 is considering or experimenting with changes to the dining area's physical environment, potentially for nutritional and hydration purposes, including the use of specific colors and glassware. However, the details and outcomes of these changes were not fully elaborated upon in the provided information.

In **Care Home LN8**, there was limited awareness regarding the potential benefits of positive environmental changes to improve nourishment and hydration among residents. The care home did not employ the use of different colored plates or drinking vessels to address these concerns. However, during discussions about the physical environment, it was mentioned that the care home has four dining areas. When asked if the current dining area was typical, the cook suggested that they probably should have separate dining areas. She expressed the desire to create a "home from home" environment and believed that allowing residents to sit in chairs with tables in front of them, similar to what they might do at home, was important. This suggests that the care home values a personalised and comfortable dining experience for its residents and aims to provide flexibility in their dining arrangements.

In **Care Home LN11**, the RM was asked about any changes made to the physical dining area environment with the specific aim of improving nutritional intake and hydration. The RM explained that when she first arrived at the care home, the dining tables in the upstairs area were arranged in a banquet style. However, the RM found this arrangement to be undignified and lacking a personal touch. She shared a personal experience of being ill and unable to feed herself in a hospital setting, which influenced her perspective. As a result, she advocated for smaller tables to create a more dignified and personal dining experience for the residents. She emphasized the importance of

assisting residents with dignity, avoiding communal feeding, although she acknowledged the benefits of social interactions. While the care home hadn't fully achieved the desired standard, they had moved away from banquet-style tables, indicating an effort to improve the dining environment and promote dignity for the residents.

In **Care Home NOT3**, the chef and the RM were interviewed about interventions and changes related to nutritional intake, hydration, and the dining environment: The chef mentioned that he uses blue plates for some residents and have plate guards, double-handed beakers with lids, and specialised cutlery. When asked about red glasses, he hadn't heard of their use but were informed about recent research from Canada and the United States and some UK hospitals experimenting with them to increase hydration. This information was new to him, and he found it interesting.

The RM was aware of the use of blue plates and shared that she had used yellow pot cups with handles on the dementia unit to maintain a consistent, dignified approach. She noted that all residents were maintaining their fluid intake, and renal function was stable. She expressed openness to new approaches that enhance the dining experience.

Regarding changes to the physical environment, the RM explained that she enhanced the dementia unit's dining area by incorporating a sensory room into it to make it more accessible for residents with dementia. She also mentioned the purchase of a "magic table," an interactive suspended device, which had a positive impact on resident engagement. She highlighted the changes in the social and ambient environment, including music during lunchtimes, enhancements to an outdoor patio area, and plans to introduce a washing line activity for residents. These changes aimed to create a more engaging and comfortable dining atmosphere for residents.

In **Care Home SY4**, the staff were asked about the use of interventions like blue plates or red glasses to enhance nutritional intake and hydration. They mentioned trying yellow dementia plates, but these didn't work well with both residents and staff due to their fragility. When asked about blue plates to make food more attractive, they hadn't heard of this concept. However, they expressed interest in learning more and receiving information about the benefits of using such plates.

Regarding changes in the physical environment of the dining room, they mentioned that they had recently decorated it. They emphasized the importance of the physical environment in aiding nutritional intake and hydration, particularly due to their own experience seeing improvements after making changes. Furthermore, they mentioned changes in the social and

ambient environment of the dining room, including the introduction of music. They believed that these enhancements made the dining experience more pleasant and encouraged residents to eat. Overall, they highlighted the significance of both the physical and social environments in promoting nourishment and hydration in the care home.

In **Care Home SY10**, there were plans to make environmental changes in the dining areas, although these plans were still in the developmental stage. The chef recently purchased new feeder bowls with sloped sides for residents. The RM had considered using plate clips that attach to standard plates but found them to be aesthetically unpleasing and lacking in dignity, especially when used in front of others. Regarding colored plates and glasses, the chef mentioned that they had recently introduced the use of blue plates. This suggests an awareness of the potential benefits of using colored tableware to enhance the dining experience, although the extent of their implementation and the impact on residents' nutritional intake and hydration was not detailed in the provided information.

Care Home Group OL1, in response to an online questionnaire, reported that they have implemented the use of colored melamine plate ware and red beakers and glasses in their facility. Notably, the blue plates were reserved for residents with dementia or those at a higher risk. This suggests a deliberate effort to use colored tableware as an intervention to improve the dining experience and potentially enhance nutritional intake and hydration for specific residents, particularly those with dementia.

The **analysis of the results regarding the care home environment** indicates a unanimous positive perspective among all respondents. They believe that environmental factors have a substantial impact on promoting improved nutritional intake and hydration for residents. These factors encompass various aspects, including the physical environment within the care homes, such as the design and layout, as well as the social and ambient atmosphere, which includes factors like seating arrangements and the visual aspects of tableware, glasses, and table covers. Overall, the respondents emphasise the significant rôle that the care home environment plays in encouraging residents to consume more food and fluids.

A brief precis of the discussion follows. It must be recognised the care home environment can have a significant impact on nutritional intake and hydration.

- **Coloured plates and glasses**: There is some evidence, previously discussed, that using colored plates and glasses can make food more appealing and encourage people to eat more.

- **Physical environment**: The physical environment of the dining room can also play a rôle in nutritional intake and hydration. For example, making the dining room more comfortable and inviting can encourage people to eat more. Additionally, providing a variety of food options can help to ensure that everyone finds something they enjoy eating.

- **Social and ambient environment**: The social and ambient environment of the dining room can also play a rôle in nutritional intake and hydration. For example, playing music or providing other forms of entertainment can help to create a more enjoyable dining experience. Additionally, making sure that residents feel comfortable and respected can help to encourage them to eat and drink more.

The care homes in this study have taken a variety of steps to improve the care home environment and promote nutritional intake and hydration. These steps include:

- Using coloured plates and glasses
- Making changes to the physical environment of the dining room
- Providing a variety of food options
- Playing music or providing other forms of entertainment
- Making sure that residents feel comfortable and respected.

It is important to note that the impact of these changes on residents' nutritional intake and hydration has not been fully evaluated. However, the care homes in this study are committed to creating a positive dining environment that encourages residents to eat and drink more.

Recommendations – Care Home Environment

Based on my analysis of the findings related to the care home environment and its impact on food and beverage services, here are some practical recommendations, as previously considered:

1. ***Implement Coloured Tableware:***
    - *Consider using coloured plates and glasses, such as blue, for residents, especially those with dementia or at higher risk. Coloured tableware can make food more visually appealing and potentially enhance the dining experience.*
2. ***Explore the Impact of Colour Choices:***
    - *Investigate the impact of different colours of tableware on residents' food consumption. While blue is commonly used, consider experimenting with other colours to assess their effectiveness.*

3. ***Create a Comfortable and Aesthetic Dining Environment:***
    - *Invest in the physical environment of the dining room, including aesthetics and comfort.*
    - *Replace basic furniture with more comfortable and visually appealing options to create a welcoming atmosphere.*
4. ***Personalised Dining Spaces:***
    - *Provide dining options that mimic a "home from home" environment, where residents can sit in chairs with tables in front of them.*
    - *Personalised dining spaces can enhance the comfort and dignity of residents during meals.*
5. ***Music Selection for Dining Rooms:***
    - *Experiment with different types of music in dining areas to gauge their impact on residents.*
    - *Consider using soothing sounds like birdsong or outdoor sounds during mealtimes to create a pleasant dining atmosphere.*
6. ***Regularly Assess and Adjust Music Choices:***
    - *Continuously assess the impact of music on residents' dining experiences.*
    - *Adjust the music selection based on feedback and observations to maximise its effectiveness.*
7. ***Enhance the Social and Ambient Environment:***
    - *Enhance the social and ambient environment of the dining room by incorporating entertainment options, such as music, into mealtime routines.*
    - *Ensure that residents feel comfortable and respected during dining.*
8. ***Consider the Use of Interactive Devices:***
    - *Explore the use of interactive devices like the "magic table" to engage residents during meals.*
    - *Such devices can contribute to a more enjoyable dining experience.*
9. ***Experiment with Sensory Rooms:***
    - *Consider incorporating sensory rooms into dining areas, particularly for residents with dementia. Sensory rooms can enhance accessibility and provide a calming atmosphere.*
10. ***Promote Dignified Dining:***
    - *Promote dignity in dining by avoiding communal feeding and encouraging smaller, more personal table arrangements.*
11. ***Assess the Impact of Changes:***
    - *Continuously assess the impact of environmental changes on residents' nutritional intake and hydration.*
    - *Collect feedback from residents and staff to evaluate the effectiveness of these interventions.*
12. ***Share Best Practices:***
    - *Share successful strategies and best practices related to the care home environment and its impact on nutrition and hydration among care home managers and staff.*

13. ***Provide Information and Training:***
    - *Educate staff about the potential benefits of environmental interventions on residents' dining experiences.*
    - *Ensure that staff are aware of and trained in implementing these changes effectively.*
14. ***Collaborate with Research Institutions:***
    - *Collaborate with research institutions to conduct studies on the impact of environmental changes on nutritional intake and hydration in care homes.*
    - *This can provide evidence-based insights.*
15. ***Regularly Update Tableware and Equipment:***
    - *Ensure that tableware and equipment are in good condition and regularly updated. Replace items that are showing signs of wear and tear to maintain a pleasant dining experience.*
16. ***Personalised Approaches:***
    - *Recognise that each care home and its residents may have unique preferences and needs. Tailor environmental changes and interventions accordingly.*
17. ***Continuous Improvement:***
    - *Maintain a culture of continuous improvement in the care home environment. Regularly assess and adapt strategies based on the evolving needs and preferences of residents.*

By implementing these recommendations, care homes can create a more appealing, comfortable, and dignified dining environment that encourages residents to consume more food and fluids, ultimately improving their nutritional intake and hydration.

Perceptions of Hospitality and Hospitableness

In the section respondents were asked about the importance of these concepts in delivering care and F&B services within care home environments, particularly in the context of resident-directed food services. The responses revealed that none of the respondents could clearly distinguish between the terms "hospitality" and "hospitableness." Though this was intended to address RSQ 6. Here are some key points from the feedback:

Definitions of Hospitality: Respondents associated hospitality with catering, domestic services, and hotel-like services. It was seen as related to the quality of meals, beverages, cleanliness, and overall service.

Hospitality vs. Hospitableness: Some respondents made a distinction by considering hospitality as related to the product (e.g., the quality of the meal), while hospitableness was seen as related to how welcoming and friendly the environment and staff were.

Application in Care Home: Respondents acknowledged the challenge of applying the principles of hospitality in a care home context. They aimed to provide high-quality services while also creating a welcoming and homely atmosphere. Balancing between a formal, hotel-like service and a more personal, resident-oriented approach was seen as being too difficult to achieve.

Resident Involvement: Respondents expressed a willingness to involve residents in determining food services. Some believed that certain residents would enjoy participating in decision-making, although not all residents might have the capacity to do so.

Family Involvement: While many care homes created resident food preferences documents, family involvement through Food Preference Questionnaires was less common. Some care homes relied on word-of-mouth input, potentially overlooking changes in residents' tastes and desires over time.

'All Day Grazing': There were discussions about implementing 'All Day Grazing' as an alternative to fixed meal times to maintain better nutritional intake. However, concerns were raised, including the costs associated with equipment, staffing, and food safety aspects related to leaving food out on buffets and at unsafe temperatures.

Overall, the responses highlighted the complexity of providing hospitality and hospitableness in care home settings, where a balance between high-quality service and creating a home-like atmosphere for residents is crucial.

Recommendations – Perceptions of Hospitality and Hospitableness

Based on my analysis of findings from the study on perceptions of hospitality and hospitableness in care home environments, here are some recommendations for improving the delivery of care and food & beverage services:

1. ***Clarify Terminology:***
   - *Develop a clear and shared understanding of the terms "hospitality" and "hospitableness" within the care home staff. This can be achieved through training and communication.*
2. ***Align Expectations:***
   - *Ensure that staff members understand the expectations associated with hospitality and hospitableness in care home services.*
   - *This includes emphasising the importance of both the quality of services and the welcoming, friendly atmosphere.*
3. ***Collaboration between Departments:***
   - *Foster collaboration between the kitchen, housekeeping, and caregiving teams to ensure a seamless integration of hospitality principles throughout the care home environment.*
   - *Regular interdisciplinary meetings can facilitate coordination and problem-solving.*
4. ***Resident-Centered Approach:***
   - *Emphasise the importance of a resident-centered approach. While providing high-quality services is essential, it should be done in a way that respects residents' preferences and choices.*
5. ***Resident and Family Involvement:***
   - *Actively involve residents in decision-making regarding food services where possible. Implement regular feedback sessions or surveys to gauge their preferences.*
   - *Encourage family involvement through Food Preference Questionnaires to capture changing tastes and dietary requirements over time.*
6. ***Celebrating Successes:***
   - *Recognise and celebrate instances where the principles of hospitality and hospitableness are successfully implemented.*
   - *Share success stories among staff to encourage a positive and collaborative atmosphere.*
7. ***'All Day Grazing' Consideration:***
   - *Explore the feasibility of implementing 'All Day Grazing' as an alternative to fixed meal times. Conduct a cost-benefit analysis to assess the financial implications, including equipment, staffing, and food safety measures.*
8. ***Staff Training:***
   - *Provide training to staff members on the principles of hospitality and hospitableness. Focus on interpersonal skills, communication, and creating a welcoming environment.*

9. ***Balance Formality and Homeliness:***
    - *Encourage staff to strike a balance between offering formal, hotel-like services and creating a more personal, homely atmosphere.*
    - *Recognise that each resident may have unique preferences in this regard.*
10. ***Continuous Improvement:***
    - *Implement a continuous improvement process for food and beverage services. Regularly review and adapt menus and service approaches based on resident feedback and changing demographics.*
11. ***Collaboration and Communication:***
    - *Foster open communication and collaboration among staff members from different departments, such as kitchen staff, care providers, and housekeeping, to ensure a cohesive approach to delivering hospitality and hospitableness.*
12. ***Quality Assurance:***
    - *Develop quality assurance measures to consistently monitor the quality of meals, beverages, cleanliness, and overall service.*
    - *Carry out regular audits, both internal and external, together with feedback loops which can help identify areas for improvement.*
13. ***Resource Allocation:***
    - *Allocate resources judiciously to support the delivery of high-quality care and food services.*
    - *Prioritise investments that directly impact resident satisfaction and well-being.*
14. ***Regulatory Compliance:***
    - *Ensure that any changes or innovations in food service, such as 'All Day Grazing,' comply with relevant health and safety regulations to maintain food safety standards.*
15. ***Education for Residents and Families:***
    - *Inform residents and their families about the care home's approach to hospitality and hospitableness.*
    - *Transparency can help manage expectations and promote a sense of partnership in care.*
16. ***Research and Innovation:***
    - *Encourage research and innovation in care home hospitality practices by collaborating with academic institutions and industry experts.*
    - *Stay updated with best practices in the field and consider adapting successful strategies to the specific care home context.*

Incorporating these recommendations can help care homes provide a more balanced and resident-centered approach to hospitality and hospitableness, improving the overall quality of care and food & beverage services within care home environments.

Catering Systems in Place

The discussions, analysis and recommendations presented here are in response to RSQ's 3, 5 and six.

Analysis of conversation with **Volunteer 2**: The reason for handling catering services in-house, rather than outsourcing to a third party, was rooted in the desire to involve residents in the care home, particularly those with dementia. Unlike other care homes with external contracts, this facility believed that engaging residents in cooking activities was essential for their dementia care, memory preservation, and independence. They didn't have hot cooking, but residents participated in making sandwiches, salads, and interacting with the cook while enjoying a cup of tea. This approach aimed to ensure that people with dementia were not excluded from kitchen life and remained connected to the culinary experience.

In **Care Home W01**, which is a charity-owned long-term care facility, catering services are outsourced to an external catering contract company. The catering system primarily follows a 'cook-hold-serve' approach and includes the use of pre-cooked ready meals that are reheated before serving. Distribution of meals to the dining areas is done through a traditional Ganymede style heated trolley system.

In **Care Home LN8**, the cook operates alone but is assisted by a part-time cook who covers her days off and holidays. The food preparation and service systems are quite rudimentary. The kitchen is small and has a service hatch facing an internal corridor. There are two food delivery methods:

Pre-Plating: The cook pre-plates food in the kitchen based on residents' choices. The plated dishes are covered with aluminium or polycarbonate cloches and placed in the service hatch. Carers then collect these plates and deliver them to residents who dine in their rooms or require extra assistance. For residents who cannot make their food choices, carers refer to the resident's file, which contains information provided by their families regarding preferred foods and drinks.

Multi-Portion Trays: The cook prepares multi-portion trays of the daily menu, which are then transported to the dining rooms. Carers portion the food onto plates according to residents' preferences. However, there is no heated servery, so the food, initially hot from the kitchen, is kept at room temperature during service.

The system is quite basic, and the equipment is outdated. The food production system follows a 'cook-hold-serve' approach, but there are significant delays between cooking, holding, and serving some dishes, potentially affecting food quality and safety. Additionally, the presentation of

the food is unappealing, with little effort made to make it visually attractive, especially when carers are responsible for plating.

At **Care Home LN11**, the style of food and drink service is characterized by the use of heated trolleys. Ideally, residents are given the choice of accompaniments with their meals, such as asking if they want peas with fish & chips or specific vegetables with a roast dinner, instead of simply providing a standard plate. During the site visit and discussions with the kitchen manager, it was observed that the primary food service system in place was 'cook-hold-serve.' Heated Ganymede-style trolleys are used to transport food to different dining areas. Residents were seen to be offered various options from these heated trolleys during the observed service times.

In **Care Home NOT3**, the catering system is a combination of different approaches: 'cook-serve,' 'cook-hold-serve,' and 'cook-chill/freeze-store-rethermalise-serve.' Chilled foods are labelled with 'use by' date stickers and stored in cold storage for a maximum of three days after preparation. Some dishes are also frozen, primarily for texture-modified meals. These frozen meals are pre-plated in an appealing manner, often resembling the original, non texturised dishes, using techniques like piping or quenelling. These meals are later defrosted, rethermalised, and served to residents directly from the kitchen under plate cloches.

To transport bulk food to various dining areas, Ganymede-style heated trolleys are employed. In these dining areas, carers plate the food for the residents, ensuring it is ready for consumption.

Both **Care Home SY4** and **Care Home SY10** use the widely adopted 'cook-hold-serve' system, and they rely on Ganymede style trolleys for meal service.

Care Home Group OL1 employs a hybrid catering system, combining elements of 'cook-hold-serve' and 'cook-chill (or freeze)-rethermalise-serve.' Additionally, they supplement their menu with ready-made meals purchased from a specialized supplier.

From the above discussion and **Analysis of Catering Systems Used,** the predominant catering systems primarily relies on the **Cook-Hold-Serve** approach, using heated trolleys to transport food from the kitchen to the serving areas. However, there are concerns regarding food temperature and how long it's held before serving. The analysis suggests some questionable practices in this regard. Additionally, there are newer catering systems available, but the individuals involved are not familiar with them. Unsurprisingly, the results of the analysis of catering systems in various care homes reveal diverse approaches to meal preparation and service, each with its own set of advantages and challenges, these are presented below:

Resident Involvement: The approach taken by **Volunteer 2**, involving residents in food-related activities despite not having hot cooking facilities, is commendable. Engaging residents, especially those with dementia, in tasks like making sandwiches and salads fosters a sense of purpose, contributes to their well-being, and helps preserve their memories and independence. This approach aligns with person-centered care.

Outsourcing vs. In-House: Care Home W01 outsources its catering services to an external company. While outsourcing can offer cost efficiencies and expertise, it may reduce the level of control over food quality and customization. It's notable that Care Home W01 prefers in-house services for the unique benefits it brings to residents.

Basic Food Preparation: Care Home LN8 operates with rudimentary food preparation and service systems. The use of pre-plate and multi-portion tray methods reflects simplicity but comes with challenges related to food temperature, presentation, and outdated equipment. These issues can impact the dining experience for residents.

Heated Trolleys: Care Home LN11 uses heated trolleys for food service, allowing residents to have some choice in accompaniments. The 'cook-hold-serve' approach ensures hot meals are ready for residents. However, the quality of service may depend on the functionality and maintenance of these trolleys.

Combination Approach: Care Home NOT3 employs a combination of food preparation approaches, including 'cook-serve,' 'cook-hold-serve,' and 'cook-chill/freeze-store-rethermalise-serve.' While this provides flexibility, it requires careful labelling, storage, and coordination to ensure food safety.

Texture-Modified Meals: Care Home NOT3's approach to texture-modified meals, including freezing and appealing presentation techniques, shows creativity in addressing residents' needs while maintaining visual appeal.

Ganymede-Style Trolleys: **Care Home SY4** and **Care Home SY10** rely on 'cook-hold-serve' with the use of Ganymede-style trolleys. This is a common method in many care homes, simplifying distribution and ensuring meals remain hot.

Hybrid System: Care Home Group OL1 combines 'cook-hold-serve' with 'cook-chill/freeze-rethermalise-serve' and supplements its menu with ready-made meals. This hybrid approach offers variety but may require efficient coordination and labelling.

This brief analysis highlights the significance of maintaining food safety standards, ensuring food is served at the correct temperature, and addressing presentation concerns. It also raises the question of whether care homes should explore newer catering systems that could enhance efficiency, quality, and customization. While cost considerations are essential, prioritising the well-being and dining experience of residents is equally important. Lastly, staff training and awareness about evolving catering approaches can contribute to better meal services in care homes.

Recommendations – Catering Systems in Place

Based on my analysis of the findings of catering systems in the care homes researched, here are some recommendations for improving meal preparation and service in care homes:

1. ***Prioritise Resident Involvement:***
   - *Encourage and expand resident involvement in meal-related activities, especially for those with dementia.*
   - *Activities like making sandwiches and salads can contribute to their well-being, memory preservation, and sense of independence. This should be done as an assembly exercise, using ready cut ingredients, avoiding the use of potentially dangerous equipment and utensils.*
   - *Consider allocating dedicated staff or volunteers for these activities.*
2. ***Evaluate Outsourcing vs. In-House Services:***
   - *Assess the benefits and drawbacks of outsourcing catering services versus handling them in-house. While outsourcing can offer cost efficiencies, consider the unique benefits in-house services bring to residents, such as customisation and control over food quality.*
3. ***Modernise Food Preparation:***
   - *Care Home LN8's rudimentary food preparation methods should be modernised. Invest in updated equipment to improve food temperature control, presentation, and overall dining experience for residents.*
4. ***Maintain Heated Trolleys:***
   - *Care Home LN11's use of heated trolleys is commendable, but their functionality and maintenance should be a priority. Ensure that trolleys are regularly checked and maintained to guarantee the consistent delivery of hot meals.*
5. ***Optimise Combination Approaches:***
   - *For care homes employing a combination of food preparation approaches like Care Home NOT3, focus on meticulous labelling, storage, and coordination to ensure food safety. Staff should be well-trained in these processes.*
6. ***Enhance Texture-Modified Meals:***
   - *Continue the creative approach of Care Home NOT3 in providing texture-modified meals.*
   - *Ensure that these meals not only meet residents' dietary needs but are also visually appealing.*
   - *Invest training time in presentation techniques including the use of moulds and piping or quenelling.*
7. ***Efficiently Use Ganymede-Style Trolleys:***
   - *For care homes using Ganymede-style trolleys like Care Home SY4 and Care Home SY10, focus on efficient distribution to ensure meals remain hot during service.*
   - *Regularly assess the functionality of these trolleys.*

8. ***Streamline Hybrid Systems:***
    - *For care homes with hybrid systems like Care Home Group OL1, emphasise efficient coordination between 'cook-hold-serve' and 'cook-chill/freeze-rethermalise-serve.'*
    - *Clearly label and track the use-by dates of chilled and frozen foods to maintain food safety standards.*
9. ***Consider Newer Catering Systems:***
    - *Explore the possibility of adopting newer catering systems that could enhance efficiency, food quality, and customisation.*
    - *While cost considerations are important, prioritise the well-being and dining experience of residents.*
10. ***Staff Training and Awareness:***
    - *Provide ongoing training and raise staff awareness about evolving catering approaches and best practices. Ensuring that staff are familiar with new techniques and technologies can lead to improved meal services.*
11. ***Regular Quality Assurance:***
    - *Implement a system of regular quality assurance checks to ensure that food is consistently served at the correct temperature and meets presentation standards.*
    - *Address any issues promptly.*
12. ***Resident Feedback:***
    - *Continuously gather feedback from residents and their families regarding meal preferences and satisfaction.*
    - *Use this feedback to make adjustments and improvements to the catering system.*

In conclusion, catering services in care homes should be designed and managed with a strong focus on resident well-being, food safety, and quality. By considering these recommendations and tailoring them to the specific needs of each care home, owners, managers and staff can create a more effective and resident-centered meal service system.

Menus, Culinary Innovation and Food Choices

This section directly addresses RSQ's 2, 5 and 6.

The task of menu planning in long term care homes is a complex process. The menu planner, whether that be the head chef or food service manager, needs to be aware of the several variables likely to be encountered, these could include the food philosophy of the care home management, the facilities available, the type of kitchen equipment available, the skills base of kitchen and service staff and, any budget constraints. Other, more complex, considerations, relate to the residents themselves. It is essential to check their backgrounds, culture, their culinary likes, and dislikes; any allergies or intolerances and pay particular attention to specific dietary and nutritional needs.

Only one respondent home employed dietitians, through their head office support operations. The other care home managers and caterers relied on infrequent contact with the LA dietitians and nutritionists. In all cases, there was little more than hearsay evidence that menu content had been reviewed for nutritional content. As discussed previously, the assessment of menus by a dietitian and nutritionist is a critical step in the menu development process. Though when that assessment does take place it is often just that, a means of extending life, rather than improving the quality of life. There is a case, however, for chefs and cooks to receive further training in nutritional aspects, to complement their skills in improving the residents' quality of life. Unfortunately, there is no legal requirement for the assessment of nutritional values to take place in the UK.

Of the many culinary innovations currently available, and under development, little knowledge of those innovations was demonstrated by the respondents. Sous-Vide (under vacuum) cooking was not practiced in any of the care homes. Although no longer seen as being a new innovation in commercial restaurant kitchens, the technique has been used in food production factories for many years. Many commercial restaurant operations have taken advantage of the technique, for more than 40 years to improve outputs. Some of the benefits of Sous-Vide cooking are:

- *The foods cooked by the Sous-Vide method retain more of the nutrients and vitamins, whilst maintaining a better flavour*
- *There is a reduced risk of contamination due to the pasteurising effect of a long cooking time at specific temperatures.*
- *Consistent results. It is virtually impossible to overcook the food.*
- *Cheaper cuts of meat can be utilised, making considerable recipe cost reductions.*

- *There is no need for expensive equipment. Sous-Vide machines have dropped in price over recent years.*
- *It is an energy efficient method.*
- *No specific knowledge, other than the usual chefs' culinary skills, are needed.*
- *Set and walk away – once placed in the water bath at a set temperature, the chef can leave it unattended to finish cooking whilst concentrating on other tasks.*

Hydrocolloids and various gelling and setting agents were not being utilised in the kitchens seen, other than the proprietary thickening agents discussed in Chapter 4. These so called "chemical additives" are actually developed from naturally occurring food compounds and are used in processes commonly attributed to "Molecular Gastronomy" or, more correctly, "Molecular Cuisine". In many cases, the use of thickening and setting agents in foods will be invaluable for Texture Modification of foods. Texture Modified foods are an essential element in feeding and ensuring adequate nutritious food and hydration for people living with dysphagia.

There are also recent moves to utilise Three-Dimensional (3D) printing of foods. Having personally experimented with 3D food printing (3DFP) over the past 4 years I did not have much success, other than with chocolate shapes. This was mostly due to the incompatibility of the 3D printer used and the interface with the university IT systems. Recent research (Lee et al. 2021) and (Pant et al. 2021), however, explored 3D printing of food foams and vegetables, stabilised with the use of hydrocolloids, to assist hydration for people with dysphagia. The results were, apparently, favourable. The premise being that foams allowed the food to stay in the mouth for enough time to provide hydration, whilst reducing the danger of choking.

As previously explained, Volunteer 1 and Volunteer 2 were not involved in this section.

At **Care Home W01**, the menus are created by the company's executive chef at the head office. The head chef at the facility had limited freedom to introduce occasional 'chef's specials' to accommodate residents' requests. When asked about innovation, the chef expressed that there weren't many opportunities for it. They attended some company workshops and Nestlé courses for using thickening powders for residents with dysphagia but didn't find them particularly special.

Regarding menu engineering techniques to track popular dishes, the chef appeared unfamiliar with the concept.

For residents with dysphagia who needed texture-modified meals due to swallowing difficulties, no special meals were prepared. Instead, the chef blended selections from the daily menu and sent them to dining room pantries in thermos jugs for carers to plate and serve. Unfortunately, the carers did not try to present these modified foods attractively.

At **Care Home LN8**, the menu changes are influenced by resident preferences. The cook occasionally swaps or changes dishes that residents seem to be getting tired of or disliking. They strive to introduce variety based on feedback and periodically ask residents if there are specific dishes they'd like.

While the home has several non-British residents, their families often bring in food from their cultural background, as these residents tend to prefer it over British food. The cook mentioned that tastes can change over time.

The cook admitted to having no knowledge of modern culinary techniques or ingredients and is not using any of them. The menus at the home follow a three-week cycle with some basic dishes, including items like Spam Fritters and Hot Dogs. The cook primarily procures food from local supermarkets, considering it cost-effective. Only bulk purchases come from large wholesale deliveries and local cash and carries.

The cook is not familiar with menu engineering techniques for tracking popular menu items. They are also unaware of the IDDSI launch, and texture-modified foods are prepared on the day based on the regular menu, with neither the cook nor the RM having knowledge of forthcoming changes in texture-modified food standards.

At **Care Home LN11,** the menus follow a four-week cycle, designed by the Kitchen Manager. The main meal of the day is lunch, consisting of soup, a choice of hot main course, and a dessert, with a very traditional menu selection. The last meal of the day is “Tea”, offering choices like soup, sandwiches, a hot light dish, and cake. Snacks are available throughout the day, and residents can have an evening drink and biscuit if desired.

When asked how often they change the menus, the Kitchen Manager stated it's an ongoing process. They adjust based on feedback and if they notice certain items aren't popular. However, they are not familiar with menu engineering techniques for tracking popular menu items or assisting in future menu planning.

At **Care Home NOT3**, the Head Chef provided insight into their menu system. They have a daily specials menu for lunch and tea, alongside the main menu, and residents are informed about the alternate choices available on each floor. The meals on this specials menu are generally not cooked to order but are based on what's available to avoid waste. Residents have the option of sandwiches or jacket potatoes as an alternative.

Although the menu is traditional, it is well-balanced in terms of color and texture. However, no nutritional analysis is conducted, and menu engineering techniques are neither used nor familiar to the staff. On the positive side, there is an effective system in place for managing special dietary needs and residents with dysphagia. The chef receives patient data from the administration office, which helps create daily and weekly lists of required diets for each dining area, ensuring correct foods are sent to the right places. Unfortunately, there was a case where incorrect information led to a tragic incident, emphasizing the need for better communication.

The chef and the team make efforts to present texture-modified foods using traditional techniques like piping and molding, following the NPSA system as recommended by their community dietitian. However, they were not aware of the new IDDSI Framework. Proprietary thickening agents are used, and the chef is unaware of generic hydrocolloids and their cost-saving potential while maintaining food production, service, and safety standards.

At **Care Home SY4,** menus were not available during the visit as they were being updated. Nevertheless, the observed food appeared to be of good quality with a diverse selection. The facility needed texture-modified foods, which were primarily purchased pre-prepared from a major frozen food company. These pre-prepared items were defrosted and rethermalised when needed, resulting in a high standard of presentation as they were created in food-grade silicone molds to closely resemble their original forms.

The new chef at the home was not aware of the new IDDSI Framework and relied on suppliers to provide appropriate pureed meals. He had no plans to create his own as both he and the residents were satisfied with the products used. Consequently, he was unfamiliar with various hydrocolloids and had no intentions of experimenting with them or seeking alternative culinary innovations.

Care Home SY10, which had previously received a "Requires Improvement" rating, was working on enhancing food quality through new menus. They had shifted from the previous practice of preparing all meals in-house to using bulk, frozen, ready meals from various frozen food wholesalers. The focus was mainly on the main course protein dishes, while salads, vegetables, and accompaniments were still prepared or cooked in-house, with a preference for fresh ingredients over frozen ones (except for chips). There were plans to resume full in-house food production in the future. Texture-modified ready meals were also part of their menu offerings. However, there was no sign of culinary innovation in terms of techniques or products. The concept of menu engineering was unfamiliar and not employed at this care home.

Care Home Group OL1 operates on a four-week menu cycle with seasonal variations, considering market availability. While most menus are developed by head office, the Head Chef has the flexibility to utilise local supplier offers. The menu offerings include a wide range of breakfast options, both hot and cold. Lunch is the main meal, offering three choices each for starters, main courses, and desserts. Tea time consists of sandwiches, scones, cakes, and biscuits, and residents do not need to pre-order their food.

Temperature-stable foods are accessible 24/7 on service sideboards in the main dining area, and carers can access both cold and hot drinks from their serveries. The care home also provides special meal themes throughout the year, such as for sports events, festivals, and visiting entertainment.

Texture-modified meals are mainly purchased from a frozen food supplier. However, the chef is not aware of the new IDDSI Framework and is unfamiliar with the use of thickening gels and hydrocolloids used by manufacturers. While interested in learning more, the chef has limited time for culinary innovation and creativity.

The above discussion **of menus, culinary innovation**, **and food choices** revealed a lack of surprises in the responses from chefs and cooks. Many of them were set in their traditional ways and did not see the need for culinary innovation or experimentation. The menus in these care facilities were considered as unadventurous and lacking diversity, despite changing demographics among residents. There appeared to be minimal effort to provide a more eclectic range of menu options for new and future residents. Additionally, none of the chefs were familiar with Menu Engineering techniques, which are valuable tools for effective menu planning, but they were not being utilized in these care homes. Overall, the results regarding **menus, culinary innovation, and food choices** in various care homes suggest a consistent pattern of traditional and unadventurous culinary practices. Here's a summary of the key points:

Care Home W01: The menus are primarily created by the company's executive chef at the head office. The head chef at the facility has limited freedom to introduce occasional 'chef's specials'. There is little emphasis on culinary innovation, and the chef is not familiar with menu engineering techniques. Texture-modified meals for residents with dysphagia are not specially prepared.

Care Home LN8: Menu changes are influenced by resident preferences, but there is limited diversity in the menu offerings. While the home has non-British residents, they often bring their

own food due to their preferences. The cook lacks knowledge of modern culinary techniques and ingredients, and menu engineering techniques are unfamiliar.

Care Home LN11: The menus follow a four-week cycle and are adjusted based on feedback. The Kitchen Manager is not familiar with menu engineering techniques for tracking popular dishes.

Care Home NOT3: The menu is traditional, well-balanced, but lacks nutritional analysis. Menu engineering techniques are not in use. There is an effective system for managing special dietary needs, but a tragic incident highlights the need for better communication. Texture-modified foods are prepared using traditional techniques.

Care Home SY4: Menus were not available during the visit but appeared to offer good quality and diversity. Texture-modified foods are purchased pre-prepared and presented attractively. The chef is not aware of the new IDDSI Framework.

Care Home SY10: The care home is transitioning from in-house food preparation to using bulk, frozen, ready meals. There is a lack of culinary innovation and no use of menu engineering techniques.

Care Home OL1: Menus operate on a four-week cycle with seasonal variations. The Head Chef lacks knowledge of modern culinary techniques and ingredients. Menu engineering techniques are not used, and there is minimal time for culinary innovation.

The overall pattern across these care homes is a resistance to culinary innovation, limited knowledge of menu engineering techniques, and a lack of diversity in menu offerings. This may not align with the changing demographic of residents, suggesting a potential need for more eclectic and diverse menu options in the future. Additionally, the lack of familiarity with the IDDSI Framework in some care homes raises concerns about providing appropriate texture-modified foods for residents with dysphagia.

Recommendations – Menus, Culinary Innovations and Food Choices

Based on the findings from the various care homes, and my analysis, here are some recommendations to improve menus, culinary innovation, and food choices in these facilities:

1. Encourage Culinary Innovation:

- *Provide training and workshops on modern culinary techniques and ingredients for chefs and cooks to inspire creativity in menu planning.*
- *Encourage chefs to experiment with new recipes and flavours to diversify menu options and cater to changing resident preferences.*

- *It is recommended that care home chefs and food service staff study the use of Three-Dimensional Food Printing (3DFP), the various hydrocolloids, and how they can be employed in food texture modification in compliance with the IDDSI framework.*

2. Embrace Menu Engineering:

- *Educate staff about menu engineering techniques to track popular dishes and optimise menu planning based on data-driven insights.*
- *Implement menu engineering strategies to identify and promote high-margin and well-received dishes.*

3. Address Dietary Needs:

- *Ensure that chefs and cooks are aware of the IDDSI Framework for texture-modified foods and provide training on its implementation.*
- *Create a system for regular updates and communication about changes in dietary standards to prevent errors in meal preparation.*

4. Resident-Centered Menus:

- *Involve residents in menu planning by seeking feedback and preferences regularly.*
- *Consider cultural diversity among residents and provide options that cater to various cultural backgrounds.*

5. Nutritional Analysis:

- *Conduct regular nutritional analysis of menu items to ensure that residents receive well-balanced and healthy meals.*
- *There are several web based nutritional analysis tools available, for example Nutritics, Foodzilla and NutriAdmin.*
- *Share nutritional information with residents to promote informed food choices.*

6. Supplier Collaboration:

- *Collaborate with local suppliers to access fresh, seasonal ingredients and take advantage of special offers.*
- *Explore partnerships with suppliers who offer pre-prepared texture-modified foods that align with the IDDSI Framework.*

7. Presentation Matters:

- *Train staff, including carers, on the importance of presenting texture-modified foods attractively to enhance the dining experience for residents with dysphagia.*
- *Incorporate creative presentation techniques to make meals visually appealing.*

8. Flexibility in Menus:

- *Move away from rigid menu cycles to allow for more flexibility in menu changes based on resident feedback and preferences.*
- *Introduce occasional 'chef's specials' or theme-based menus to create excitement and variety.*

9. Prioritise Communication:

- *Improve communication between administrative offices, kitchen staff, and caregivers to prevent incidents related to dietary needs.*
- *Establish clear channels for sharing resident dietary information accurately and promptly.*

10. Stay Informed:

- *Encourage chefs and cooks to stay updated on industry standards, including dietary guidelines, culinary trends, and innovations.*
- *Allocate time for staff to learn about new cooking techniques and ingredients.*

11. Emphasise Culinary Creativity:

- *Create an environment that fosters culinary creativity and encourages staff to take pride in their work.*
- *Recognise and reward staff for innovative menu ideas and successful culinary experiments.*

12. Diversify Menu Offerings:

- *Reflect the changing demographics of residents by diversifying menu options to cater to various tastes and dietary requirements.*
- *Consider offering international cuisines to appeal to a broader range of palates.*

Implementing these recommendations can lead to improved food quality, resident satisfaction, and a more dynamic and responsive approach to menu planning in care homes. It will ensure that the dining experience is not only nutritionally sound but also enjoyable and culturally sensitive.

Food Costs & Labour Costs

With regard to food and labour costs, it was shown in Chapter 4 that few catering staff actually knew their food or labour costs. The purpose of this section is to analyse RSQ's 1 and 3. Within any organisation, whether commercial or not-for-profit there is a continuous imperative to monitor and control costs. As part of education and training Head Chefs and Catering Managers should be offered additional training on how to monitor and control their costs.

Whilst some food costs have risen in recent years, due partly to the Brexit effect, it is still reasonable to be able to provide a minimum of three meals a day, plus hot and cold beverages for around £4.50 to £5.50 per resident (my own calculated F&B Costs September 2021). However, not all care homes will have the same needs, which will influence final costs. It is essential to minutely examine every cost associated with catering services. There are invariably sliver-thin margins in running a care home, catering services within the care homes are no exception. Rimmington, et al, (2006), analysed food purchasing strategies within the UK public sector and found little appetite from the *Big Four* UK catering companies to abide by the UK Public Sector Food Procurement Initiative, in which nine draft principles of sustainable food procurement were developed. Only five of those principles were adopted, with the procurement agenda unfulfilled.

Food costs and labour costs are two of the biggest expenses for care homes.

- Food costs: The food budget for care homes varies depending on the size of the home, the number of residents, and the type of food that is served. However, food costs typically account for about 30% of the total budget for care homes.
- Labour costs: Labour costs are the second biggest expense for care homes, after food costs. Labour costs include the salaries and wages of care staff, chefs, and other kitchen staff. Labour costs typically account for about 25% of the total budget for care homes.

The care homes in this study were offering minimum pay rates to their care staff and the going market rates for chefs and other trained staff in their areas. It proved impossible to get more detail about labour costs.

Volunteer 1 believes that chefs in the NHS may not know their daily food costs. He based this on his experience of working on a project where they asked chefs about their menu and the costs, and the chefs did not know what they were looking at.

This suggests that there may be a lack of business acumen required of chefs and cooks within the NHS. Volunteer 1 also comments that care home chefs are probably more aware of their

food costs than those in the NHS hospitals. This raises the question of whether or not enough training is included in the curriculum of UK college catering courses for chefs to understand business matters, food costing, etc.

Care Home W01 has a daily food cost budget of £7.00 per person per day, which is significantly higher than other care homes in the survey. The catering contractor charges the care home owners a fixed management fee and re-charges the food costs to the care home charity. This is a common occurrence in contract catering, where contractors charge a fixed fee for managing the operation and gain further income from bulk discounts obtained directly from the suppliers, rather than pass on the potential savings to their clients. This may explain the significantly higher food costs at Care Home W01. No information was available with regard to labour costs.

The interview with the RM and cook of **Care Home LN8** revealed the following key points:

- The RM is responsible for food and beverage costs, but the ultimate decision lies with the directors.
- The cook is responsible for the day-to-day preparation and cooking of food.
- The home has a set budget of £300 per week for food and beverage costs. This budget works out to £2.25 per day per resident.
- The cook tries to stick to the budget, but sometimes it is difficult. The menu is carbohydrate heavy, with main course choices such as Spam Fritters, Pizza, Chicken Drummers, and Corned Beef Hash.
- The carers who are responsible for serving food and drink are predominantly on minimum hourly rates with some on zero hours contracts. The cook and RM did not reveal their salaries.

The interview also revealed that the RM and cook have different perspectives on the food budget. The RM believes that the budget is sufficient, while the cook believes that it is too tight. This discrepancy may be due to the different rôles that they play in the home. The RM is responsible for ensuring that the home stays within its budget, while the cook is responsible for making sure that the residents have enough food to eat. The interview also highlighted the challenges that care homes face in providing nutritious and affordable meals to their residents. The care home in this case study has a limited budget for F&B costs, which makes it difficult to provide a variety of meals that meet the dietary needs of all residents. Additionally, the home relies on a high number of low-paid carers to serve food and drink, which may impact the quality of service that residents receive.

The daily food cost budget at **Care Home LN11**, as reported by the RM, was £2.15 per resident per day, excluding beverages. The menus provided a traditional and varied selection over a four-week cycle but lacked exciting or unique food options. The reported food costs appeared reasonable. There was no information available regarding labour costs.

Care Home NOT3 had an unusually high reported F&B cost budget of £5.50 per resident per day, which included all drinks, including wines. The previous week's reported F&B costs were £5.11 per resident, but it wasn't specified how much of this was allocated to food and how much to drinks. All staff, including care staff, were allowed to eat what was available, and care staff were expected to dine with the residents. Because there was no separate budget for staff food, the true F&B cost per resident was likely lower than £5.11, but it couldn't be accurately determined due to the lack of financial data. Additionally, there was no information available regarding labour costs.

At **Care Home SY4**, there wasn't a set budget for food, and residents could have what they desired. Efforts were being made to improve food quality, which was a top priority for the RM. Initial estimates for food costs were around £2.75 per resident per day. Another concern for the RM was portion control, as portions were currently considered too large even by relatives. They were working on implementing portion control but were initially focused on providing a variety of meal choices, which had been lacking. No information was available regarding labour costs.

At **Care Home SY10**, the reported food cost averaged £2.40 per resident per day, which included standard beverages. There were ongoing efforts to improve the quality of food, suggesting that the food costs may increase in the future.

Among the care homes reviewed, except for **NOT3** and **WO1**, **Care Home OL1** had the highest reported food cost at £2.75 per resident per day.

To summarise the above discussion, food costs typically account for about 30% of the total budget, while labour costs account for about 25%. There is concern about chefs' understanding of food costs, suggesting a potential lack of business acumen in this area.

Care Home W01 stands out with a daily food cost budget of £7.00 per person, attributed to a catering contractor's management fee structure.

Care Home LN8 has a budget of £2.25 per day per resident for food and beverages, with differing perspectives between the RM and cook on its sufficiency. The care home struggles to provide nutritious meals due to limited funds and reliance on low-paid carers.

Care Home LN11 has a daily food cost budget of £2.15 per resident, offering traditional but not particularly exciting menu options.

Care Home NOT3 reports an unusually high F&B cost budget of £5.50 per resident per day, including drinks. Labour costs remain unspecified.

Care Home SY4 does not have a set food budget and is working on improving food quality and portion control.

Care Home SY10 reports an average food cost of £2.40 per resident per day, including standard beverages.

Except for two outliers, **NOT3** and **WO1**, **Care Home OL1** has the highest reported food cost at £2.75 per resident per day.

Care home managers should be reviewing their purchasing habits, procedures, and supplier relations on a regular basis. Although this could be viewed as a considerable use of valuable time, it is essential to keep on top of this. There should also be a review of how the food and drink is produced and served for resident consumption. There may be a case for full supply consolidation, using just one supplier. Most of the smaller care homes were using smaller, local, suppliers, complemented by national group suppliers. Whilst I am in favour of locally sourced food, prepared in-house by highly skilled chefs, I recognise that this method may not be appropriate in all cases. With severe labour shortages in some parts of the country, a supply solution may be to opt for what are commonly called "**Delivered Meal Solutions**" (DMS). A significant drawback to this route is the additional, associated, costs of the prepared foods. A major benefit is the reduction in staff time and costs and administration. The ready-made, frozen foods, require little skill to re-thermalise, again, contributing to cost savings. A further drawback is the perceived quality of the dishes, which in some cases may be poor.

It is recognised that many care homes will totally sub-contract catering provision to specialist catering and housekeeping companies. This works well for many care home organisations but those catering companies themselves face many of the problems outlined above.

Recommendations – Food and Labour Costs

Based on analysis of the findings related to food costs and labour costs in care homes, here are some recommendations:

1. ***Budgeting and Cost Control:***
   - *Implement a clear and realistic budget for food costs. It's essential to strike a balance between providing nutritious meals and managing expenses effectively.*

- *Regularly review and adjust the budget as needed based on factors like the number of residents, dietary requirements, and market fluctuations.*

2. ***Menu Planning:***
   - *Diversify menus to meet the dietary needs and preferences of residents. Consider introducing more nutritious and appealing meal options.*
   - *Encourage menu planning that optimises the use of ingredients to reduce waste and lower food costs.*
3. ***Training and Education:***
   - *Provide training for chefs and kitchen managers on food costing and financial management. Professional chefs need a full understanding of budgetary controls.*
   - *This should include understanding ingredient costs, portion control, and budget adherence. There are many software packages available to assist with this.*
   - *Collaborate with educational institutions to ensure that culinary programs include coursework on business acumen and cost management.*
4. ***Labour Costs:***
   - *Collect and analyse labour cost data to better understand this significant expense. Ensure that staff are paid fairly and in line with industry standards.*
   - *Explore opportunities to improve efficiency in kitchen operations to potentially reduce labour costs without compromising quality.*
5. ***Contract Catering:***
   - *When using catering contractors, carefully review their fee structures and contracts to ensure transparency and fair pricing.*
   - *Negotiate contracts that pass on cost savings to your care home.*
6. ***Communication and Collaboration:***
   - *Foster open communication between the RM and the chef regarding the food budget. Both perspectives are valuable for finding a balance between budget constraints and resident satisfaction.*
   - *Involve all relevant staff members, including carers, in discussions about meal quality and portion control. Their feedback can be valuable in improving food services.*
7. ***Portion Control:***
   - *Implement portion control measures to reduce food waste and maintain cost-effective meal service. This can also help address concerns about over-large portions.*
8. ***Quality Improvement:***
   - *Prioritise ongoing efforts to improve the quality of food. While cost control is important, residents' health and satisfaction should remain a top priority.*
9. ***Transparency and Reporting:***
   - *Maintain clear records of food and labour costs to track performance over time.*
   - *Transparency in financial reporting can help identify areas for improvement.*
10. ***Benchmarking:***
    - *Compare your care home's food and labour costs to industry benchmarks and best practices. This information can be found in the various databases such as Mintel. These can provide insights into areas that may need improvement.*
11. ***Staff Well-being:***
    - *Consider the well-being of your kitchen and care staff.*
    - *Low wages and precarious contracts can lead to high turnover and impact the quality of care and food service.*
    - *Strive to provide fair compensation and job security.*

12. Resident Choice:

- *While budget constraints are a concern, continue to allow residents some choice in their meals when possible. This promotes individualised care and satisfaction.*

13. Sustainability:

- *Explore sustainable sourcing options for food ingredients, which can often lead to cost savings in the long run.*

Remember that each care home's situation may be unique, so adapt these recommendations to fit the specific needs and circumstances of your facility. Regularly assess your progress and adjust strategies accordingly to ensure that food and labour costs remain manageable while delivering high-quality care and meals to residents.

Finally, in this section, I take a look at the potential fuel and energy savings available and reductions in food waste. The catering services are a significant part of care home and hospital procurement. With the current need for “green” and “sustainable” purchasing, an emphasis needs to be placed on buying activities and seeking provenance (Smith et al. 2016) and (Sonnino & McWilliam. 2011). The main cost in many food products is the fuel and energy used in production (Rivier et al. 2018), yet this is often overlooked in costing food recipes and is usually subsumed into general operational costs.

Food waste is often overlooked, though most chefs do try to minimise this. Sonnino & McWilliam (2011) studied catering practices in three hospitals in Wales to determine to what extent sustainability and provenance policies and practices were carried out in-house. Their analysis revealed a much higher level of food waste than anticipated with a significant discrepancy between their results, between 30% and 37%, and the figures given by the University Health Board of Wales, between 7% and 12%. These discrepancies were attributed to a lack of training for food production and service staff.

In view of the above it is recommended that all care home catering and service staff are offered food waste and energy reduction training as part of their ongoing CPD.

Equipment needs.

This section considers RSQ's 3, 5 and 6. None of the surveyed care homes were utilising what is considered to be modern kitchen cooking equipment, relying solely on traditional gas and electric stoves and ovens. Only one care home had a steam convection oven, and just one had a blast chiller/freezer. Surprisingly, when asked about their familiarity with different types of kitchen equipment, the chefs displayed a significant lack of knowledge. Figures 4.10 and 4.11 illustrated a typical response regarding the equipment currently in use and their awareness of other available equipment in the market.

Many care homes encounter financial challenges, which limits their ability to invest in new equipment. However, considering the average life span of seven to ten years for medium-duty kitchen equipment and applying a basic straight-line depreciation policy, most care homes, except for the newest ones, should consider replacing aging equipment. Doing so can potentially lead to labour and energy savings in the long run.

Recommendations – Equipment Needs

Based on analysis of the findings related to equipment needs in care homes, it is evident that there is a significant gap in the utilisation of modern kitchen equipment and knowledge about available options. Here are some recommendations based on these findings:

1. ***Assessment of Current Equipment:***
    - *Conduct a comprehensive assessment of the existing kitchen equipment. Identify the age, condition, and functionality of each appliance.*
2. ***Education and Training:***
    - *Provide training and education programs for kitchen staff and chefs to enhance their knowledge of modern kitchen equipment.*
    - *This will enable them to make informed decisions regarding equipment upgrades.*
3. ***Prioritise Essential Upgrades:***
    - *Prioritise the replacement or upgrade of essential kitchen equipment that has exceeded its average lifespan (seven to ten years).*
    - *Focus on items that can lead to significant labour and energy savings.*
4. ***Budget Planning:***
    - *Individual, privately owned care homes may need assistance in developing budget plans that allocate funds for equipment upgrades. Corporate owned care homes may be advised to seek assistance from hospitality and accountancy consultancies.*
    - *Explore potential sources of funding or grants that can support these investments.*

5. ***Energy-Efficient Equipment:***

- *Care home owners are encouraged to invest in energy-efficient kitchen equipment.*
- *While the initial cost may be higher, the long-term savings in energy consumption can offset these expenses.*

6. ***Financial Assistance Options:***

- *Explore partnerships with equipment suppliers or financing organisations that offer affordable leasing or financing options, making it easier for care homes to acquire modern equipment.*

7. ***Pooling Resources:***

- *Investigate the possibility of multiple care homes in the same region pooling their resources to purchase and share expensive, specialised equipment like blast chillers or convection ovens in a central production area, similar to how the home delivery "Dark Kitchens" operate.*

8. ***Regular Maintenance:***

- *Emphasise the importance of regular maintenance and servicing of kitchen equipment to prolong its lifespan and maintain optimal functionality.*

9. ***Market Research:***

- *Conduct market research to identify equipment that best suits the specific needs of each care home.*
- *Tailor equipment purchases to the type and scale of food preparation required.*

10. ***Long-Term Cost Analysis:***

- *If expertise is not available in-house, seek consultancy help to understand the long-term cost benefits of investing in modern kitchen equipment. These upgrades can lead to labour and energy savings over time.*

11. ***Regulatory Compliance:***

- *Ensure that all equipment purchases and upgrades comply with relevant health and safety regulations and food preparation standards.*

12. ***Monitoring and Evaluation:***

- *Establish a system for monitoring and evaluating the impact of equipment upgrades on operational efficiency, food quality, and cost savings.*
- *Use this data to make informed decisions about future investments.*

13. ***Promote Sustainability:***

- *Consider sustainability in equipment choices. Opt for appliances that are environmentally friendly and have minimal ecological impact.*

14. Continuous Improvement:

- *Encourage care homes to view equipment upgrades as part of a continuous improvement process in their kitchens, aiming for efficiency and quality in food preparation.*

By implementing these recommendations, care homes can address their equipment needs, improve the quality of their kitchen operations, and potentially realise cost savings in the long run.

Sources of funding

This section aimed to identify the sources of funding for care home residents, such as private, charity, or local authority funding, and whether this had any impact on the quality of food and beverage (F&B) services, in relation to RSQ 5. In England, care home funding is a complex subject. Residents and their relatives typically undergo a financial assessment to determine the amount they can contribute to care home fees. If a potential resident has less than £23,250 in investments or savings (2021 figure), they may be eligible for financial assistance. Usually, the value of the resident's own home is not included in this assessment.

When a local authority pays for a care home, and the home charges more than the local authority's standard costs, a Top-Up Fee may be required. This fee can be paid by the resident or a third party, such as a relative. Some local authorities offer a deferred payment option, where the cost is set against the value of the resident's home and must be repaid at a later date. This repayment is not forgiven, and it may become due upon the resident's death. Many people opt for deferred payments to provide flexibility when selling their homes at a more convenient time (Sheffield City Council, 2021).

In **Care Home W01**, all residents were funded by the charity that operated the home. Surprisingly, this funding arrangement did not negatively affect the quality of food services. In fact, the charity had outsourced catering services to an international catering and food service company, investing a substantial amount in food costs, which likely contributed to maintaining high-quality food services.

At **Care Home LN8,** the source of funding was divided, with around 60% of residents funded by the local authority and 40% self-funded. However, this funding split did not affect the quality of F&B services, as the food quality and service remained consistent for all residents, regardless of their funding source.

At **Care Home LN11**, the source of funding was predominantly private, with a few residents receiving local authority top-up fees due to additional costs charged by the home. Despite this funding mix, the quality of food remained consistent for all residents. Notably, one resident, a retired high court judge with a preference for high-quality foods like calves' liver and game, received special attention from the RM. The RM made regular trips to a nearby Waitrose supermarket to purchase these specific items, as their local butcher couldn't supply them. Overall, it was evident that food costs were not influenced by the source of funding, and all residents were offered the same menus.

During the visit to **Care Home NOT3**, all residents were privately funded. Despite this, or because of this, the care home provided a high-quality dining experience, and the reported food costs were well-covered by the fees paid by the residents.

Care Home SY3 received funding directly from its residents, and in some cases, residents received top-up loans from the local authority to cover their costs.

Care Home SY10 received funding for all its residents directly from the local authority.

At **Care Home OL1**, the primary source of funding was reported as private, although some residents received top-up loans to support their care expenses.

The section on sources of funding for care home residents reveals a complex landscape in England. The funding for residents depends on various factors, including their financial situation and whether they are funded privately, by a charity, or through the local authority.

Financial assessments are conducted to determine how much a resident can contribute to their care home fees. If a resident's investments or savings fall below £23,250, they may be eligible for financial assistance. Importantly, the value of the resident's own home is typically not included in this assessment.

When a local authority pays for a care home placement, and the home charges more than the standard costs covered by the local authority, a Top-Up Fee may be required. This additional fee can be paid by the resident or a third party, such as a relative. Some local authorities offer a deferred payment option, allowing residents to use the value of their home to cover care costs, with repayment becoming due later, often upon the resident's death.

Interestingly, the source of funding did not seem to significantly impact the quality of F&B services in the care homes studied. For instance, in Care Home W01, where all residents were funded by a charity, the quality of food services remained high, possibly because the charity had outsourced catering to a professional company. Similarly, in Care Home NOT3, where all residents were privately funded, the care home still provided a high-quality dining experience.

Overall, the findings suggest that while funding mechanisms are complex and diverse, they do not necessarily correlate with the quality of F&B services in care homes, as demonstrated by the consistent food quality observed across different funding sources in the various care homes examined.

Recommendations – Sources of funding

Based on analysis of the findings regarding the sources of funding for care home residents and their impact on the quality of food and beverage (F&B) services, here are some key recommendations:

1. ***Transparent Financial Assessments:***
   - *Care homes should ensure that financial assessments for residents are transparent and consider their investments, savings, and property value, in accordance with government guidelines.*
   - *Residents and their families should be well-informed about how these assessments are conducted.*
2. ***Top-Up Fee Clarity:***
   - *When a Top-Up Fee is required, care homes should clearly communicate this to residents and their families. It's important to provide information on who is responsible for covering the fee and whether deferred payment options are available.*
   - *Transparency can prevent confusion and financial stress for residents and their families.*
3. ***Quality Outsourcing:***
   - *Care homes should consider outsourcing F&B services to professional catering and food service companies when feasible.*
   - *This can help maintain or even improve the quality of food services, regardless of the residents' funding source.*
   - *Care should be taken, however, to ensure a quality-oriented company is contracted, and at favourable rates.*
   - *Outsourced caterers do not offer the same flexibility as in-house catering services.*
   - *The example of Care Home W01 demonstrates how outsourcing can be beneficial.*
4. ***Consistency Across Funding Sources:***
   - *Care homes should prioritise consistency in food quality and service regardless of the funding source.*
   - *The findings show that the quality of F&B services remained consistent in care homes with diverse funding arrangements, such as Care Home LN8, LN11, and NOT3.*
5. ***Tailored Services:***
   - *Care home owners and managers should recognise that some residents may have specific dietary preferences or requirements.*
   - *As seen in the case of Care Home LN11, providing personalised attention to residents with unique preferences can enhance their dining experience.*
   - *Care homes should aim to accommodate such preferences when possible.*
6. ***Private Funding Opportunities:***
   - *Care homes should explore opportunities to attract privately funded residents, as seen in Care Home NOT3. Privately funded residents can help cover food costs, potentially allowing for higher-quality dining experiences for all residents.*

7. ***Collaboration with Local Authorities:***

    - *When care homes receive funding from local authorities, maintaining a positive relationship with these authorities is crucial. Open communication and collaboration can lead to smoother funding arrangements and better support for residents.*

8. ***Financial Assistance Guidance:***

    - *Care homes should offer guidance to residents and their families on how to apply for financial assistance if they qualify based on their financial situation. This can help residents access the necessary support to cover care home fees.*

9. ***Regular Evaluation:***

    - *Continuously evaluate the quality of F&B services and their relationship to funding sources. This ongoing assessment can help care homes make necessary adjustments and improvements to ensure high-quality dining experiences for residents.*

10. ***Resident-Centered Care:***

    - *Always prioritise the well-being and preferences of the residents.*
    - *Regardless of funding sources, care homes should maintain a resident-centered approach to provide the best possible dining experience.*

In conclusion, while funding for care home residents in England is complex and diverse, it should not be a barrier to providing high-quality F&B services. Care homes can navigate these complexities by adopting transparent practices, outsourcing when appropriate, and prioritising consistency and resident-centered care. Analysis: The source of funding did not play a significant rôle in the type and quality of food offered to the residents.

Nutritional / Dietetic related

I open this section with a brief recognition of the differing nutritional needs of people living with dementia. These can be different from those without dementia due to various factors related to the condition. As previously discussed, dementia is a general term for a decline in cognitive function severe enough to interfere with daily life. Some of the factors that can influence the nutritional needs of individuals with dementia include:

Cognitive Impairment: People with dementia may have difficulty with memory, judgment, and decision-making. This can impact their ability to plan and prepare balanced meals, remember to eat, or recognise when they are hungry or full. Caregivers may need to provide more supervision and assistance with meal planning and preparation.

Changes in Taste and Smell: Dementia can affect a person's sense of taste and smell, which can lead to changes in food preferences. Some individuals may develop a preference for sweeter or more strongly flavoured foods, while others may lose interest in eating altogether.

Swallowing Difficulties: As dementia progresses, some individuals may experience difficulty swallowing (dysphagia), which can increase the risk of choking and aspiration pneumonia. Adjustments to the texture and consistency of foods and fluids may be necessary to ensure safe and adequate nutrition.

Weight Management: Weight loss is common in individuals with dementia, and in some cases, there may be unintentional weight gain. Caregivers and healthcare professionals need to monitor weight changes and adjust the diet accordingly to maintain a healthy weight.

Behavioral Issues: Behavioral and psychological symptoms of dementia, such as agitation, aggression, or wandering, can affect mealtime routines and make it challenging to ensure proper nutrition. Strategies to manage these behaviors during meals may be necessary.

Medication Interactions: Some medications prescribed for dementia can have side effects that affect appetite or digestion. It's important for healthcare providers to consider potential interactions between medications and nutrition.

Nutrient Needs: Nutritional needs can vary among individuals with dementia depending on their age, gender, overall health, and the specific type of dementia they have. However, maintaining a balanced diet that provides essential nutrients is crucial for overall health and well-being.

In summary, while the basic principles of nutrition apply to both individuals with and without dementia, managing the nutritional needs of people with dementia requires additional

considerations and adaptations. It is essential for healthcare professionals and the catering staff to work together to assess each person's unique situation, monitor their nutritional status, and make appropriate dietary adjustments to support their health and quality of life. Consulting with a registered dietitian or healthcare provider experienced in dementia care can be valuable in developing and implementing a personalised nutrition plan.

This section now explores the dynamics among care home staff, including chefs, RMs, nurses, doctors, nutritionists, and dietitians in the context of nutritional advice. The aim is to identify which expert is typically consulted for nutritional advice and what effect this may have in answering RSQ's 2, 5 and 6. Here are the key findings, analysis and discussion from the interviews and questionnaire responses:

Volunteer 1 emphasizes the critical rôle of food in patient care, highlighting the importance of nutritionists, dietitians, and the SALT team. Dietitians are particularly influential in decision-making.

Volunteer 2 expresses a preference for consulting dietitians over nutritionists in their care home, indicating a need for good access to dietitians.

Care Home W01 relies on dietary and nutritional advice from Head Office and values occasional visits from company dietitians.

Care Home LN8, when asked about seeking advice on improving residents' food intake, prioritizes nutritionists, dietitians, nurses, and doctors in that order. The cook feels closer to nursing staff and doctors but questions doctors' nutrition knowledge.

Care Home LN11 ranks dietitians and nutritionists highest for advice on food intake, followed closely by the chef, due to their expertise in food science and preparation.

Care Home NOT3 ranks dietitians and doctors ahead of nutritionists for their training in food and diet. The chef is placed last, with the nurse in between. The food service assistant is ranked highest for giving advice because they have daily interactions with residents.

Care Home SY10, similar to NOT3, places dietitians at the top, followed by doctors, nutritionists, nurses, and chefs, with food service assistants ranking highest for advice.

Care Home OL1 places dietitians and nutritionists at the top, followed by chefs, reflecting their understanding of the science behind food.

The findings from this exploration of the dynamics among care home staff regarding nutritional advice reveal several key points:

Recognition of Nutritional Importance: Volunteer 1 highlights the critical rôle of food in patient care, emphasising that getting the food right is essential. This recognition underscores the understanding that proper nutrition is vital for the well-being of residents in care homes.

Preference for Dietitians: Volunteer 2 expresses a preference for consulting dietitians over nutritionists. This preference likely stems from the specialised training and expertise that dietitians have in dietary planning and management.

Centralized Guidance: Care Home W01 relies on dietary and nutritional advice from Head Office, indicating a centralized approach to nutrition management. Occasional visits from company dietitians reinforce the importance placed on expert guidance.

Dietitian and Nutritionist Expertise: Care Home LN8, LN11, and SY10 consistently place dietitians and nutritionists at the top for providing advice on food intake. This reflects the acknowledgment that these professionals have the expertise to address residents' nutritional needs.

Chef's Rôle: Care Home LN11 and OL1 also recognise the chef's significance, emphasizing that chefs understand not only the science of food but also how to prepare and present it. This recognition underscores the importance of culinary skills in ensuring that residents receive nutritious and appetising meals.

Varied Perspectives: Care Home NOT3's rankings reveal a different perspective, placing food service assistants/carers at the top for giving advice due to their daily interactions with residents. This perspective highlights the importance of understanding residents' individual preferences and needs in providing nutritional care.

In summary, the findings indicate that there is a shared understanding among care home staff about the critical rôle of nutrition in resident care. Dietitians consistently hold a prominent position in providing nutritional advice, likely due to their specialized training. Chefs are also recognised for their culinary expertise, and the importance of individualised care is emphasised by some staff, especially those who interact with residents daily. This diversity in perspectives reflects the multifaceted nature of nutrition management in care homes, where a collaborative approach involving various professionals is essential to meet residents' unique dietary needs. The preferences vary somewhat depending on the care home and the rôle of the respondent, but dietitians and nutritionists consistently rank high across the board.

Overall, the findings suggest that dietitians and nutritionists play vital rôles in providing nutritional advice within care home settings, with a preference for dietitians in some cases. Additionally, centralised guidance from Head Office and company dietitians is important in ensuring proper dietary care in care homes.

In closing this section, I add my own personal comment, and share my own experience as a Type 2 Diabetic over the past 20 years. I experienced conflicting and differing advice received from dietitians and nutritionists during my visits to the NHS Diabetes Clinics. This firsthand experience underscores the tensions and mixed messages that exist in the healthcare system and how these can create confusion within the catering staff community. That tension and confusion continues.

Recommendations – Nutritional and Dietetic Related

Based on analysis of the findings regarding nutritional advice in care homes, here are a set of recommendations:

1. ***Emphasise the Vital Rôle of Nutrition:***
   - *Continue to emphasise the critical role of nutrition in patient care among all care home staff.*
   - *Promote the understanding that getting the food right is essential for the well-being of residents.*
2. ***Prioritise Access to Dietitians:***
   - *Recognise the preference for consulting dietitians over nutritionists in some care homes. Ensure that care homes have good access to dietitians, as their specialised training and expertise in dietary planning and management are highly valued.*
3. ***Centralised Guidance:***
   - *Medium to large size chains should consider adopting a centralised approach to nutrition management, as seen in Care Home W01.*
   - *Regular visits from company dietitians can provide valuable expert guidance and ensure consistent nutritional standards.*
4. ***Recognise the Chef's Significance:***
   - *Acknowledge the significance of chefs in providing nutritional care. Professionally and correctly trained chefs not only understand the science of food but also know how to prepare and present it in an appetising manner.*
   - *Encourage collaboration between chefs and dietitians/nutritionists to optimise meal planning.*
5. ***Individualised Care:***
   - *Highlight the importance of understanding residents' individual preferences and needs in providing nutritional care.*
   - *Care Home NOT3's perspective, which places food service assistants/carers at the top for giving advice, underscores the need for personalised care.*

6. ***Interdisciplinary Collaboration:***
    - *Promote interdisciplinary collaboration among care home staff.*
    - *Encourage regular meetings and communication between dietitians, nutritionists, chefs, nurses, and doctors to ensure a holistic approach to residents' nutritional well-being.*
7. ***Training and Education:***
    - *Invest in ongoing training and education for all staff involved in resident care regarding nutrition. This will empower them with the knowledge and skills necessary to contribute effectively to residents' nutritional needs.*
8. ***Resident-Centered Approach:***
    - *Maintain a resident-centered approach to nutrition management. Continuously seek feedback from residents regarding their dietary preferences and adapt meal plans accordingly.*
9. ***Regular Evaluation:***
    - *Establish a system for regular evaluation of the nutritional care provided within care homes. Monitor resident health and satisfaction to gauge the effectiveness of the current nutritional practices and make necessary adjustments.*
10. ***Documentation and Record-Keeping:***
    - *Implement thorough documentation and record-keeping practices for nutritional care.*
    - *This ensures that all care home staff have access to relevant information about residents' dietary needs and preferences.*
11. ***Quality Assurance:***
    - *Implement quality assurance protocols to ensure that the nutritional care provided meets established standards. Regular audits and assessments can help identify areas for improvement.*

In summary, these recommendations aim to foster a collaborative and informed approach to nutrition management in care homes, considering the preferences and expertise of various staff members while ensuring that the well-being of residents remains the top priority.

In closing **Section 5.1, Summary and Interpretation of Key Findings**, each of the preceding sections provided responses which addressed the MRQ, **What is the rôle of caterers in the provision of nutritious food and drink within elderly care homes?,** and the RSQs, from various perspectives. The responses highlight a significant dilemma in elderly care homes regarding the relationship between culinary staff (chefs and cooks) and nutritional or dietetic staff. This dilemma is crucial in understanding the rôle of caterers in providing nutritious food and drink. Differing perspectives shed light on the rôle of caterers in balancing adherence to standards with catering to individual preferences. Some chefs feel that they are considered professionals, especially when their colleagues recognise their expertise in areas like nutrition. However, there is a consensus that chefs

often do not receive the same recognition as other healthcare professionals, raising questions about their role in providing nutritious meals.

The responses provided shed light on the rôle of caterers, specifically chefs, in the provision of nutritious food and drink, focusing on the critical aspect of training and development needs. While some interviewees express that catering qualifications should not be compulsory, others acknowledge that such training may become mandatory in the future, particularly in response to potential regulatory changes.

These insights also focused on the care home environment and its impact on the provision of nutritious food and drink. These factors include the physical setting, architectural design, aesthetics, and equipment used for serving (such as plates and glassware). There was also emphasis on the importance of providing a personalised and dignified dining experience. This includes efforts to move away from communal feeding and create a more intimate atmosphere for residents.

5.2 Theoretical and Practical Implications.

In order to present practical recommendations, it was important to compare and contrast the literature with the findings of primary research. This allowed for a critical evaluation of the existing knowledge on a particular topic and provided insight into any gaps or inconsistencies in the literature. By analysing both sources of information, I was able to establish a strong foundation for the recommendations. When comparing and contrasting the primary research to the literature, I had to be fully cognizant of the methodology, sample size and data analysis techniques used. The following practical recommendations have been developed which are evidence based and well-informed from the literature and research.

Theoretical Implications:

1. **Understanding the Changing Elderly Population**: This research highlights the shift in care home demographics from the stoic generation to the Baby Boomer generation, emphasising the need to adapt care practices and services to meet the expectations and preferences of this new generation. The theoretical implication is that care practices must evolve to cater to the changing needs and attitudes of residents.

2. **Recognition of Qualitative Research**: The acknowledgment that qualitative research methods can provide valuable insights into complex topics, such as care home catering, is a theoretical implication. This challenges the notion that research in this field should solely

rely on quantitative methods, emphasising the importance of a qualitative approach for capturing nuanced aspects of the subject.

3. **Viewing Culinary Arts as a Science**: The research raises the question of whether culinary arts should be considered a science in the context of care home catering. This theoretical consideration prompts a deeper exploration of the role of culinary expertise in healthcare and nutrition, potentially challenging traditional perceptions.

   The research prompted me to ask the question of whether culinary arts should be considered a science in the context of care home catering. However, it does not delve deeply into this theoretical consideration, leaving the concept relatively undeveloped and open to interpretation. My interpretation, however, supported by Aguilera (2017), Crosby (2020), Lavelle et al. (2021), Potter (2016), Shepherd (2012), Spence and Piqueras-Fiszman (2014), Spence (2017), This (2006), This (2007), This (2009), This (2011), and This (2012) is that the culinary arts are very definitely underpinned by science. This gives a clear answer to RSQs 3, 5 and 6 and the MRQ.

4. **Valuing Caterers in the Care Team**: By exploring the significance of caterers within the care home team, the research suggests that these professionals should be seen as integral members of the care team. Theoretical implications revolve around redefining rôles and recognising the importance of catering staff in enhancing residents' well-being.

Practical Implications:

1. **Enhanced Care Home Catering**: The research underscores the need for innovative and multidisciplinary approaches to care home catering. It suggests that catering companies, managers, and staff should aim to improve the efficiency of catering systems, potentially leading to better-quality food services for residents.

2. **Improving the Well-being of Dementia Patients**: The emphasis on providing an appropriate nutritious diet for people living with dementia is a practical implication. This suggests that care homes should focus on tailoring meal plans to the specific dietary needs of dementia patients, potentially improving their overall well-being.

3. **Guidance for Care Home Practices**: The research offers insights into current practices, provisions, and challenges within care homes in England. This information can guide care homes in making informed decisions about food choices and preferences, leading to more resident-centered services.

4. **Methodological Guidance**: The research discusses the optimal methodological approach for exploring the topic. This can serve as a practical guide for future researchers interested in studying similar subjects within the context of care homes and catering services.

5. **Recommendations for Improvement**: The conclusions and recommendations section of the research provides practical guidance for both business and resident perspectives. This includes suggestions for enhancing care home catering services to meet the needs and expectations of residents while also potentially improving the profitability of catering companies.

In summary, this research not only sheds light on the theoretical aspects related to changing demographics, research methods, and the perception of culinary arts but also offers practical insights and guidance for improving care home catering practices. It underscores the importance of catering services in enhancing the well-being and quality of life for elderly residents, particularly those living with dementia.

5.3 Limitations.

While the research has important theoretical and practical implications, it is essential to acknowledge its limitations to provide a balanced view.

While my research discusses an optimal methodological approach, it may not consider the diverse research needs and constraints that other researchers might encounter. What works well in one context may not be suitable for another.

While recognising the value of qualitative research is essential, emphasising it as the primary method for understanding complex topics may exclude the potential benefits of quantitative research, which can offer a broader perspective and statistical validation. However, that is the route I took.

I must recognise that the research has limited generalisability. The research primarily focused on the transition from the stoic generation to the Baby Boomer generation in care homes. The theoretical implications may not be universally applicable, as the cultural, social, and generational factors affecting care practices can vary significantly across regions and contexts.

While the research suggests the importance of caterers within the care team, it doesn't provide a detailed framework or theoretical model for the integration of catering staff into the broader care ecosystem. The practical challenges and barriers to achieving this integration are not explored in-depth.

The call for enhanced care home catering and multidisciplinary approaches may not fully account for the resource constraints that many care homes face. Implementing innovative approaches may require substantial investments in training, infrastructure, and personnel, which some facilities may struggle to afford.

The focus on providing an appropriate diet for dementia patients is crucial, but the research does not address the variability in dementia care needs in detail nor provide suggested menus or recipes. Different forms and stages of dementia may require distinct dietary interventions, making it challenging to provide a one-size-fits-all solution.

The insights into current practices and challenges in care homes are limited to England. These findings may not be directly transferable to care homes in other countries, even within the UK, with different healthcare systems, regulations, and cultural norms.

The practical recommendations provided in my research may require significant changes in care home operations. Implementing these changes, such as improving catering services and profitability simultaneously, can be a complex and resource-intensive process that requires careful planning and execution.

In conclusion, while the research presents valuable theoretical and practical implications for improving care home catering and the well-being of elderly residents, it is important to consider the limitations mentioned above to ensure that these implications are applied thoughtfully and contextually in real-world settings.

5.4 Contribution and Significance

The research makes significant theoretical contributions by highlighting the shift in care home demographics from the stoic generation to the Baby Boomer generation. This shift emphasises the need to adapt care practices and services to meet the expectations and preferences of the new generation of residents. The research's theoretical implication is that care practices must evolve to cater to the changing needs and attitudes of these residents. This insight encourages a re-evaluation of care strategies and a more resident-centered approach.

The recognition of qualitative research methods as valuable tools for understanding complex topics, such as care home catering, challenges the previous bias towards quantitative methods. This theoretical implication asserts the importance of a qualitative approach in capturing nuanced aspects of the subject, ultimately leading to a more comprehensive understanding of the experiences and perspectives of both residents and staff.

Viewing culinary arts as a science within the context of care home catering is a thought-provoking theoretical consideration. This notion prompts a deeper exploration of the rôle of culinary expertise in healthcare and nutrition. By questioning traditional perceptions, the research encourages a re-evaluation of the contributions that culinary professionals can make to the well-being and quality of life of care home residents.

By highlighting the significance of caterers within the care team, the research suggests practical implications for redefining rôles and recognising the importance of catering staff in enhancing residents' well-being. This perspective shift can lead to better collaboration, improved resident experiences, and more holistic care practices.

From a practical standpoint, the research offers insights that can directly impact care home operations and resident well-being. Enhanced care home catering, as suggested by the research, encourages the adoption of innovative and multidisciplinary approaches to improve the efficiency of catering systems. This could lead to better-quality food services and overall resident satisfaction.

Furthermore, the emphasis on providing appropriate and nutritious diets for dementia patients presents a practical implication that care homes should tailor meal plans to the specific dietary needs of this population. This could significantly contribute to the well-being of dementia patients, enhancing their quality of life and potentially slowing the progression of the disease.

The research's guidance for care home practices, methodological insights, and recommendations for improvement directly benefit care home administrators and operators. It provides valuable information for informed decision-making related to food choices, preferences, and services. Additionally, the methodological guidance can assist future researchers in studying similar topics within care home and catering contexts.

In conclusion, this research contributes not only to theoretical discussions regarding changing demographics, research methodologies, and the perception of culinary arts but also provides practical insights and guidance for improving care home catering practices. It underscores the importance of catering services in enhancing the well-being and quality of life for elderly residents, particularly those with dementia, and promotes a more holistic and resident-centered approach to care.

5.5 Future Research Direction and Final Conclusion.

Building upon the insights and contributions of my research there are several promising avenues for future research that can further enhance our understanding of care home catering, resident well-being, and quality of life. Here are some suggested directions:

Longitudinal Studies on Resident Well-Being: Conduct long-term studies to track the impact of enhanced catering practices on the well-being and overall quality of life of care home residents. Investigate how changes in diet, meal planning, and culinary expertise influence residents' physical health, mental well-being, and social engagement over time.

Intergenerational Dining Experiences: Explore the potential benefits of intergenerational dining experiences within care homes. Investigate how interactions between residents, EMI residents, staff, and younger generations (e.g., volunteers or family members) during meal times can positively affect residents' emotional and psychological health.

Technology Integration: Assess the rôle of technology, such as smart kitchen appliances, in improving catering efficiency, meal customisation, and dietary monitoring within care homes. Investigate how technology can aid in providing personalised meal plans for residents with specific dietary requirements.

Culinary Training for Caregivers: Explore the impact of providing culinary training to caregiving staff in care homes. Investigate how equipping caregivers with culinary presentation skills can enhance their ability to provide nutritionally balanced and appetising meals, leading to improved resident satisfaction.

Cross-Cultural Perspectives: Examine how cultural backgrounds and preferences influence the culinary expectations of care home residents. Investigate how care homes can better accommodate diverse cultural diets and food traditions to enhance resident-centered care.

Sustainability and Food Ethics: Investigate the integration of sustainable and ethical food practices within care home catering. Explore how sourcing local, organic, and ethically produced foods can improve the nutritional value of meals and align with residents' values and preferences.

Advanced Dietary Approaches for Dementia: Continue to research and develop advanced dietary approaches tailored specifically for dementia patients. Investigate the potential of specific diets (e.g., ketogenic, or Mediterranean diets) in managing cognitive decline and improving the overall well-being of residents with dementia.

Staff-Resident Collaboration: Explore ways to foster collaboration between catering staff and residents in menu planning and meal preparation. Investigate how involving residents in food-related decisions can empower them and enhance their sense of agency and well-being.

Quality Assurance and Regulations: Investigate the development and implementation of quality assurance measures and regulations specific to care home catering. Examine how standardised guidelines can ensure consistently high-quality food services across care homes.

Cost-Effective Solutions: Research cost-effective strategies for implementing improved catering practices in care homes, especially for facilities with limited budgets. Investigate innovative solutions and partnerships that can make high-quality catering accessible to a broader range of care facilities.

IDDSI Protocols: Since the introduction of the IDDSI protocols it may be of use to measure the uptake of the new way of measuring texture modified foods. My research interests continue to be more than curious, and I expect there will be opportunities to further this in the coming years, despite my own predictions that I will succumb to the bastard disease known as dementia. For the record, I would be more than happy, indeed enthusiastic, to be a participant in any future research and this part of my thesis may be used as confirmation of my considered agreement to participate, in accordance with ethical protocols.

COVID-19 pandemic: There are undoubtedly changes brought about within the care home catering industry impacted by the COVID-19 pandemic, probably in regard to staffing and operational practices. My results are a disappointing reflection on the state of care home catering in the UK, at least in some of the observed care homes. Consequently, I would suggest a much more in-depth research comparing food service practices in European countries to those of the UK.

These future research directions have the potential to further enrich our understanding of care home catering and its impact on the well-being of elderly residents. They can also contribute to the development of practical guidelines and interventions that enhance the quality of care provided to this vulnerable population.

In summary, there are undoubtedly several opportunities for further research to emerge from the findings and discussions in the DBA thesis. An easy option would be to re-run the research again, with a larger population set.

This brings me to the close of Chapter 5 and the final thesis submission. Thank you for taking the time to read.

References

3D Sourced. 3Dsourced.com. Retrieved August 2021, from https://www.3dsourced.com/guides/3d-printed-food/

Abma, T. A., & Stake, R. E. (2014). Science of the particular: An advocacy of naturalistic case study in health research. *Qualitative Health Research, 24*(8), 1150-1161.

ADASS Budget Survey 2020: Impact of Covid-19 on budgets. (). https://www.adass.org.uk/adass-budget-survey-2020-coronavirus-budgets

ADI [Alzheimer Disease International]. (2015, *World Alzheimer Report 2015: The global impact of dementia: An analysis of prevalence, incidence, cost, and trends* . https://www.alzint.org/resource/world-alzheimer-report-2015/

AfN. (n.d.). *Applying for AfN Degree Accreditation*

AGCAS (Association of Graduate Careers Advisory Services). (2021, Mar). *Job Profile - Chef.* Prospects UK. https://www.prospects.ac.uk/job-profiles/chef

Age UK. https://www.ageuk.org.uk/.

Aguilera, J. M. (2017). The emergence of gastronomic engineering. *Innovative Food Science & Emerging Technologies, 41*, 277-283.

Aguilera, J. M., & Park, D. J. (2016). *Texture-modified foods for the elderly: Status, technology and opportunities*https://doi.org///doi.org/10.1016/j.tifs.2016.10.001

Ahmed, M., Jones, E., Redmond, E., Hewedi, M., Wingert, A., & Rab, G. E. (2015). Food production and service in UK hospitals. *International Journal of Health Care Quality Assurance, 28*(1), 40.

Allan, S., Gousia, K., & Forder, J. (2021). Exploring differences between private and public prices in the English care homes market. Health Economics, Policy and Law, 16(2), 138-153.

Altan, M. A., & Gehrels, S. (2017). *Hospitality-oriented food services in healthcare : an analysis of stakeholder's perception (hospital management, dietitians, hospitality services and medical staff).* ().CELTH. https://www.narcis.nl/publication/RecordID/oai:pure.buas.nl:publications%2F9101e20b-5ef7-48ca-a7ca-257f83b85b66

Altan, M. (2009). *Towards Patient-centric food services in Acute N H S Hospitals. A case study approach*

Altus, D. E., Engelman, K. K., & Mathews, R. M. (2002). Using family-style meals to increase participation and communication in persons with dementia. *Journal of Gerontological Nursing, 28*(9), 47. http://www.ncbi.nlm.nih.gov/pubmed/12240521

Alzheimer Europe - Research - European Collaboration on Dementia. Retrieved Mar 19, 2018, from http://www.alzheimer-europe.org/Research/European-Collaboration-on-Dementia

Alzheimer's Society. (2013). *Eating and Drinking Fact Sheet* (Factsheet 511LP ed.). Alzheimer's Society.

Alzheimer's Society. (2014, *What is dementia?* Retrieved 10/30 2014, from http://www.alzheimers.org.uk/site/scripts/documents_info.php?documentID=106

Amella, E. J., Grant, A. P., & Mulloy, C. (2008). Eating Behavior in Persons With Moderate to Late-stage Dementia: Assessment and Interventions. *Journal of the American Psychiatric Nurses Association, 13*(6), 360. https://doi.org/10.1177/1078390307309216

American Psychological Association. (2019). Publication Manual of the American Psychological Association, (2020).

Andrews, J. (2013). *A plea on costs*. Dementia Services Development Centre.

Archer, E. (2018). *The failure to measure dietary intake engendered a fictional discourse on diet-disease relations*. Frontiers Media S.A.

Archestratus (of Gela.), Wilkins, J., & Hill, S. (2011). *Archestratus: Fragments from The Life of Luxury: a Modern English Translation with Introduction and Commentary*. Prospect Books.

Bakker, R. (2003). Sensory Loss, Dementia, and Environments. *Generations, 27*(1), 46-51.

BAPEN. (willingness of the British Association for Parenteral and Enteral Nutrition to work with the government to prevent malnutrition)(Food Facts). (2012). *Nutrition & Food Science, 42*(6)

Baptiste, F., Egan, M., & Dubouloz-Wilner, C. (2014). Geriatric Rehabilitation Patients' Perceptions of Unit Dining Locations. *Canadian Geriatrics Journal, 17*(2), 38-44.

Barnes, J. (Ed.). (1995). *The Cambridge Companion to Aristotle*. Cambridge University Press.

Barnes, S., Wasielewska, A., Raiswell, C., & Drummond, B. (2013). Exploring the mealtime experience in residential care settings for older people: an observational study. *Health & Social Care in the Community, 21*(4), 442-450. https://doi.org/10.1111/hsc.12033

Bassey, M. (1999). *Case study research in educational settings*. Open University Press.

Bayles, K., McCullough, K., & Tomoeda, C. K. (2018). Cognitive-Communication Disorders of MCI and Dementia: Definition. *Assessment, and Clinical Management. Plural Publishing,*

Beck, A. M., Balknäs, U. N., Fürst, P., Hasunen, K., Jones, L., Keller, U., Melchior, J. C., Mikkelsen, B. E., Schauder, P., Sivonen, L., Zinck, O., Øien, H., & Ovesen, L. (2001). Food and nutritional care in hospitals: how to prevent undernutrition–report and guidelines from the Council of Europe. *Clinical Nutrition, 20*(5), 455-460. https://doi.org/http://dx.doi.org.lcproxy.shu.ac.uk/10.1054/clnu.2001.0494

Beck, A. M., Balknäs, U. N., Camilo, M. E., Fürst, P., Gentile, M. G., Hasunen, K., Jones, L., Jonkers-Schuitema, C., Keller, U., & Melchior, J. (2003). The European view of hospital undernutrition. *Nutrition in Clinical Practice, 18*(3), 247-249.

Becker, H. S. (1970). *Sociological work: method and substance*. Aldine.

Bell, E., Bryman, A., Harley, B., & Bryman, A. (2019). *Business research methods*. Oxford University Press.

Bell, J. (1993). *Doing your research project : a guide for first-time researchers in education and social science* (2nd ed.). Open University Press.

Berchoux, J. (1803). La Gastronomie ou L'homme des champs à table. *P.: Giguet Et Michaud,*

Berchtold, N., & Cotman, C. (1998). Evolution in the conceptualization of dementia and Alzheimer's disease: Greco-Roman period to the 1960s. . *Neurobiology of Aging, 19*(3), 173-189.

Berezow, A. (2018). Is Nutrition Science Mostly Junk? *American Council on Science and Health,* https://www.acsh.org/news/2018/11/19/nutrition-science-mostly-junk-13611

Biernacki, C., Ward, L., & Barratt, J. (2001). Improving the nutritional status of people with dementia. *British Journal of Nursing, 10*(17), 1104-1114.

Blain, M. J. (2012). *Hospitableness: Can the sub-traits of hospitableness be identified, measured in individuals and used to improve business performance?*(DBA).

BNF. (2016, February). *Older Adults.* British Nutrition Foundation. https://www.nutrition.org.uk/nutritionscience/life/older-adults.html

Boczko, F. (2004). Managing dysphagia in dementia: A timed snack protocol. *Nursing Homes, 53*(9), 64.

Boller, F., & Forbes, M. M. (1998). History of dementia and dementia in history: An overview. *Journal of the Neurological Sciences, 158*(2), 125-133. https://doi.org/10.1016/S0022-510X(98)00128-2

Bosetti, N., & Washington-Ihieme, M. (2019, April,). *Kitchen Talent: Training and retaining the chefs of the future.* Centre for London. https://www.centreforlondon.org/publication/kitchen-talent/

Bottery, M & Wright, N. (2019). *Writing a watertight thesis: a guide to successful structure and defence*. Bloomsbury Academic.

Bottery, S. (2019). *Cancer or Dementia: the social care system is unfair to people with either condition.* Retrieved 18 Aug 2021, from https://www.kingsfund.org.uk/blog/2019/09/cancer-dementia-unfair-social-care-system

Bounds, A. (2017, -07-03T23:01:37.000Z). *Local councils to see central funding fall 77% by 2020.* Financial Times. Retrieved Mar 8, 2018, from https://www.ft.com/content/9c6b5284-6000-11e7-91a7-502f7ee26895

Bowen, J. T., & Morris, A. J. (1995). Menu design: can menus sell. *International Journal of Contemporary Hospitality Management,*

Boyce, J. M., & Shone, G. R. (2006). Effects of ageing on smell and taste. *Postgraduate Medical Journal, 82*(966), 239-241.

Boyer, G. R. (1990). *An economic history of the English Poor Law : 1750-1850*. Cambridge U.P.

Brillat-Savarin, J. A. (1825). *Physiologie du gout* (Reprint 1982 ed.). Editions Flammarion.

British Dietetic Association. (2012). The nutrition and hydration digest. *Improving Outcomes through Food and Beverage Services,Crawl*

Brooker, D. (2003). What is person-centred care in dementia? *Reviews in Clinical Gerontology, 13*(3), 215-222.

Brooker, D. J., Woolley, R. J., & Lee, D. (2007). Enriching opportunities for people living with dementia in nursing homes: an evaluation of a multi-level activity-based model of care. *Aging and Mental Health, 11*(4), 361-370.

Brooks, J., Savitch, N., & Gridley, K. (2017). Removing the 'gag': Involving people with dementia in research as advisers and participants. *Social Research Practice,* , 3-14.

Brotherton, B., & Wood, R. C. (2000). Hospitality and Hospitality Management. In C. Lashley, & A. Morrison (Eds.), *In Search of Hospitality: Theoretical Perspectives and Debates* (pp. 134-156). Butterworth- Heinemann.

Brotherton, B. (1999). Towards a definitive view of the nature of hospitality and hospitality management. *International Journal of Contemporary Hospitality Management, 11*(4), 165-173. https://doi.org/10.1108/09596119910263568

Brotherton, B. (2015). *Researching hospitality and tourism* (2nd edition. ed.). SAGE Publications Ltd.

Browner, J. (2003). *The Duchess who Wouldn't Sit Down: An informal history of hospitality*. Bloomsbury.

Brush, J. A., & Calkins, M. P. (2008). Environmental interventions and dementia: enhancing mealtimes in group dining rooms. *ASHA Leader, 13*(8), 24-25.

Brush, J. A., Meehan, R. A., & Calkins, M. P. (2002). Using the environment to improve intake for people with dementia. *Alzheimer's Care Quarterly, 3*(4), 330-338.

Bryman, A. (2008). Of methods and methodology. *Qualitative Research in Organizations and Management: An International Journal, 3*(2), 159-168. https://doi.org/10.1108/17465640810900568

Bryman, A., & Bell, E. (2011). *Business research methods* (3rd ed.). Oxford University Press.

Bryman, A., & Bell, E. (2015). *Business research methods* (Fourth edition. ed.). Oxford University Press.

Buttriss, J. L. (1997). Food and nutrition: attitudes, beliefs, and knowledge in the United Kingdom. *The American journal of clinical nutrition*, *65*(6), 1985-1995.

Burger, C., Kiesswetter, E., Alber, R., Pfannes, U., Arens-Azevedo, U., & Volkert, D. (2019). Texture modified diet in German nursing homes: availability, best practices and association with nursing

home characteristics. *BMC Geriatrics; BMC Geriatr, 19*(1), 284. https://doi.org/10.1186/s12877-019-1286-9

Burgess, R. G. (1985). *Issues in educational research: Qualitative methods*. Taylor & Francis.

Cahill, S., O'Shea, E., & Pierce, M. (2011). Creating excellence in dementia care: A research review for Ireland's national dementia strategy.

Caldecott, T. (2014). *Food as Medicine: The Theory and Practice of Food* (2nd ed.). Phytoalchemy.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin, 56*(2), 81-105. https://doi.org/10.1037/h0046016

Cantley, C., & Wilson, R. C. (2002). Put yourself in my place - designing and managing care homes for people with dementia. *The Policy Press,*

Caraher, M., Crawley, H., & Lloyd, S. (2009). *Nutrition Policy across the UK: Briefing Paper*. The Caroline Walker Trust.

Cardenas, D. (2013). Let not thy food be confused with thy medicine: The Hippocratic misquotation. *E-SPEN Journal, 8*(6), e260-e262.

Care Quality Commission. (2012, *Time to Listen in Care Homes: Dignity and nutrition inspection programme 2012.* https://www.cqc.org.uk/sites/default/files/documents/time_to_listen_-_care_homes_main_report_tag.pdf

Care Quality Commission (CQC). *Review: Meeting the healthcare needs of people living in care homes" 2009/2010* (2012.

Carolan, C. M., Forbat, L., & Smith, A. (2016). Developing the DESCARTE model: The design of case study research in health care. *Qualitative Health Research, 26*(5), 626-639.

Caroline Walker Trust. (1995). Eating well for older people: Practical and nutritional guidelines for food in residential and nursing homes and for community meals. REPORT OF AN EXPERT WORKING GROUP.(2nd Edition)

Carr, W., & Kemmis, S. (1986). Becoming Critical: Education Knowledge and Action Research (1st ed.). Routledge. https://doi.org/10.4324/9780203496626

Carrier, N., West, G. E., & Ouellet, D. (2007). Cognitively impaired residents' risk of malnutrition is influenced by foodservice factors in long-term care. *Journal of Nutrition for the Elderly, 25*(3-4), 73-87.

Catering for Health - Strategy Document 2013 - 2017 (2013)..The Hospital Caterers Association.

Causer, Lee. (2017, 14 August). *16% of care homes at risk of failure.* www.moorestephens.co.uk. Retrieved 28 Feb 2018, from https://www.moorestephens.co.uk/news-views/august-2017/16-of-care-homes-at-risk-of-failure

CD&D NHS Trust. (2018, *National Awards for Pioneering Nutrition Service.* https://www.cddft.nhs.uk/. Retrieved July 2018, from https://www.cddft.nhs.uk/news-and-media/latest-news/national-awards-for-pioneering-nutrition-service.aspx

Chan, M. (2018). *Video message by WHO Director-General Margaret Chan*. [Video/DVD] Geneva: World Health Organisation.

Chang, C.-C., & Roberts, B. L. (2011). Strategies for Feeding Patients with Dementia. *The American Journal of Nursing*, *111*(4), 36–46. https://doi.org/10.1097/01.NAJ.0000396553.01996.5e

Change Factory. *Managing the Change in Aged Care from a Catering Mindset to a Hospitality Experience.* Change Factory. Retrieved 4 Sept 2021, from https://www.changefactory.com.au/industry/aged-care-health-services/managing-change-aged-care-catering-mindset-hospitality-experience/

Charras, K., & Frémontier, M. (2010). Sharing meals with institutionalized people with dementia: a natural experiment. *Journal of Gerontological Social Work, 53*(5), 436-448.

Chon, K., Park, E., & Zoltan, J. (2020). The Asian paradigm in hospitality and tourism. *Journal of Hospitality & Tourism Research, 44*(8), 1183-1202.

Chrysikou, E., Tziraki, C., & Buhalis, D. (2018). Architectural hybrids for living across the lifespan: lessons from dementia. *The Service Industries Journal, 38*(1-2), 4-26.

Cichero, J. A. Y., Lam, P., Steele, C. M., Hanson, B., Chen, J., Dantas, R. O., Duivestein, J., Kayashita, J., Lecko, C., Murray, J., Pillay, M., Riquelme, L., & Stanschus, S. (2016). Development of International Terminology and Definitions for Texture-Modified Foods and Thickened Fluids Used in Dysphagia Management: The IDDSI Framework. *Dysphagia; Dysphagia, 32*(2), 293-314. https://doi.org/10.1007/s00455-016-9758-y

Cipriani, G., Carlesi, C., Lucetti, C., Danti, S., & Nuti, A. (2016). Eating behaviors and dietary changes in patients with dementia. American Journal of Alzheimer's Disease & Other Dementias®, 31(8), 706-716. https://doi.org/10.1177/1533317516673155Cohen, L., Manion, L., & Morrison, K. (2005). *Research methods in education* (5th ed.). routledge.

Collins. *Collins English Dictionary.* https://www.collinsdictionary.com/. Retrieved 2018, from https://www.collinsdictionary.com/dictionary/english/nutrition

Cooper, K. (2003). Nurse roasts minister over meals "not fit for a dog". *Nursing Standard, 18.8*, 6.

Crawley, H., & Hocking, E. (2011). Eating well: supporting older people and older people with dementia: Practical Guide. *The Caroline Walker Trust,*

Creswell, J. W. (1994). *Research design: qualitative and quantitative approaches*. Sage.

Creswell, J. W. (2011). Controversies in Mixed Methods Research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (4th ed., pp. 269). Sage Publications Inc.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research*. SAGE.

Crosby, G. (2020). *Cook, Taste, Learn: How the Evolution of Science Transformed the Art of Cooking*. Columbia University Press.

Davies, S., Froggatt, K., & Meyer, J. (2009). (2009) “Reflections on the Way Forward” in *Understanding Care Homes: A Research and Development Perspective*. In Davies, S., Froggatt, K., & Meyer, J. (Eds.),. Jessica Kingsley Publishers.

De Bruin, S. R., Oosting, S. J., Tobi, H., Blauw, Y. H., Schols, J., & De Groot, C. (2010). Day care at green care farms: a novel way to stimulate dietary intake of community-dwelling older people with dementia? *Journal of Nutrition, Health & Aging, 14*(5), 352-357. https://doi.org/10.1007/s12603-010-0079-9

de Carvalho, I. A., Epping-Jordan, J., Pot, A. M., Kelley, E., Toro, N., Thiyagarajan, J. A., & Beard, J. R. (2017). Organizing integrated health-care services to meet older people’s needs. *Bulletin of the World Health Organization, 95*, 756-763. https://doi.org///dx.doi.org/10.2471/BLT.16.187617

Denzin, N. K. (1970). *Sociological methods: a sourcebook*. Butterworths.

Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research* (4th ed. ed.). Sage.

Department of Health. (2015). *Prime Minister's challenge on dementia 2020*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/414344/pm-dementia2020.pdf

Department of Health. (2016). *Prime Minister’s Challenge on Dementia 2020: Implementation Plan.* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/507981/PM_Dementia-main_acc.pdf

Department of Health and Social Care. (2019). *Dementia 2020 Challenge: 2018 Review Phase 1.* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/780777/dementia-2020-challenge-2018-review.pdf

Derrida, J. (2000). HOSTIPITALITY. *Angelaki, 5*(3), 3-18. https://doi.org/10.1080/09697250020034706

Dillon, H. A., McDonald, S., & Jonus, I. (2012). Steamplicity: An innovative meal system that delivers. *Healthcare Management Forum, 25*(3), S20-S28. https://doi.org/10.1016/j.hcmf.2012.07.010

DiMaria-Ghalili, R. (2014). Integrating Nutrition in the Comprehensive Geriatric Assessment. *Nutrition in Clinical Practice, 29*(4), 420-427. https://doi.org/10.1177/0884533614537076

Dinsdale, N. (2016a). Living with Dementia: Plotting a Revolution in Care Home Catering Provision through Resident Directed Services. Paper presented at the Dublin Institute of Technology.

Dinsdale, N. (2016b). Meeting the challenges of care home catering provision. Paper presented at the *Food in Hospitals and the Care Sector - Clinical Standards, Meeting the Economic Challenges and Preventing Malnutrition,*

Dinsdale, N. (June 2019). Meeting the Challenges of Care Home Catering for People Living with Dementia: The Sex 'n' Drugs and Rock 'n' Roll Generation. Paper presented at the *11th International Conference on Culinary Arts and Science,*

Douglas, M. (1972). Deciphering a Meal. *Daedalus, 101*(1), 61-81. http://www.jstor.org/stable/20024058

Downs, M., & Bowers, B. (Eds.). (2016). *Excellence in dementia care: research into practice /*. Open University Press.

Drummond, K. E., & Brefere, L. M. (2016). *Nutrition for foodservice and culinary professionals*. John Wiley & Sons.

DSDC.*Virtual Care Home.* Retrieved 09/21 2014, from http://dementia.stir.ac.uk/design/virtual-environments/virtual-care-home

Dunk, S. (2018, Jun 22,). Together we're great. *Care Home Catering,* https://carehomecatering.co.uk/news/2018-06-22-together-were-great

Dunne, T. E., Neargarder, S. A., Cipolloni, P. B., & Cronin-Golomb, A. (2004). Visual contrast enhances food and liquid intake in advanced Alzheimer's disease. *Clinical Nutrition, 23*(4), 533-538. https://doi.org/10.1016/j.clnu.2003.09.015

Durnbaugh, T., Haley, B., & Roberts, S. (1996). Assessing problem feeding behaviors in mid-stage Alzheimer's disease: Clients with mid-stage Alzheimer's disease may be eating far less than their caregivers believe. *Geriatric Nursing, 17*(2), 63-67. https://doi.org/http://dx.doi.org.lcproxy.shu.ac.uk/10.1016/S0197-4572(96)80170-4

Edwards, J. S. A., & Hartwell, H. J. (2006). Hospital food service: a comparative analysis of systems and introducing the Steamplicity concept. *Journal of Human Nutrition and Dietetics, 19*(6), 421-430. https://doi.org/10.1111/j.1365-277X.2006.00730.x

Egan, N. (2013). Food trends in aged care. *Australian Ageing Agenda,*

Elias, N., & Dunning, E. (1986). *Quest for excitement. Sport and leisure in the civilizing process.* Basil Blackwell.

Elton, G. R. (1953). An Early Tudor Poor Law. *The Economic History Review, 6*(1), 55-67. https://doi.org/10.2307/2591021

ENRICH (Enabling Research In Care Homes). (2016, https://enrich.nihr.ac.uk/

Estes, C. L. (2001). *Social policy and aging: a critical perspective*. Thousand Oaks, Calif. ; London : Sage Publications.

Etymonline. (n.d.). *Nutrition.* https://www.etymonline.com/. Retrieved 2018, from https://www.etymonline.com/search?q=nutritionem+

Farrer, O., Sasanelli, L., Matwiejczyk, L., Yaxley, A., & Miller, M. (2019). *The role of dietitians in residential aged care: How do cooks and chefs perceive their contribution?* Council on the Ageing (Australia). https://doi.org/10.1111/ajag.12584

Feldman, C., Mahadevan, M., Su, H., Brusca, J., & Ruzsilla, J. (2011). Menu engineering: A strategy for seniors to select healthier meals. *Perspect Public Health, 131*(6), 267-274. https://doi.org/10.1177/1757913911419897

Fjellström, C. (2004). Mealtime and meal patterns from a cultural perspective. *Scandinavian Journal of Nutrition, 48*(4), 161-164.

Fleming, R., & Purandare, N. (2010). Long-term care for people with dementia: environmental design guidelines. *International Psychogeriatrics, 22*, 1084-1096.

Foskett, D., Paskins, P., Pennington, A., & Rippington, N. (2016). *The theory of hospitality and catering*. Dynamic Learning.

Foskett, D., Rippington, N., Paskins, P., Thorpe, S., & Campbell, J. (2015). *Practical cookery for Level 2 NVQs and apprenticeships* (13th ed.). Hodder Education.

Friedland, A. (2005). CULTIVATING THE CULINARIANS. *Food Management, 40*(7), 24-24,26,28,30,32.

Gill, J., Johnson, P., & Clark, M. (2010). *Research methods for managers* (4th ed.. ed.). SAGE.

Gillespie, C., & Cousins, J. (2012). *European gastronomy into the 21st century*. Routledge.

Gillham, B. (2008). Developing a questionnaire. A&C Black.

Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of grounded theory : strategies for qualitative research*. Aldine.

Goeminne, P. C., De Wit, E. H., Burtin, C., & Valcke, Y. (2012). Higher food intake and appreciation with a new food delivery system in a Belgian hospital. Meals on Wheels, a bedside meal approach: A prospective cohort trial. *Appetite, 59*(1), 108-116.

Goldacre, B. (2004a,). Ben Goldacre on Gillian McKeith. *The Guardian (London)*

Goldacre, B. (2004b, Sep 30,). Dr Gillian McKeith (PhD) continued. *The Guardian* https://www.theguardian.com/science/2004/sep/30/badscience.research

Goldacre, B. (2009). *Bad science*. Harper Perennial.

Gorski, D. (2015, *Let food be thy medicine and medicine be thy food? The obsessive worship of "medicinal foods".* www.sciencebasedmedicine.org.

Gosling, J., & Mintzberg, H. (2003). The five minds of a manager. *Harvard Business Review, 81*(11), 54.

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis, 11*(3), 255-274.

Greenbaum, H. (2021, December 1). The "no first-person" myth. *APA Style Blog*. https://apastyle.apa.org/blog/first-person-myth#disqus_article_comments

Gregoire, M. B., & Spears, M. C. (2013). *Foodservice organizations: A managerial and systems approach*. Pearson Boston, MA.

Gubrium, J. F. (1975). *Living and Dying at Murray Manor*. St. Martin's Press.

Gummesson, E. (2017). *Case theory in business and management: Reinventing case study research*. Sage.

Guthrie, D. (1944). The “Breviary” and “Dyetary” of Andrew Boorde (1490–1549), Physician, Priest, and Traveller [Synopsis]. *Journal of the Royal Society of Medicine*, *37*(9), 507–509. https://doi.org/10.1177/003591574403700913

Halpert, B. P. (1983). Development of the term "senility" as a medical diagnosis. *Minnesota Medicine, 66*(7), 421-424.

Hammersley, M., & Atkinson, P. (1995). Recording and organizing data. *Ethnography: Principles in Practice.London: Routledge,* , 175-204.

Hancock, A. (2021, 16 August). ‘It’s a tough life’: Hospitality crisis deepens chef shortages. *Financial Times* https://www.ft.com/content/eb7c3f69-7b03-4536-b455-d88088076a7c

Hankey, G. J. (2018). Public Health Interventions for Decreasing Dementia Risk. *JAMA Neurology, 75*(1), 11-12. https://doi.org/10.1001/jamaneurol.2017.3303

Harris, D. K., & Benson, M. L. (2006). *Maltreatment of patients in nursing homes: There is no safe place*. Routledge.

Harrison, A. F. (1982). *Gastronomy*. New Horizon.

Hartwell, H. J., Edwards, J. S. A., & Symonds, C. (2006). Foodservice in hospital: development of a theoretical model for patient experience and satisfaction using one hospital in the UK National Health Service as a case study. *Journal of Foodservice, 17*(5-6), 226. https://doi.org/10.1111/j.1745-4506.2006.00040.x

Hartwell, H. J., Shepherd, P. A., & Edwards, J. S. A. (2013). Effects of a hospital ward eating environment on patients' mealtime experience: A pilot study. *Nutrition & Dietetics, 70*(4), 332-338. https://doi.org/10.1111/1747-0080.12042

The Health and Social Care Act 2008 (Regulated Activities) Regulations 2014, Statutory Instrument U.S.C. (2014). https://www.legislation.gov.uk/ukdsi/2014/9780111117613/contents

Hegarty, J. A. (2014a). Cookbooks—Ancient and Contemporary. *Journal of Culinary Science & Technology, 12*(1), 91-98.

Hegarty, J. A. (2014b). **Cookbooks - Ancient and Contemporary** ISSN: Date: 01/01/2014 Volume: 12 Issue: 1 Page: 91. *Journal of Culinary Science & Technology, 12*(1), 91.

Hegarty, J. A. (2014c). *The Real Food Revolution: A Manifesto for a New Food System!*

Hegarty, J. A. (2015). *Personal email - Hospital Catering*

Hegarty, J. A. (2016). Engaging in hospitality and culinary research that makes a difference: The shape of things to come, *Research in Hospitality Management, 6*(2), 203-206.

Help the Aged. National Care Homes Research and, Development Forum. (2007). My Home Life, Quality of life in care homes: a review of the literature.

Hemmington, N., & Gibbons, A. (2017). 'Pas d'hospitalit&#65533;': Derrida and the study of hospitality in higher education. *Hospitality and Society, 7*(2), 115-131. https://doi.org/10.1386/hosp.7.2.115_1

Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative research methods*. Sage.

Hertog, P. D., Gallouj, F., & Segers, J. (2011). Measuring innovation in a "low-tech" service industry: the case of the Dutch hospitality industry. *The Service Industries Journal, 31*(9/10), 1429-1449. https://doi.org/10.1080/02642060903576084

Hewitt, M. (2007). How to search and critically evaluate research literature. *The NIHR RDS for the East Midlands/Yorkshire & the Humber,*

Hickson, M., Fearnley, L., Thomas, J., & Evans, S. (2007). Does a new steam meal catering system meet patient requirements in hospital? *J.Hum.Nutr.Diet., 20*, 476-485.

Hippius, H., & Neundörfer, G. (2003). The discovery of Alzheimer's disease. *Dialogues in Clinical Neuroscience,* (5 (1)), 101- 8. https://doi.org/https://doi.org/10.31887/DCNS.2003.5.1/hhippius

ICN2. (19-21 Nov, 2014). Second International Conference on Nutrition: better nutrition better lives. Paper presented at the

IDDSI. (2020, Dec). *Current Implementation Status.* IDDSI - International Dysphagia Standardisation Initiative. Retrieved Jan 2021, from https://iddsi.org/United-Kingdom

Inzelberg, R., E Afgin, A., Massarwa, M., Schechtman, E., D Israeli-Korn, S., Strugatsky, R., Abuful, A., Kravitz, E., A Farrer, L., & P Friedland, R. (2013). Prayer at midlife is associated with reduced risk of cognitive decline in Arabic women. *Current Alzheimer Research, 10*(3), 340-346.

IoH. (2017, *Institute of Hospitality Qualifications.* Retrieved Nov 2018, from https://www.instituteofhospitality.org/professional-development/qualifications/

Janson, M. (2006). Orthomolecular medicine: the therapeutic use of dietary supplements for anti-aging. *Clinical Interventions in Aging, 1*(3), 261.

Jesson, J., Matheson, L., & Lacey, F. M. (2011). *Doing your literature review : traditional and systematic techniques*. SAGE.

Johnson, P., & Duberley, J. (2000). *Understanding management research: An introduction to epistemology*. Sage.

Johnston, R. (1994). Operations: From Factory to Service Management. *International Journal of Service Industry Management, 5*(1), 49-63.

Johnston, R. (1999). Service operations management: return to roots. *International Journal of Operations and Production Management, 19*(2), 104-124. https://search-proquest-com.lcproxy.shu.ac.uk/docview/232351074/fulltextPDF/E3B9BF14ACED4F9EPQ/1?accountid=13827

Johnston, R. (2005). Service operations management: from the roots up. *International Journal of Operations & Production Management,*

Jones, P., & Lockwood, A. (1995). Hospitality operating systems. *International Journal of Contemporary Hospitality Management, 7*(5), 17-20. https://doi.org/10.1108/09596119510090690

Jones, P., & Mifll, M. (2001). Menu development and analysis in UK restaurant chains. *Tourism and Hospitality Research, 3*(1), 61-71. https://doi.org/10.1177/146735840100300105

Jordan, F. (2006). Teaching and research. *An international handbook of tourism education* (pp. 395-406). Routledge.

Jouanna, J. (2016). 10 Regimen in the Hippocratic Corpus: Diaita and Its Problems. *Ancient Concepts of the Hippocratic* (pp. 209-241). Brill.

Kahana, E., & Kahana, B. (2014). Baby Boomers Expectations of Health and Medicine. *The virtual mentor: VM*, *AMA Journal of Ethics, 16*(5), 380-384.

Kahraman, C., Cebeci, U., & Ruan, D. (2004). Multi-attribute comparison of catering service companies using fuzzy AHP: The case of Turkey. *International Journal of Production Economics, 87*(2), 171-184.

Kaplan, A. (1964). *The Conduct of inquiry: methodology for behavioral science*. Chandler.

Kassander, A. R. (1969). One Man's Poison Is Another Man's Meat: Arizona Academy of Science Annual Address: 1969. *Journal of the Arizona Academy of Science, 5*(4), 199-201.

Keller, H. H. (2006). The SCREEN I (Seniors in the Community: Risk Evaluation for Eating and Nutrition) index adequately represents nutritional risk. *Journal of Clinical Epidemiology, 59*(8), 836-841.

Keller, H. H., & Duizer, L. M. (2014). What do consumers think of pureed food? Making the most of the indistinguishable food. *Journal of Nutrition in Gerontology and Geriatrics, 33*(3), 139-159.

Keller, H., Carrier, N., Duizer, L., Lengyel, C., Slaughter, S., & Steele, C. (2014). Making the Most of Mealtimes (M3): grounding mealtime interventions with a conceptual model. *Journal of the American Medical Directors Association, 15*(3), 158-161.

Killett, A., Bowes, A., Brooker, D., Burns, D., Kelly, F., La Fontaine, J., Latham, I., O'Neill, M., Poland, F., & Wilson, M. (2013). What Makes a Real Difference to Resident Experience? Digging Deep into Care Home Culture: The CHOICE (Care Home Organisations Implementing Cultures of Excellence) Research Report.

Kimberley, A. (2021). Reflexivity as a Vital Skill for Future Researchers and Professionals. *Electronic Journal of Business Research Methods, 19*(1), 14-26.

King, C. (2017). The veracity of Ammianus Marcellinus' description of the Huns. *American Journal of Ancient History* (pp. 77-95). Gorgias Press.

King, N. (2004). Using templates in the thematic analysis of text In: Cassell C, Symon G, eds. Essential Guide to Qualitative Methods in Organizational Research.

Kirk, D. (1995). Hard and soft systems: a common paradigm for operations management. *International Journal of Contemporary Hospitality Management, 7*(5), 13-16. https://doi.org/https://doi.org/10.1108/09596119510090708

Kirk, D., & Pine, R. (1998). *Research in hospitality systems and technology*https://doi.org///doi-org.lcproxy.shu.ac.uk/10.1016/S0278-4319(98)00016-4

Kitwood, T. (1997). *Dementia reconsidered : the person comes first*. Open University.

Kitwood, T. (1987). Dementia and its pathology: in brain, mind or society? *Free Associations, 1*(8), 81-93.

Kitwood, T., & Bredin, K. (1992). Towards a theory of dementia care: personhood and well-being. *Ageing & Society, 12*(3), 269-287.

Klosse, P. (2013). *The essence of gastronomy: Understanding the flavor of foods and beverages*. CRC Press.

Kondrup, J., Johansen, N., Plum, L. M., Bak, L., Larsen, I. H., Martinsen, A., Andersen, J. R., Baernthsen, H., Bunch, E., & Lauesen, N. (2002). Incidence of nutritional risk and causes of inadequate nutritional care in hospitals. *Clinical Nutrition, 21*(6), 461-468.

Kondrup, J. (2004). Proper hospital nutrition as a human right. *Clinical Nutrition, 23*(2), 135-137.

Kotecha, V. (2020, May,). *The hidden profits behind collapsing care homes.* Retrieved 29 July 2021, from https://chpi.org.uk/blog/the-hidden-profits-behind-collapsing-care-homes/

Kothari, C. R. (2011). *Research Methodology: Methods and Techniques*. New Age International (P) Limited.

Kozak, M. A., & Gürel, D. A. (2015). Service design in hotels: A conceptual review. *Tourism (13327461), 63*(2), 225- 240. http://search.ebscohost.com/login.aspx?direct=true&db=hjh&AN=103188525&site=ehost-live

Kuhn, T. S. (1970). *The Structure of scientific revolutions* (3rd ed.Reprint 1996 ed.). University of Chicago.

Kurti, N., & This-Benckhard, H. (1994). Chemistry and Physics in the Kitchen. *Scientific American, 270*(4), 66-71.

Laing, W. (2017). *Care of older people: Market Report. 28th Ed*. London: LaingBuisson.

Laing, W. (2018). *Care of older people: Market Report. 29th Ed*. London: LaingBuisson.

Laing, W. (2021). *Care Homes for Older People. UK Market Report*. *32nd Ed*. London: Laing Buisson.

Lam, P., Stanschus, S., Zaman, R., & Cichero, J. A. Y. (2017). The International Dysphagia Diet Standardisation Initiative (IDDSI) framework: the Kempen pilot. *British Journal of Neuroscience Nursing, 13*, S18-S26. https://doi.org/10.12968/bjnn.2017.13.Sup2.S18

Lashley, C. (2000). In search of hospitality: Towards a theoretical framework. *International Journal of Hospitality Management, 19*(1), 3-15.

Lashley, C. (2004). Escaping the tyranny of relevance: some reflections on hospitality management education.

Lashley, C. (2008). Studying Hospitality: Insights from Social Sciences1. *Scandinavian Journal of Hospitality and Tourism, 8*(1), 69-84. https://doi.org/10.1080/15022250701880745

Lashley, C. (2015). Hospitality and hospitableness. *Research in Hospitality Management, 5*(1), 1-7.

Lashley, C., Lynch, P., & Morrison, A. J. (2007). *Hospitality a social lens*. Elsevier.

Lavelle, C., This, H., Kelly, A. L., & Burke, R. (2021). *Handbook of Molecular Gastronomy: Scientific Foundations, Educational Practices, and Culinary Applications*. CRC Press.

Lee, A. Y., Pant, A., Pojchanun, K., Lee, C. P., An, J., Hashimoto, M., Tan, U., Leo, C. H., Wong, G., & Chua, C. K. (2021). Three-Dimensional Printing of Food Foams Stabilized by Hydrocolloids for Hydration in Dysphagia. *International Journal of Bioprinting, 7*(4)

Liu, W., Cheon, J., & Thomas, S. A. (2014). Interventions on mealtime difficulties in older adults with dementia: a systematic review. *International Journal of Nursing Studies, 51*(1), 14-27.

Livingston, G. E. (1979). Development of the systems approach to the design of food service operations. *Food Service Systems: Analysis, Design and Implementation,*

Lugosi, P. (2003). *The production and consumption of hospitality space*

Lugosi, P. (2007). Consumer participation in commercial hospitality. *International Journal of Culture, Tourism and Hospitality Research,*

Lugosi, P. (2008). Hospitality spaces, hospitable moments: Consumer encounters and affective experiences in commercial settings. *Journal of Foodservice, 19*(2), 139-149.

Lugosi, P. (2009). Ethnography, ethnographers and hospitality research: communities, tensions and affiliations. *Tourism and Hospitality Planning & Development, 6*(2), 95-107. https://doi.org/10.1080/14790530902981431

Lugosi, P., Lynch, P., & Morrison, A. (2009). Critical hospitality management research. *The Service Industries Journal, 29*(10), 1465-1478. https://doi.org/10.1080/02642060903038879

Lynch, P., Molz, J. G., Mcintosh, A., Lugosi, P., & Lashley, C. (2011). Theorizing hospitality. *Hospitality & Society, 1*(1), 3-24.

Mac Con Iomaire, M. (2009). *The emergence, development, and influence of French haute cuisine on public dining in Dublin restaurants 1900-2000: An Oral History. PhD, Technological University Dublin* https://doi.org/10.21427/D79K7H

Mac Con Iomaire, M. (2021). Applying a Food Studies Perspective to Irish Studies.' In: Eamon Maher and Eugene O'Brien eds. *Reimagining Irish Studies for the Twenty-first century*. Oxford: Peter Lang. pp. 19-38.

Mac Con Iomaire, M., & Maher, E. (2014). *Tickling the Palate: Gastronomy in Irish Literature and Culture*. Oxford: Peter Lang.

Macdiarmid, J. I. (2013). Is a healthy diet an environmentally sustainable diet? *Proceedings of the Nutrition Society*, *72*(1), 13-20.

Maguire, K., & Howard, M. (2001). *A study of the social and physical environment in catering kitchens and the role of the chef in promoting positive health and safety behaviour*. Taylor & Francis. https://doi.org/- 10.1080/09603120126720

Mahadevan, M. (2012). Menu engineering for assisted-living elderly: a public health imperative. *Perspect Public Health, 132*(5), 211- 212. https://doi.org/10.1177/1757913912457313

Maharaj, J. (2020). *Take back the tray revolutionizing food in hospitals, schools, and other institutions*. ECW Press.

Malherbe, J. A. (2023). Troubling the Golden Thread: a post-qualitative inquiry into the tacit dimension.

Mamzoori-Stamford, J. (2015, NACC and HCA launch health and social care catering NVQ. *The Caterer,* https://www.thecaterer.com/articles/356683/nacc-and-hca-launch-health-and-social-care-catering-nvq

Manthorpe, J., & Iliffe, S. (2021). Care homes: averting market failure in a post-covid-19 world. *Bmj; Bmj, 372*, n118. https://doi.org/10.1136/bmj.n118

Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th ed.. ed.). Sage Publications.

Mason-Baughman, M. B. (2012) Applied Behavior Analysis as a treatment framework for various dementias. Presentation to the American Speech-Language Hearing Association (ASHA). Atlanta, Georgia, USA

Mathey, M. A. M., Vanneste, V. G. G., de Graaf, C., de Groot, L. C., & van Staveren, W. A. (2001). Health Effect of Improved Meal Ambiance in a Dutch Nursing Home: A 1-Year Intervention

Study. *Preventive Medicine, 32*(5), 416 - 423. https://doi.org/http://dx.doi.org.lcproxy.shu.ac.uk/10.1006/pmed.2001.0816

McAuley, J. (2014). *Organization theory challenges and perspectives*. Pearson.

McCormack, B. (2004). Person-centredness in gerontological nursing: an overview of the literature. *Journal of Clinical Nursing, 13*, 31-38.

McCormack, B., & McCance, T. (2016). *Person-centred practice in nursing and health care: theory and practice*. John Wiley & Sons.

McFadden, S. H., & McFadden, J. T. (2011). *Aging Together: Dementia, Friendship, and Flourishing Communities*. The John Hopkins University Press.

Merriam-Webster. (2021), *Gastronomy. In Merriam-Webster.com dictionary. .* Retrieved August 2021, from https://www.merriam-webster.com/dictionary/gastronomy

Miller, M. A., & Kinsel, K. (1998). Patient-Focused Care and its Implications for Nutrition Practice. *Journal of the American Dietetic Association, 98*(2), 177-181. https://doi.org/10.1016/S0002-8223(98)00043-1

Milte, R., Bradley, C., Miller, M., Farrer, O., & Crotty, M. (2018). How Widely are Supportive and Flexible Food Service Systems and Mealtime Interventions Used for People in Residential Care Facilities? A Comparison of Dementia-Specific and Nonspecific Facilities. *Healthcare*, *6*(4), 140. https://doi.org/10.3390/healthcare6040140

Miranda-Castillo, C., Woods, B., & Orrell, M. (2010). People with dementia living alone: what are their needs and what kind of support are they receiving? *International Psychogeriatrics, 22*(4), 607-617. https://doi.org/10.1017/S104161021000013X

Mitchell, S. L. (2019). Care of patients with advanced dementia. *Up to Date.Alphen Aan Den Rijn, Netherlands: Wolters Kluwer, Up to Date Inc,*

Murphy, J. (2022). Improving nutrition and hydration in older people with dementia in care homes. *Nursing Older People.*, *34*(5).

Murphy, J. L., Holmes, J., & Brooks, C. (2017). Nutrition and dementia care: developing an evidence-based model for nutritional care in nursing homes. *BMC Geriatrics, 17*(1), 55. https://doi.org/10.1186/s12877-017-0443-2

Murray, L. (2021). Your dinner is printed [Food-3D Printing]. *Engineering & Technology, 16*(2), 34-36.

National Careers Service - Chef. (2017, https://nationalcareers.service.gov.uk/job-profiles/chef

Navarro, V., Serrano, G., Lasa, D., Luis Aduriz, A., & Ayo, J. (2012). Cooking and nutritional science: Gastronomy goes further. *International Journal of Gastronomy and Food Science, 1*(1), 37-45. https://doi.org/http://dx.doi.org/10.1016/j.ijgfs.2011.11.004

Nestle, M., & McIntosh, W. A. (2010). Writing the food studies movement. *Food, Culture & Society, 13*(2), 159-179.

Newman, T. (2020, Feb,). Why is nutrition so hard to study? *Medical News Today,* https://www.medicalnewstoday.com/articles/why-is-nutrition-so-hard-to-study?c=1258887548774

NHS Ethics Committee. (2015). *Telephone conversation regarding ethics*

NICE. *Prevent or delay the onset of dementia.* https://www.nice.org.uk/. Retrieved 2018, from https://www.nice.org.uk/about/what-we-do/into-practice/measuring-the-use-of-nice-guidance/impact-of-our-guidance/niceimpact-dementia/ch1-prevent-or-delay-onset-of-dementia

NICE. (2006). Nutrition support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition.

Nolan, M. R., Davies, S., Brown, J., Keady, J., & Nolan, J. (2004). Beyond 'person-centred'care: a new vision for gerontological nursing. *Journal of Clinical Nursing, 13*, 45-53.

Nordqvist. C. (2017, September). *Nutrition: What is it and why is it important?* Medical News Today. Retrieved Feb 26, 2018, from https://www.medicalnewstoday.com/articles/160774.php

Oates, J., Carpenter, D., Fisher, M., Goodson, S., Hannah, B., Kwiatkowski, R., Prutton, K., Reeves, D., & Wainwright, T. *The British Psychological Society Code of Human Research Ethics*. The British Psychological Society.

Ofori, W., & Frommann, J. (2013). *The challenge of feeding the patients with dementia* http://www.theseus.fi/handle/10024/66947

Osei, Y. M. (2014). *Exploring Sensory Design in Therapeutic Architecture* https://doi.org/https://curve.carleton.ca/830897ce-74d7-4928-8bea-0db6163341d7

Ozdemir, B. (2012). A review on menu performance investigation and some guiding propositions. *Journal of Foodservice Business Research, 15*(4), 378-397.

Ozga, J. (2000). *Policy research in educational settings : contested terrain*. Open University Press.

Packer, T. (2003). Turning rhetoric into reality. *Community Mental Health Nursing and Dementia Care: Practice Perspectives* (pp. 104-119). Open University Press, Buckingham.

Painter, V., Le Couteur, D. G., & Waite, L. M. (2017). Texture-modified food and fluids in dementia and residential aged care facilities. *Clinical Interventions in Aging, 12*, 1193.

Panebianco, M., Marchese-Ragona, R., Masiero, S., & Restivo, D. A. (2020). Dysphagia in neurological diseases: a literature review. *Neurological Sciences; Neurol Sci, 41*(11), 3067-3073. https://doi.org/10.1007/s10072-020-04495-2

Pant, A., Lee, A. Y., Karyappa, R., Lee, C. P., An, J., Hashimoto, M., & Zhang, Y. (2021). 3D food printing of fresh vegetables using food hydrocolloids for dysphagic patients. *Food Hydrocolloids*, *114*, 106546.

Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice*. Sage publications.

Payne-Palacio, J., & Theis, M. (2016). *Foodservice management : principles and practices* (Thirteenth edition..; Global edition.. ed.). Boston : Pearson.

Perivolaris, A., LeClerc, C. M., Wilkinson, K., & Buchanan, S. (2006). An enhanced dining program for persons with dementia. *Alzheimer's Care Quarterly, 7*(4), 258-267.

Perry, C. (1998). A Structured Approach for Presenting Theses. *Australasian Marketing Journal, 6*(1), 63-85. https://doi.org/10.1016/S1441-3582(98)70240-X

Petticrew, M., & Roberts, H. (2005). *Systematic reviews in the social sciences : a practical guide*. Blackwell.

Pine, R. (1987). *Management of technological change in the catering industry*. Avebury.

Piqueras-Fiszman, B., Varela, P., & Fiszman, S. (2013). How Does the Science of Physical and Sensory Properties Contribute to Gastronomy and Culinary Art? *Journal of Culinary Science & Technology, 11*(1), 96-109. https://doi.org/10.1080/15428052.2012.728983

Plano Clark, V. L., Foote, L. A., & Walton, J. B. (2018). Intersecting mixed methods and case study research: design possibilities and challenges. *International Journal of Multiple Research Approaches, 10*(1), 14-29.

Pliner, P., & Bell, R. (2009). A table for one: the pain and pleasure of eating alone. *Meals in science and practice* (pp. 169-189). Elsevier.

Pohl, C. D. (1999). *Making Room: Recovering hospitality as a christian tradition*. Wm. B. Eerdmans Publishing.

Pollock, R. (2003). *Sound, hearing and the acoustic environment*. Sterling University.

Poth, C. N. (2018). *Innovation in mixed methods research: A practical guide to integrative thinking with complexity*. Sage.

Potter, J. K. (2016). *Cooking for geeks real science, great cooks, and good food* (2nd ed.). O'Reilly.

Prince, M., Bryce, R., Albanese, E., Wimo, A., Ribeiro, W., & Ferri, C. P. (2013). The global prevalence of dementia: A systematic review and metaanalysis. *Alzheimer's & Dementia; Alzheimers Dement, 9*(1), 63-75.e2. https://doi.org/10.1016/j.jalz.2012.11.007

Prince, M., Knapp, M., Guerchet, M., McCrone, P., Prina, M., Comas-Herrera, A., Wittenberg, R., Adelaja, B., Hu, B., & King, D. (2014). *Dementia UK: -overview.* ().Alzheimer's Society. https://www.alzheimers.org.uk/about-us/policy-and-influencing/dementia-uk-report

Public Health England (PHE) knowledge and intelligence service. (2016). *Recent Trends in Life Expectancy at Older Ages: Update to 2014.* (). PHE knowledge and intelligence service.

Puckett, R. P. (2013). *Food service manual for health care institutions* (4th ed.). Jossey-Bass.

Radice, J. (1993). *Menu Design*. PB C International, Incorporated.

Rasmussen, H. H., Kondrup, J., Ladefoged, K., & Staun, M. (1999). Clinical nutrition in Danish hospitals: a questionnaire-basednutrition among doctors and nurses. *Clinical Nutrition, 18*(3), 153-158.

Rasmussen, H. H., Kondrup, J., Staun, M., Ladefoged, K., Kristensen, H., & Wengler, A. (2004). Prevalence of patients at nutritional risk in Danish hospitals. *Clinical Nutrition, 23*(5), 1009-1015.

Reed: Chef Jobs. Retrieved December 2021, from https://www.reed.co.uk/jobs/chef-jobs

Reed.co.uk.*Average Chef salary in the UK.* www.reed.co.uk. Retrieved August 2021, from https://www.reed.co.uk/average-salary/average-chef-salary

Reichler, G., & Dalton, S. (1998). Chefs' Attitudes Toward Healthful Food Preparation are More Positive Than Their Food Science Knowledge and Practices. *Journal of the American Dietetic Association, 98*(2), 165-169. https://doi.org/http://dx.doi.org.lcproxy.shu.ac.uk/10.1016/S0002-8223(98)00041-8

Remsburg, R. E., Luking, A., Bara, P., Radu, C., Pineda, D., Bennett, R. G., & Tayback, M. (2001). Impact of a buffet-style dining program on weight and biochemical indicators of nutritional status in nursing home residents: a pilot study. *Journal of the American Dietetic Association, 101*, 1460-1463.

Riddiford, Scott. Gazibarich, Boris. Milosavljevic, Marianna. (2000). What is the role of dietetic support staff? A survey of dietetic managers in New South Wales public hospitals. *Australian Journal of Nutrition and Dietetics., 57*(4), 215. https://www-wiley-com.hallam.idm.oclc.org/en-us

Rimmington, M., Smith, J. C., & Hawkins, R. (2006). Corporate social responsibility and sustainable food procurement. *British Food Journal,*

Rivier, M., Collignan, A., Meot, J., Patrick, S., & Madournier, M. (2018). Modeling a process combining a cereal dryer with a bioenergy unit for equipment design in developing countries. *Journal of Food Process Engineering, 41*(6)

Rodgers, S. (2005). Selecting a food service system: a review. *International Journal of Contemporary Hospitality Management, 17*(2), 147-156. https://doi.org/10.1108/09596110510582341

Rodgers, S., & Assaf, A. (2007). Quantitative methods in measuring productivity of foodservice systems. Journal of Foodservice Business Research, 9(1), 39-54.

Ross, L. J., Mudge, A. M., Young, A. M., & Banks, M. (2011). Everyone's problem but nobody's job: Staff perceptions and explanations for poor nutritional intake in older medical patients: Hospital nutrition: Everyone's problem, nobody's job. *Nutrition & Dietetics, 68*(1), 41-46. https://doi.org/10.1111/j.1747-0080.2010.01495.x

Rowley, J. (2014). Designing and using research questionnaires. *Management Research Review, 37*(3), 308-330. https://doi.org/10.1108/MRR-02-2013-0027

Rudgard, O., & Swinford, S. (2018, 20 March,). Care cap must be introduced to spare dementia sufferers. *Daily Telegraph* https://www.telegraph.co.uk/news/2018/03/20/care-cap-must-introduced-spare-dementia-sufferers-punitive-care/

Salisbury NHS Foundation Trust. (2014). *Quality Account 2013 / 2014*

Sara, M. Y., Bartlett, R., & Brannelly, T. (2018). Dementia in Eastern Mediterranean countries: A systematic review. *Dementia,* , 1471301217753776. https://doi.org/10.1177/1471301217753776

Saunders, M. N. K., & Rojon, C. (2011). On the attributes of a critical literature review. *Coaching: An International Journal of Theory, Research & Practice, 4*(2), 156-162. https://doi.org/10.1080/17521882.2011.596485

Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (Seventh edition. ed.). London. Pearson.

Saunders M, Lewis P and Thornhill A. (2019). Research methods for business students. (Eighth edition. ed. London: Pearson.

Savva, G. M., Wharton, S. B., Path, F. R. C., Ince, P. G., Forster, G., Matthews, F. E., & Brayne, C. (2009). Age, neuropathology, and dementia.(Report). *The New England Journal of Medicine, 360*(22), 2302. https://doi.org/10.1056/NEJMoa0806142

Schatzman, L., & Strauss, A. L. (1973). *Field research: Strategies for a natural sociology*. Prentice Hall.

Schauder, P. (2001) Organising and managing nutritional care in hospitals. Paper presented at the *European Forum Food and Nutritional Care in Hospitals: Acting Together to Prevent Undernutrition,* 129.

Schrödinger, E. (1996). *'Nature and the Greeks' and 'Science and Humanism'*. Cambridge University Press.

Schwartz, D. B., Albert, B., Wesley, J. R., Gustavo, K., Pontes-Arruda Alessandro, Márquez, H. A., James, R. L., Cheryl, M., Lysen, L. K., & Angela, D. (2014). Gastrostomy Tube Placement in Patients With Advanced Dementia or Near End of Life. *Nutrition in Clinical Practice, 29*(6), 829-840. https://doi.org/10.1177/0884533614546890

Sevin, H, D. (2018). Hotel Services In Hospitals. *Journal of Tourism and Gastronomy Studies, 6*(1), 451-459.

Shapin, S. (1995). *A social history of truth: Civility and science in seventeenth-century England*. University of Chicago Press.

Sharp, J. A., Howard, K., & Peters, J. (2016). *The management of a student research project* (3rd ed.). Routledge. https://doi.org/10.4324/9781315238449

Shepherd, G. M. (2011). *Neurogastronomy: how the brain creates flavor and why it matters* Columbia University Press.

Sheppard, L. (2010). Catering for older people and those with dementia: should food provision be legislated or regulated? *Working with Older People, 14*(1), 29-33.

Sidenvall, B., & Ek, A. (1993). Long-term care patients and their dietary intake related to eating ability and nutritional needs: nursing staff interventions. *Journal of Advanced Nursing, 18*(4), 565-573.

Sidenvall, B., & Fjellstrom, C. (1994). The meal situation in geriatric care—intentions and experiences. *Journal of Advanced Nursing, 20*(4), 613-621.

Silverman, D. (2005). *Doing qualitative research: a practical handbook* (2nd ed.. ed.). SAGE.

Silverman, H. (2006). Nutrition and Ceremony. *EXPLORE: The Journal of Science and Healing, 2*(1), 60-61. https://doi.org/10.1016/j.explore.2005.10.014

Skills for Health, Health Education England & Skills for Care. (2018, *Dementia Training Standards Framework.* https://www.hee.nhs.uk/. https://skillsforhealth.org.uk/wp-content/uploads/2021/01/Dementia-Core-Skills-Education-and-Training-Framework.pdf

Smith, B. (1995). Formal ontology, common sense and cognitive science. *International Journal of Human - Computer Studies, 43*(5-6), 641-667. https://doi.org/10.1006/ijhc.1995.1067

Smith, J., Andersson, G., Gourlay, R., Karner, S., Mikkelsen, B. E., Sonnino, R., & Barling, D. (2016). Balancing competing policy demands: the case of sustainable public sector food procurement. *Journal of Cleaner Production, 112*, 249-256.

Sonnino, R., & McWilliam, S. (2011). Food waste, catering practices and public procurement: A case study of hospital food systems in Wales. *Food Policy, 36*(6), 823-829.

Spence, C. (2017). *Gastrophysics: The new science of eating*. Viking.

Spence, C., & Piqueras-Fiszman, B. (2014). *The perfect meal: the multisensory science of food and dining*. John Wiley & Sons.

Stajcic, N. (2013). Understanding culture: Food as a means of communication. *Hemispheres*, (28), 77.

Stratton, R., Beggs, E., Holmes, E., Burden, S., & Cawood, A. (2021). *National Survey of Malnutrition and Nutritional Care in Adults.* ().BAPEN.

Stroebele, N., & De Castro, J. M. (2004). Effect of ambience on food intake and food choice. *Nutrition, 20*(9), 821-838. https://doi.org/http://dx.doi.org/10.1016/j.nut.2004.05.012

Suominen, M., Muurinen, S., Routasalo, P., Soini, H., I, S., Peiponen, A., H, F., & K, H. P. (2005). Malnutrition and associated factors among aged residents in all nursing homes in Helsinki. *European Journal of Clinical Nutrition, 59*(4), 578. https://doi.org/10.1038/sj.ejcn.1602111

Tadd, W., Hillman, A., Calnan, S., Calnan, M., Bayer, T., & Read, S. (2011). Dignity in Practice: An exploration of the care of older adults in acute NHS Trusts. *NIHR SDO Report,*

Telfer, E. (2001). The philosophy of hospitableness. In C. Lashley, & A. Morrison (Eds.), *In Search of Hospitality; theoretical perspectives and debates* (pp. 38). Butterworth-Heinemann.

The Beryl Institute. (2016, *Integrating Healthcare and Hospitality to Create a Patient Experience Academy.* http://www.theberylinstitute.org/?page=CASE0415

The British Psychological Society. (2010). *Code of Human Research Ethics*. The British Psychological Society.

The Caterer. (2006, April). Hospital catering: service of hot meals. https://www.thecaterer.com/news/foodservice/hospital-catering-service-of-hot-meals

The Malnutrition Task Force. (2016). *Addressing Malnutrition: Care Homes Mini Guide* (http://www.malnutritiontaskforce.org.uk/wp-content/uploads/2014/07/Addressing_Malnutrition_Care_Homes_Mini_Guide.pdf ed.)

This- Benkhard, H. (2006a). Bread and Crackers. (pp. 230). Columbia University Press. https://doi.org/10.7312/this13312.72

This- Benkhard, H. (2006b). *Molecular gastronomy*. Columbia University Press.

This- Benkhard, H. (2009). *Building a meal: from molecular gastronomy to culinary constructivism* (M. B. DeBevoise Trans.). Columbia University Press.

This- Benkhard, H. (2011). Molecular Gastronomy in France. *Journal of Culinary Science & Technology, 9*(3), 140-149. https://doi.org/10.1080/15428052.2011.600212

This- Benkhard, H. (2007). *Kitchen mysteries : revealing the science of cooking = Les secrets de la casserole*. Columbia University Press.

This- Benkhard, H. (2012). *La cuisine note à note: en douze questions souriantes*. Belin.

Traynor, B. J., & Rademakers, R. (2017). Dementia Research—A Roadmap for the Next Decade. *JAMA Neurology, 74*(2), 141-142. https://doi.org/10.1001/jamaneurol.2016.5004

Trnka, P. (1997). Women, Animals, and the Unknown: Hume's Philosophy of Nature. *Journal of the British Society for Phenomenology, 28*(3), 255-272. https://doi.org/10.1080/00071773.1997.11007204

Troyna, B. (1994). Critical social research and education policy. *British Journal of Educational Studies, 42*(1), 70-84. https://doi.org/10.1080/00071005.1994.9973984

van den Noort, M., & Bosch, P. (2010). *The twilight of dementia*. Little, Brown and Co. https://doi.org/10.1016/S0140-6736(10)62023-5

van Hoof, J., Blom, M. M., Post, H. N. A., & Bastein, W. L. (2013). Designing a "Think-Along Dwelling" for People With Dementia: A Co-Creation Project Between Health Care and the Building Services Sector. *Null, 27*(3), 299-332. https://doi.org/10.1080/02763893.2013.813424

Van Ittersum, K., & Wansink, B. (2012). Plate size and color suggestability: the Delboeuf Illusion's bias on serving and eating behavior. *Journal of Consumer Research, 39*(2), 215. http://shu.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwY2AwNtIz0EUrE0yTU43SzIyNU83MLExMEw0t0xKB_MQ0c4vkJHPTFGOUYwyQCng3IQam1DxRBlk31xBnD11QoRlfADmGIR58x

Y6lqYmxsRgDC7CvnCrBoJCSbGxsYmqYmJJmkmhikWacmJiSbG5pmGhokWicCOyNSTKIYTcDAAMDLmg

Veal, A. J. (2011). *Research methods for leisure and tourism: a practical guide* (4th ed.). Financial Times Prentice Hall.

Vega, C., Ubbink, J., & Van der Linden, E. (Eds.). (2012). *The Kitchen as Laboratory: reflections on the science of food and cooking*. Columbia University Press.

Veith, I., & Barnes, L. L (2015). *The yellow emperor's classic of internal medicine*. University of California Press. https://doi.org/10.1525/9780520963245 .

Vernooij-Dassen, M., Leatherman, S., & Olde Rikkert, M. (2011). Quality of care in frail older people: the fragile balance between receiving and giving. *Bmj, 342*(mar25 2), d403. https://doi.org/10.1136/bmj.d403

VOICES. (1998). Eating well for older people with dementia - Report of expert working group.

Walker, R. (1985). *Doing research: a handbook for teachers*. Methuen.

Walsham, G. (2006). Doing interpretive research. *European Journal of Information Systems, 15*(3), 320-330.

Walters, S. (2018, 25 March). I want 'NHS tax' to fund old age, says Jeremy Hunt. *Mail Online* https://www.dailymail.co.uk/news/article-5540499/I-want-NHS-tax-fund-old-age-says-Jeremy-Hunt.html

Watkins, R., Goodwin, V. A., Abbott, R. A., & Tarrant, M. (2019). Eating well in care homes: Testing the feasibility of a staff training programme aimed at improving social interaction and choice at mealtimes. *International Journal of Older People Nursing, 14*(3), n/a. https://doi.org/10.1111/opn.12247

Watson, R., & Green, S. M. (2006). Feeding and dementia: a systematic literature review. *J Adv Nurs 54*, 86-93.

Webb, C. (1992). *The use of the first person in academic writing: objectivity, language and gatekeeping*. Blackwell Science. https://doi.org/10.1111/j.1365-2648.1992.tb01974.x

Wellington, J. J., & University of Sheffield. Division of Education. (1996). *Methods and issues in educational research*. University of Sheffield Division of Education.

Wesoły, M. (2011a). The Learned Banqueteurs or The Deipnosophists? About the Anti-Philosophical Significance of Athenaeus' Dialogue. *Archiwum Historii Filozofii I Myśli Społecznej, 56*

Wesoły, M. (2011b). The Learned Banqueteurs or The Deipnosophists? About the Anti-Philosophical Significance of Athenaeus' Dialogue. *Archiwum Historii Filozofii I Myśli Społecznej, 56*

West Sussex Adults Safeguarding Board. (2014, June). *Orchid View - Serious Case Review.* https://www.westsussexsab.org.uk/media/xxzbsc2z/orchid-view-serious-case-review.pdf.

Westaby, D., Young, A., O'Toole, P., & Sanders, D. S. (2014). *BSG guideline on the provision of a percutaneously placed enteral tube feeding service.* (). London: https://www.bsg.org.uk/clinical-resource/bsg-guideline-on-the-provision-of-a-percutaneously-placed-enteral-tube-feeding-service/

Westaby, D., Young, A., O'Toole, P., Smith, G., & Sanders, D. S. (2010). The provision of a percutaneously placed enteral tube feeding service. *Gut, 59*(12), 1592-1605.

Willett, R. (1969). Hospital food service systems. *Cornell Hotel and Restaurant Administration Quarterly, 10*(1), 100-108.

Wilson, A., Evans, S., & Frost, G. (2000). A comparison of the amount of food served and consumed according to meal service system. *Journal of Human Nutrition and Dietetics, 13*(4), 271-275. https://doi.org/10.1046/j.1365-277x.2000.00235.x

Wimo, A., Jönsson, L., Gustavsson, A., McDaid, D., Ersek, K., Georges, J., Gulácsi, L., Karpati, K., Kenigsberg, P., & Valtonen, H. (2011). The economic impact of dementia in Europe in 2008? cost estimates from the Eurocode project. *International Journal of Geriatric Psychiatry, 26*(8), 825-832. https://doi.org/10.1002/gps.2610

Woodman, J. S., Clark, J., & Rimmington, M. (1996). Productivity in Hospital Kitchens. *The Service Industries Journal, 16*(3), 368-378. https://doi.org/10.1080/02642069600000033

Wright, L., Hickson, M., & Frost, G. (2006). Eating together is important: using a dining room in an acute elderly medical ward increases energy intake. *Journal of Human Nutrition and Dietetics, 19*(1), 23-26. https://doi.org/10.1111/j.1365-277X.2006.00658.x

Xu, Y. (2013). *The relationship between the ownership of elder care homes and quality of care in urban China* Thesis, Georgia State University. http://scholarworks.gsu.edu/gerontology_theses/35

Yin, R. K. (1994). *Case study research : design and methods* (2nd ed.. ed.). Sage.

Yin, R. K. (2013). *Case study research : design and methods* (5 edition.. ed.). SAGE.

Zellner, D. A., Lankford, M., Ambrose, L., & Locher, P. (2010). Art on the plate: Effect of balance and color on attractiveness of, willingness to try and liking for food. *Food Quality and Preference, 21*(5), 575-578. https://doi.org/10.1016/j.foodqual.2010.02.007

Zellner, D. A., Siemers, E., Teran, V., Conroy, R., Lankford, M., Agrafiotis, A., Ambrose, L., & Locher, P. (2011). Neatness counts. How plating affects liking for the taste of food. *Appetite, 57*(3), 642-648. https://doi.org/10.1016/j.appet.2011.08.004

Appendices

Appendix 1 Definition of Terms

Word / Term	Explanation
Alzheimer's Disease	Alzheimer's disease is the most common cause of dementia. The word dementia describes a set of symptoms that can include memory loss and difficulties with thinking, problem-solving or language.
Caterer	Person or entity whose responsibility or business is to provide food, drink, and related services.
Catering	The activity of providing food, drink, and related services for a large number of people
Dementia	A brain disorder generally, but not exclusively, found in older people
Dietitian	A person who specialises in dietetics and the regulation of diets and must be academically qualified to do so.
Dysphagia	Is the medical term for the symptom of difficulty or discomfort in swallowing, as a symptom of disease.
HOLSERV	A system used to Examine the various dimensions of service quality in the hospitality industry by increasing the SERVQUAL scale to include eight new items that specifically relate to the hotel and hospitality industries, subsequently referred to as HOLSERV.
Hospitality	The quality or disposition of receiving and treating guests and strangers in a warm, friendly, generous way. Also relates to the commercial, or non-profit, business of catering for, of looking after or entertaining clients in commercial or non-profit setting

Malnutrition	Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients (World Health Organisation, 2020).
Molecular Cuisine	The application of Molecular Gastronomy scientific techniques in cooking food
Molecular Gastronomy	Molecular gastronomy, **the scientific discipline concerned with the physical and chemical transformations that occur during cooking**. The name is sometimes mistakenly given to the application of scientific knowledge to the creation of new dishes and culinary techniques.
Nourishment	The food and drink (hydration) needed by living organisms (Mankind) for growth, good health and maintenance of the body / tissue. Also, the science or study that deals with food and nourishment, especially in humans.
Nutrition	The process of taking food into the body and absorbing the nutrients in those foods; The act or process of nourishing; The study of nutrition, especially in humans.
Nutritionist	A specialist in the study of nutrition. In the United Kingdom, anyone can call themselves a nutritionist without formal education or qualification.
Nutrition Screening	The first step in identifying subjects who may be at nutritional risk or potentially at risk, and who may benefit from appropriate nutritional intervention. It is a rapid, simple, and general procedure used by nursing, medical, or other staff on first contact with the subject so that clear guidelines for action can be implemented and appropriate nutritional advice provided. Some subjects may just need help and advice with eating and

	drinking; others may need to be referred for more expert advice (Stratton. et al., 2021).
Patient Centred Care	The IOM (Institute of Medicine) defines patient-centered care as: “Providing care that is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions.”
Resident Directed Catering / Hospitality Services.	A strategy to improve food and food service quality within long term residential care homes for the elderly, infirm and / or mentally impaired.

Appendix 2. List of Abbreviations

BAPEN	British Society for Parenteral and Enteral Nutrition
B2B	Business to Business
BDA	British Dietetic Association
CHCM	Care Home Catering Management (magazine)
CHM	Care Home Management (magazine)
CS	Care Staff
DBA	Doctor of Business Administration
DN	Director of Nursing
DoH	Department of Health (UK)
DT	Dietitian
EMI	Elderly and Mentally Impaired
F&B	Food and Beverage
FSA	Food Standards Agency
HACCP	Hazard Analysis and Critical Control Point
IDDSI	International Dysphagia Diet Standardisation Initiative
LTCH	Long Term Care Home
MUST	Malnutrition Universal Screening Tool
NACC	National Association of Care Catering
NHS	National Health Service (UK)
SBS	Sheffield Business School
SHU	Sheffield Hallam University
SLT	Speech and Language Therapist
SME	Small and Medium sized Enterprises

Appendix 3 SHUREC 1

Sheffield Hallam University

RESEARCH ETHICS CHECKLIST (SHUREC1)

This form is designed to help staff and postgraduate research students to complete an ethical scrutiny of proposed research. The SHU Research Ethics Policy should be consulted before completing the form.

Answering the questions below will help you decide whether your proposed research requires ethical review by a Faculty Research Ethics Committee (FREC). In cases of uncertainty, members of the FREC can be approached for advice.

Please note: staff based in university central departments should submit to the University Ethics Committee (SHUREC) for review and advice.

The final responsibility for ensuring that ethical research practices are followed rests with the supervisor for student research and with the principal investigator for staff research projects.

Note that students and staff are responsible for making suitable arrangements for keeping data secure and, if relevant, for keeping the identity of participants anonymous. They are also responsible for following SHU guidelines about data encryption and research data management.

The form also enables the University and Faculty to keep a record confirming that research conducted has been subjected to ethical scrutiny.

- *For postgraduate research student projects, the form should be completed by the student and counter-signed by the supervisor and kept as a record showing that ethical scrutiny has occurred. Students should retain a copy for inclusion in their thesis, and staff should keep a copy in the student file.*
- *For staff research, the form should be completed and kept by the principal investigator.*

Please note if it may be necessary to conduct a health and safety risk assessment for the proposed research. Further information can be obtained from the Faculty Safety Co-ordinator.

General Details

Name of principal investigator or postgraduate research student	Norman Dinsdale
SHU email address	n.dinsdale@shu.ac.uk
Name of supervisor (if applicable)	David Egan
email address	d.j.egan@shu.ac.uk
Title of proposed research	Living with Dementia: Care Home Catering Provision through Resident Directed Food Services
Proposed start date	1st registered on DBA 2013. 1st November 2016 (data collection begins)
Proposed end date	Jan – June 2018 Writing Up Revised to December 2021 due to illness
Brief outline of research to include, rationale & aims (500 - 750 words).	Many reports on caring for people living with dementia identify nourishing food and drinks as an essential requirement. The ultimate research study will aim to investigate methods and constructs by which caterers can improve the F&B services they offer to people living with dementia in long term care homes whilst improving and maintaining their competitive edge, unique service proposition and profitability. The objectives are: To understand the working relationships between the caterers, Dietitians, nutritionists and nursing / medical staff. To explore food service delivery methods and quality constructs suitable for deployment within Long Term Care Home catering environments. To investigate the current state of creativity and innovation in Long Term Care Home catering Care home clients' (and their families) awareness and exposure to new and varied foods has raised client expectations in relation to dish quality and perceived value for money. This has created a demand for traditional standards to be raised and has placed an onus on catering management to examine its catering quality strategy in relation to client satisfaction. Loss of customer confidence caused by a poor quality food product and service has serious consequences for any catering enterprise, especially one with such a close relationship with clients.

	Furthermore, the Care Home Catering industry is today finding that it costs much more to correct poor meal provision and service, than to ensure a catering system that reliably assures that each client is satisfied first and every time. The trend towards contracting out non-core catering activities is widespread in the U.S.A. and has been growing in the UK and Europe, such that caterers can no longer afford to ignore this development. I will be researching in Long Term Care Homes which provide care and services for people living with dementia and the Elderly and Mentally Impaired. Many Long-Term Care Homes are now outsourcing their hospitality and catering requirements to specialist hospitality and catering companies. The commercial companies have to make a profit and the not-for-profit or community interest companies (caterers) have to limit their losses and hopefully return a surplus. How then, can the quality of Food and Beverage (F&B) Services be improved, whilst maintaining a healthy Profit and Loss Sheet? By F&B Services I mean both the F&B products (food – nourishment - and drink - hydration) and the softer elements of F&B Services, what may be described as the Hospitality element. Under current market and financial pressures there is little room for manoeuvre in costs and every caterer is under constant threat from competitors' eager to take away business. This is the problem which my research hopes to address. The current literature explored includes Dementia in Context; Long Term Care Home - Catering Definition; Dementia and Hospitality Business; Dementia and Hospitableness; Catering within LTCHs – Systems, Nutrition, Methods and Gastronomy and Innovation in LTCH Catering and F&B Service. My research will not be able to be analysed through one viewpoint alone. I will need to take an interpretive, subjective stance and follow a research design which will allow me to know what as well as how. Based on those observations I have nonetheless decided that the case study is the most appropriate method to follow in my research endeavours. The aims, objectives and research questions will lead to business research which is regarded as Business Research in Care Home Catering and is

	exploratory research which may include descriptive elements but then proceeds to explore and identify the latent causes at the root of the effects and the relationship between the two.
Where data is collected from human participants, outline the nature of the data, details of anonymisation, storage and disposal procedures if these are required (300 -750 words).	NB: No residents or their families will be involved in this research. My data will be collected from staff within long term care homes. I will be using an holistic approach through questionnaires and / or interviewing the supervisory, managerial, nutritional, Dietitian, senior chefs and operational actors identified as being relevant; there will also be periods of observation of, shadowing and chatting with the relevant staff involved in the study going about their daily work practices. The data collected will be in the form of completed questionnaires, field observation notes; digital voice recordings and transcripts. An initial pilot study will be developed and used to build the main study, from which emerging themes will be explored. I will be using a research diary, digital recorder and digital notebook (Tablet) for recording interviews and observations. A data collection schedule and data management plan are being created. Compass plc have indicated their willingness to take part in the research, making several of their care home operations available. Only the participants who have signed a participant consent form will be involved. Data, in the form of memos and transcriptions, will first be coded for key concepts which will then be grouped to together to form categories. Further semi-structured in-depth interviews with managers who took part in the shadowing and other relevant actors will be conducted to aid the development of the categories again through theoretical sampling. At the end of each day my field notes will be written up electronically and stored in NVivo for analysis purposes. All data will be anonymised and saved securely. According to the Data Protection Act and due to the non-personal, non-sensitive nature of the data collected and all the data being anonymized, there will be no need to dispose of the data. My understanding of the main ethical issues of observation and shadowing is that although ethical issues and arguments against them can be pre-defined,

	the very dynamic and changeable nature of observation means that new ethical issues may appear suddenly that were not anticipated and therefore the researcher would need to act quickly to assess the best course of action. To solve these issues, I would employ a pragmatic solution and accept that I may have to pull out from some situations, recognising that the research process could continue elsewhere
Will the research be conducted with partners & subcontractors?	No (If **YES**, outline how you will ensure that their ethical policies are consistent with university policy.)

1. Health Related Research involving the NHS or Social Care / Community Care or the Criminal Justice System or with research participants unable to provide informed consent

Question	Yes/No
Does the research involve? •Patients recruited because of their past or present use of the NHS or Social Care •Relatives/carers of patients recruited because of their past or present use of the NHS or Social Care •Access to data, organs, or other bodily material of past or present NHS patients •Foetal material and IVF involving NHS patients •The recently dead in NHS premises	NO
2. Is this a research project as opposed to service evaluation or audit? For NHS definitions please see the following website	N/A

If you have answered **YES** to questions **1 & 2** then you **must** seek the appropriate external approvals from the NHS, Social Care, or the National Offender Management Service (NOMS) under their independent Research Governance schemes. Further information is provided below.

NHS https://www.myresearchproject.org.uk/Signin.aspx

* Prison projects may also need National Offender Management Service (NOMS) Approval and Governor's Approval and may need Ministry of Justice approval. Further guidance at:

http://www.hra.nhs.uk/research-community/applying-for-approvals/national-offender-management-service-noms/

NB FRECs provide Independent Scientific Review for NHS or SC research and initial scrutiny for ethics applications as required for university sponsorship of the research. Applicants can use the NHS proforma and submit this initially to their FREC.

2. Research with Human Participants

Question	Yes/No
1. Does the research involve human participants? This includes surveys, questionnaires, observing behaviour etc. Note If YES, then please answer questions 2 to 10	YES
2. Will any of the participants be vulnerable? Note 'Vulnerable' people include children and young people, people with learning disabilities, people who may be limited by age or sickness or disability, etc. See definition	NO
3 Are drugs, placebos or other substances (e.g. food substances, vitamins) to be administered to the study participants or will the study involve invasive,	NO
4 Will tissue samples (including blood) be obtained from participants?	NO
5 Is pain or more than mild discomfort likely to result from the study?	NO
6 Will the study involve prolonged or repetitive testing?	NO
7 Is there any reasonable and foreseeable risk of physical or emotional harm to any of the participants? Note Harm may be caused by distressing or intrusive interview questions, uncomfortable	NO
8 Will anyone be taking part without giving their informed consent?	NO
9 Is it covert research? Note 'Covert research' refers to research that is conducted without the knowledge of	NO
10 Will the research output allow identification of any individual who has not given their express consent to be identified?	NO

If you answered **YES only** to question **1,** you must complete the box below and submit the signed form to the FREC for registration and scrutiny.

Data Handling

Where data is collected from human participants, outline the nature of the data, details of anonymisation, storage and disposal procedures if these are required (300 -750 words).

My data will be collected using an holistic approach through questionnaires and / or interviewing the supervisory, managerial, nutritional, Dietitian, senior chefs and operational actors identified as being relevant; there will also be periods of observation of, shadowing and chatting with the relevant staff involved in the study going about their daily work practices. The data collected will be in the form of completed questionnaires, field observation notes; digital voice recordings and transcripts. An initial pilot study will be developed and used to build the main study, from which emerging themes will be explored

I will be using a research diary and digital recorder / notebook (Tablet) for recording interviews and observations. A data collection schedule and data management plan are being created.

The Care Home Catering division of Compass plc have agreed to take part in the research. The NHS Sheffield Clinical Commissioning Group have also provided a list of relevant long term care homes in the Sheffield region from which a purposive sample will be created, together with a sample of the Compass units. Only the participants who have signed a participant consent form will be involved. Data, in the form of memos and transcriptions, will first be coded for key concepts which will then be grouped to together to form categories. Further semi-structured in-depth interviews with managers who took part in the shadowing and other relevant actors will be conducted to aid the development of the categories again through theoretical sampling.

At the end of each day my field notes will be written up electronically and stored in NVivo for analysis purposes. All data will be anonymised and saved securely. According to the Data Protection Act and due to the non-personal, non-sensitive nature of the data collected and all the data being anonymized, there will be no need to dispose of the data.

If you have answered **YES** to any of the other questions you are **required** to submit a SHUREC2A (or 2B) to the FREC. If you answered **YES** to question **8** and participants cannot provide informed consent due to their incapacity you must obtain the appropriate approvals from the NHS research governance system.

3. Research in Organisations

Question	Yes/No
1 Will the research involve working with/within an organisation (e.g. school, business, charity, museum, government department, international agency, etc.)?	YES
2 If you answered YES to question 1, do you have granted access to conduct the research? If YES, students please show evidence to your supervisor. PI should retain safely.	YES
3 If you answered NO to question 2, is it because: A. you have not yet asked B. you have asked and not yet received an answer C. you have asked and been refused access. Note You will only be able to start the research when you have been granted access.	

4. Research with Products and Artefacts

Question	Yes/No
1. Will the research involve working with copyrighted documents, films, broadcasts, photographs, artworks, designs, products, programmes, databases, networks, processes,	NO
2. If you answered YES to question 1, are the materials you intend to use in the public domain? Notes 'In the public domain' does not mean the same thing as 'publicly accessible'. – Information which is 'in the public domain' is no longer protected by copyright (i.e. copyright has either expired or been waived) and can be used without permission. – Information which is 'publicly accessible' (e.g. TV broadcasts, websites, artworks, newspapers) is available for anyone to consult/view. It is still protected by copyright even if there is no copyright notice. In UK law, copyright protection is automatic and does not require a copyright statement, although it is always good practice to provide one. It is necessary to check the terms and conditions of use to find out exactly how the material may be reused etc.	N/A

3. If you answered NO to question 2, do you have explicit permission to use these materials as data? If YES, please show evidence to your supervisor. PI should retain permission.	N/A
4. If you answered NO to question 3, is it because: A. you have not yet asked permission B. you have asked and not yet received and answer C. you have asked and been refused access. Note You will only be able to start the research when you have been granted permission to use the specified material.	N/A

Adherence to SHU policy and procedures

Personal statement	
I can confirm that: – I have read the Sheffield Hallam University Research Ethics Policy and Procedures	
Student / Researcher/ Principal Investigator (as applicable)	
Name: Norman H Dinsdale	Date: 16 September 2016
Signature:	
Supervisor or other person giving ethical sign-off	
I can confirm that completion of this form has not identified the need for ethical approval by the FREC or an NHS, Social Care or other external REC. The research will not commence until any approvals required	
Name: David Egan	Date: 16 September 2016
Signature:	
Additional Signature if required:	
Name:	Date:
Signature:	

Please ensure the following are included with this form if applicable, tick box to indicate:

	Yes	No	N/A
Research proposal if prepared previously	☐	☑	☐
Any recruitment materials (e.g. posters, letters, etc.)	☐	☐	☑
Participant information sheet	☐	☑	☐
Participant consent form	☐	☑	☐
Details of measures to be used (e.g. questionnaires, etc.)	☐	☑	☐
Outline interview schedule / focus group schedule	☐	☑	☐
Debriefing materials	☐	☑	☐
Health and Safety Project Safety Plan for Procedures	☐	☑	☐
Data Management Plan*	☐	☑	

If you have not already done so, please send a copy of your Data Management Plan to rdm@shu.ac.uk

It will be used to tailor support and make sure enough data storage will be available for your data. Completed form to be sent to Relevant FREC. Contact details on the website.

Appendix 4. Care Home Sampling Frame, and Interview Schedule.

Sampling Frame

The sample of care homes to be used will be generated based on the number of care homes agreeing to participate, often referred to as *Convenience Sampling*. A number of local care homes have been contacted via telephone and email.

Appendix 5. Sampling Frame Results

Care Home Code	Location	Group or Private	Rooms / Residents	CQC Rating	Random_Number	Contact / Response E = email T = Telephone
LN8	Gainsborough	Group	26	Requires Improvement	0.112716201	T / Yes
SY14	Sheffield	Group LA	38	Good	0.986666711	E / Yes
SY4	Sheffield	Group	62	Good	0.809604314	T / Yes
LN11	Gainsborough	Private	60	Good	0.990614399	E T / Yes
NOT3	Nottingham	Group	27	Good	0.667819913	E T / Yes
SY10	Sheffield	Group	66	Good	0.226225116	T / Yes
SY9	Sheffield	Group	48	Requires Improvement	0.484448796	E / No
NOT1	Retford	Group	48	Good	0.11140653	E / No
LN10	Lincoln	Group	60	Requires Improvement	0.998156467	E / No
SY1	Sheffield	Private	40	Requires Improvement	0.136543437	E / No
SY7	Sheffield	Group	23	Good	0.511499645	E / No
SY6	Sheffield	Group	60	Good	0.317736804	T / No
SY12	Sheffield	Group	58	Good	0.852055484	E T / No
LN5	Gainsborough	Group	46	Good	0.547641638	T / No
SY13	Sheffield	Private	28	Good	0.497995263	E / No
SY3	Sheffield	Group	85	Good	0.426022976	
SY17	Sheffield	Group	88	Good	0.557232388	
SY16	Sheffield	Private	52	Good	0.943411892	
LN9	Market Rasen	Group	49	Good	0.616659171	
SY11	Sheffield	Private	40	Good	0.490713715	
NOT2	Worksop	Group	53	Good	0.310434591	
LN7	Lincoln	Private	26	Requires Improvement	0.036249269	
SY15	Sheffield	Group	57	Good	0.701194629	
SY18	Scunthorpe	Group	111	Requires Improvement	0.173491216	
SY8	Sheffield	Group	67	Requires Improvement	0.970061723	
LN3	Gainsborough	Private	29	Good	0.9384986	
LN1	Lincoln	Group	36	Good	0.465053254	
SY2	Sheffield	Group	75	Requires Improvement	0.673002039	
RT1	Rotherham	Group	47	Inadequate	0.585335573	
LN4	Lincoln	Group	39	Good	0.392143987	
LN6	Lincoln	Group	44	Good	0.981221401	
SY5	Sheffield	Private	80	Requires Improvement	0.192922023	
DN1	Doncaster	Group	40	Requires Improvement	0.588802222	
LN2	Lincoln	Private	31	Good	0.130837219	
Survey Population	+/- 3% margin	+/- 5% margin	+/- 10% margin			
33	69%	44%	16%			
	22.77	14.52	5.28			

Appendix 6. Interview / Questionnaire Scheduling / Type

Interview / Questionnaire Scheduling / Type

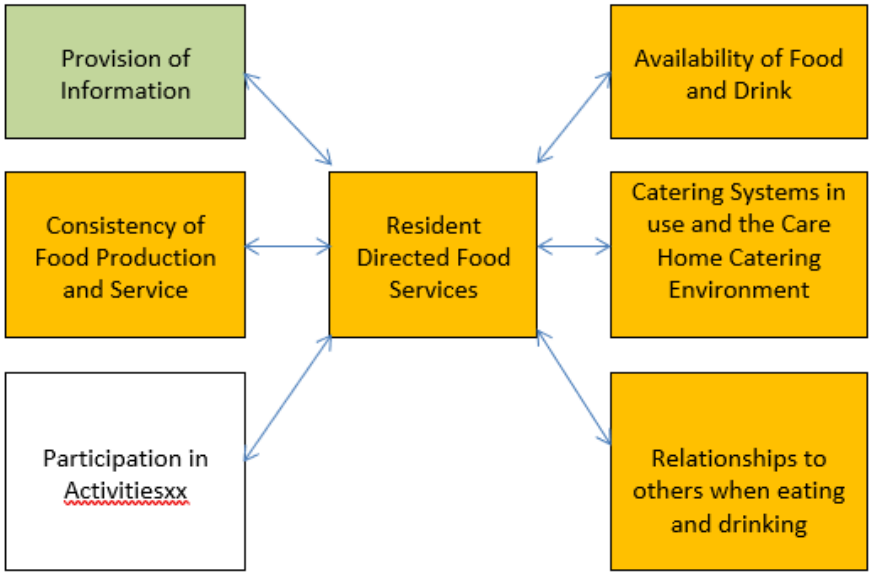
Senior / Regional Management			**Dieticians and Nutritionists**			**Corporate Chefs / Unit Head Chefs**			**Catering / Care Assistants Customer Facing**
Head Office / Regional	*Local Home*		*Head Office / Regional*	*Local Home*		*Head Office / Regional*	*Local Home*		*Local Home*
Face to Face interviews (Possibly via SKYPE) using semi-structured interview questions with responses transcribed 1 hour +			Face to Face interviews (Possibly via SKYPE) using semi-structured questionnaire questions with responses written in questionnaire form 30 / 60 minutes			Face to Face interviews (Possibly via SKYPE) using semi-structured questionnaire questions with responses written in questionnaire form 1 hour +			Structured questionnaires administered by paper, Tablet or internet 15 / 20 minutes
Complex questions of both qualitative and quantitative type			*Predominantly qualitative type interview questions*			*Relatively complex questions of both qualitative and quantitative type*			*Simplified questions using a mix of types*

Intent is to create a map of what is happening NOW in the care homes; to describe the reality of what is going on and identify areas of concern and exemplar units (if any).

Where are the breakdowns in communication?

Each participant type will have separate interview questions / questionnaires as briefly outlined above. Face to Face interviews, although time consuming, will generate more in-depth responses

The questions are based on prior literature and in part influenced by Murphy, Holmes and Brooks' (2017) Model for the provision of good nutritional care in dementia, and adapted for this study as shown below:



Much of the information provided by Murphy, Holmes and Brooks was already known, just presented in a different format.

In the model above the main focus of research will be on the sections shaded in gold

Generic Interview Schedule.

Opening

- *Establish Rapport – introductions and thanks for participating.*
- *Purpose – what the research is about.*
- *Motivation – why the research is being done.*
- *Time – how long interview expected to be.*

Body

- *Topic – dependent on participant status. Questions based on written questionnaires.*
  - *RMs*
  - *Chef / Cooks*
  - *Medical / Nursing*
  - *Care assistants*

Closing

- *Summarise – what was discussed.*
- *Maintain Rapport – Thank participant for time taken.*
- *Action to be taken – establish contact details. Offer copy of results*

Appendix 7. Participant Consent Form

Sheffield Hallam University | Sheffield Business School

INFORMED PARTICIPANT CONSENT FORM

This Informed Participant Consent Form is for staff working within Long Term Care Homes in the community, whether public or private, and who are invited to participate in the Research Project titled below.

This Informed Consent Form has two parts:

- This Information Sheet (to share information about the study with you)
- Certificate of Consent (for signatures if you choose to participate or an option to consent on-line)

Introduction:

I am a Senior Lecturer and Doctoral Researcher at Sheffield Hallam University. I am conducting the research described below in an effort to better understand the current status of Long Term Care Home (LTCH) catering and hospitality services for people living with dementia.

Purpose of the research

Many reports on caring for people living with dementia identify nourishing food and drinks as an essential requirement. The ultimate research study will aim to investigate methods and constructs by which caterers can improve the Food and Beverage (F&B) services they offer to people living with dementia (PLWD) in LTCHs whilst improving and maintaining their competitive edge, unique service proposition and profitability.

The objectives are:

- To understand the working relationships between the managers, caterers, dieticians, nutritionists and medical staff;
- To explore food service delivery methods and quality constructs suitable for deployment within LTCH catering environments;
- To investigate the current state of creativity and innovation in LTCH catering

Care home clients' (and their families') awareness of and exposure to new and varied foods has raised client expectations in relation to dish quality and perceived value for money. This has created a demand for traditional standards to be raised and has placed an onus on catering management to examine its catering quality strategy in relation to client satisfaction. Loss of customer confidence caused by a poor quality food product and service has serious consequences for any catering enterprise, especially one with such a close relationship with clients.

Furthermore, the Care Home Catering industry is today finding that it costs much more to correct poor meal provision and service, than to ensure a catering system that reliably assures that each client is satisfied first and every time. The trend towards contracting out non-core catering activities is widespread in the U.S.A. and has been growing in the UK and Europe, such that caterers can no longer afford to ignore this development.

I will be investigating LTCHs which provide care and services for people living with dementia (PLWD) and the Elderly and Mentally Impaired (EMI).

If you complete the questionnaire on-line you do not need to sign this form and your completion of the survey consent section is confirmation of your consent to participate.

Sheffield Hallam University | Sheffield Business School

Research Intervention

This research will involve your participation in some or all of the following:

Completion of a written or electronic questionnaire

Being shadowed through your daily duties within the workplace whilst talking and responding to relevant work based questions

Informal (recorded) interviews of approximately 30 to 90 minutes' duration

Participant Selection

You are being invited to take part in this research because we feel that your experience of working in the Care Home sector can contribute much to our understanding and knowledge of local Long Term Care Home operations.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. The choice that you make will have no bearing on your job or on any work-related evaluations or reports. You may change your mind later and stop participating even if you agreed earlier.

Procedures

For questionnaires: You will be asked to fill out a survey which will be provided by me, in either printed form or electronically, and collected by me or submitted electronically. You may answer the questionnaire yourself, or it can be read to you and you can say out loud the answer you want me or a friend to write down. If you do not wish to answer any of the questions included in the survey, you may skip them and move on to the next question. There are, however, one or two questions which must be answered. If you feel you cannot answer those few questions then please feel free to abandon the questionnaire.

The information recorded is confidential, your name is not being included on the forms, only a number will identify you, and no one else except my supervisors will have access to your survey.

For shadowing: You will be asked to go about your daily tasks as usual. I will be in your place of work taking field notes. If you feel uncomfortable at any time you may ask me to exclude you from my data collection.

For Interviews: You will be asked to participate in an interview with myself. During the interview, I will sit down with you at your place of work. If you do not wish to answer any of the questions during the interview, you may say so and I will move on to the next question. No one else but I will be present unless you would like someone else to be there. The information recorded is confidential, and no one else except my supervisors, Mr. David Egan and Professor Joseph Hegarty, will access to the information documented during your interview. The entire interview will be digitally-recorded, but no-one will be identified by name on the recording. The information recorded is confidential, and no one else except Mr David Egan and Professor Joseph Hegarty will have access to the recordings.

If you complete the questionnaire on-line you do not need to sign this form and your completion of the survey consent section is confirmation of your consent to participate.

Sheffield Hallam University | Sheffield Business School

Risks:

There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. However, I do not wish for this to happen. You do not have to answer any question or take part in the discussion/interview/survey if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Benefits:

There will be no direct benefit to you, but your participation is likely to help me find out more about how the care home catering and hospitality sector could be improved and subsequently share that information with the wider community.

Reimbursements:

You will not be provided any incentive to take part in the research.

Confidentiality:

The research may draw attention and if you participate you may be asked questions by other people in the community. I will not be sharing information about you to anyone outside of the research team. The information that I collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only I will know what your number is and I will lock that information. It will not be shared with or given to anyone.

Sharing the results:

Some or all of the data you provide to me may be published although nothing will be attributed to you by name. The knowledge that I get from this research will be shared with you, if you request, and before it is made widely available to the public. Each participant will receive a summary of the results.

Right to Refuse or Withdraw

This is a reconfirmation that participation is voluntary and includes the right to withdraw. You do not have to take part in this research if you do not wish to do so, and choosing to participate will not affect your job or job-related evaluations in any way. You may stop participating in the project at any time that you wish without your job being affected. I will give you an opportunity at the end of the interview/discussion/observation to review your remarks, and you can ask to modify or remove portions of those, if you do not agree with my notes or if I did not understand you correctly.

If you complete the questionnaire on-line you do not need to sign this form and your completion of the survey consent section is confirmation of your consent to participate.

Sheffield Hallam University | Sheffield Business School

Certificate of Consent

Project title: Living with Dementia: Care Home Catering Provision through Resident Directed Food Services

Researcher's name: Norman Dinsdale

Supervisors' names: Mr David Egan; Professor Joseph Hegarty

1	I confirm I have read (or had read to me) the Participant Information Sheet and the nature and purpose of the research project has been explained to me. I understand and agree to take part. I confirm I have had the opportunity to ask questions about the research;
2	I understand the purpose of the research project and my involvement in it;
3	I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.
4	I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential;
5	I understand that I might be audio recorded before, during or after completion of the questionnaire;
6	I understand that any digital data (voice recordings and transcripts of interviews) will be stored in the Sheffield Hallam University Research Data Store; I also understand that any handwritten or electronic submissions of questionnaires will be stored safely as above;
7	I understand that I may contact the researcher or supervisor if I require further information about the research, and that I may contact Sheffield Hallam University if I wish to make a complaint relating to my involvement in the research.

Signed: **Date:**

Print Name & Position:

Signed: **Date:**
Researcher

Norman Dinsdale

Doctoral Supervisor Contact David. J. Egan BA, MA, MPhil, FHEA. Senior Lecturer, Sheffield Business School, Sheffield Hallam University, Howard Street. Sheffield. S1 1WB.
d.j.egan@shu.ac.uk 0114 225 2095

You may take a photocopy, picture or scan of the completed form if you wish

If you complete the questionnaire on-line you do not need to sign this form and your completion of the survey consent section is confirmation of your consent to participate.

Appendix 8: Care Assistants and Food Service Assistants Questionnaire

Care Home ID Code	Office use only
Care Home Participant ID Code	Office use only

This research focuses on the challenges of feeding people living with dementia in care homes. The research will examine catering business models and systems within Long Term Care Homes and will then develop a Case Study based on the outcomes of that research. People living with dementia, especially in the later stages, often want to eat only when they are hungry and not necessarily when food is placed in front of them. It is not uncommon for such residents of care homes to push the plate of food away from them as soon as it is put down, only to be hungry an hour or so later, often at a time when the kitchen and servery has closed. The research will look at optimal catering business systems which allow residents access to nutrition and hydration throughout the day and evening, and not just when the kitchens and serveries are open.

First of all, would you please have a read through the **Participant Consent Form**. Once read through, and you agree with the content, would you please sign where indicated. You may take a photocopy, picture or scan of the completed form if you wish. One thing to stress about this research is that you will, in no way at all, be identified. Your contribution will be totally anonymous.

This questionnaire asks you a number of questions covering a broad range of subjects relating to your work here. These will relate to your perceptions of how food is prepared and served; your participation in menu development, if any; how you believe the food is rated or appreciated by the residents.

Thank you for agreeing to participate in this research. Your contributions are exceptionally valuable to us.

Many of the questions are in multiple choice formats. Simply tick / click the appropriate box or boxes which most closely match your response. e.g.: ☑

Some of the questions also ask for a written response. Simply jot down your response in the text box

3. *What is the name of the company that you work for and are you employed by the care home or a separate catering company?*

Name of Employer Company:

4. *I am employed by:*

The Care Home ☐ A Catering Company ☐ An Agency ☐

5. *What is your job title?*

My job title is:

6. *Now, added to that would you explain your main responsibilities within the Care Home:*

7. *What qualifications did you have to get this job?*

8. *Do you believe that your occupation is viewed as being "professional" by the, clinical, nursing, dietetic and nutritional staff?*

Yes ☐ No ☐

Please explain your answer:

9. *Have you received any further qualifications or training whilst in the company employment in regard to Food & Beverage service?*

Yes ☐ No ☐

If yes, please explain:

10. *Have you received any further qualifications or training whilst in the company employment in regard to Nutrition and / or Dietetics?*

Yes ☐ No ☐

If yes, please explain:

11. *Have you received any further qualifications or training whilst in the company employment in regard to serving, and helping to eat, people living with dementia?*

Yes ☐ No ☐

If yes, please explain

12. *Has that training and development been, or would be, beneficial to your understanding of working in care homes for people living with dementia?*

Yes ☐ No ☐

If yes, please explain

13. *Do you have any involvement in assessing the dietary and nutritional needs of the residents?*

Yes ☐ No ☐

Please explain

14. *Do you have any involvement in planning the menus?*

Yes ☐ No ☐

If yes, please explain

15. *Are you responsible for plating the food for your residents or do the chefs / cooks / kitchen assistants do that?*

I plate up ☐ the chefs / cooks / kitchen assistants plate up ☐ The residents help themselves from a buffet / hot plate ☐

Please explain

16. *If you do plate up, who determines the portion size?*

I do because I know the residents ☐ The chef / cook does ☐

The resident's nutrition plan decides ☐ Don't know ☐

17. *If you do plate up, have you received any formal education or training on plate presentation?*

Yes ☐ No ☐

Please explain:

18. *Do you believe you would be able to give better service to your residents with further training?*

Yes ☐ No ☐

19. *What type / standard of menu is available for the residents for their main meals? For example, do the residents have a choice of 1, 2, 3 or 4 courses for lunch and dinner / evening meal?*

Lunch?

Starter ☐ Intermediate Course ☐ Main Course ☐ Dessert/Pudding ☐

Dinner / Evening Meal?

Starter ☐ Intermediate Course ☐ Main Course ☐ Dessert/Pudding ☐

20. *How far in advance do the residents have to decide / choose their menu preferences or do they decide on the day?*

1 day ☐ 2 to 3 days ☐ 4 to 6 days ☐ 1 week and over ☐ No advance decision ☐

21. How are the menu choices presented to the residents?

Written Menu ☐

Written menu with illustrations ☐

Illustrated menu only ☐

Verbal explanation of what is available ☐

No menu, the residents are served what is available ☐

22. If language is a barrier in determining menu choice what protocols, if any, are in place to allow the residents to choose their food?

Please explain:

23. How do you determine the food and drink likes and dislikes of your residents?

I talk with the residents ☐

The Care Plan has the details for me ☐

I observe what they eat and record it ☐

I observe what they eat and remember ☐

24. What do you do if you observe a change in eating habits or patterns?

I tell the Chefs / Cooks ☐

I tell the Dietician / Nutritionist ☐

I tell the Senior Nurse / Matron / Manager ☐

Other ☐

25. Do family members / friends sometimes bring in food for the residents?

Yes, sometimes ☐

No, we don't allow that for food safety reasons ☐

No, but we would facilitate that ☐

Other ☐

26. *How do you organise the seating arrangements at meal times?*

Men with men, women with women ☐ Mixed sexes ☐

We let the residents decide ☐ We seat residents where we think they will be most comfortable / happy ☐

27. *Do you encourage residents to help lay up the dining tables?*

Yes ☐ No ☐

Do you sit with your residents whilst they are eating?

Yes, sometimes	☐	Yes, always	☐
No	☐	Other	☐

28. *What protocols, if any, are in place for when a resident refuses to eat to encourage eating?*

Please explain:

29. *What protocols, if any, are in place for when a resident gets up from the table before finishing their meal?*

Please explain:

30. *You have already given your job title and main responsibilities. Expanding on that how do you view your ethical responsibilities towards the residents?*

Please explain

31. *As human beings do you believe we have a right to the foods we have enjoyed throughout our lives as we enter the later stages of life or even succumb to the ravages of dementia? Or perhaps we should just accept what is put in front of us?*

We have the right to enjoyable foods ☐ We should accept what we are given ☐

Please explain your views

32. *Recent research shows that people living with dementia want to eat when they are hungry, not necessarily at fixed meal times. Are there any protocols in place here to allow for that?*

Yes ☐ No ☐

Please explain:

33. *What are your views on this? Do you think the residents here would benefit from such an intervention, if not already available, providing nourishment and hydration outside the standard meal times?*

Please explain:

34. *What is your usual shift pattern on a standard day?*

Please explain:

35. *What about non-standard days? For example, do you work many weekend shifts?*

Please explain:

36. *How about night shifts, do you have to work nights at any time?*

Please explain:

37. What is your gender?

Male ☐ Female ☐ Prefer not to say ☐ Other ☐

38. What is your age group?

Under 18	☐	46 to 50	☐
18 to 25	☐	51 to 55	☐
26 to 30	☐	56 to 60	☐
31 to 35	☐	61 to 65	☐
36 to 40	☐	Over 65	☐
41 to 45	☐		

If there is anything else you would like to add, which you think might make the catering services better in the care home, please note it here:

Thank you for your participation

Appendix 9: Care Home Catering: Resident Manager, F&B Managers & Head Chefs Questionnaire

Thank you for agreeing to participate in this research. Your contributions are exceptionally valuable to us. During the next year it is expected that parts of the research will be disseminated through conference papers and the eventual DBA Thesis

These interview questions are aimed at obtaining information from Resident Managers, F&B Operations Managers, Executive / Head Chefs / Senior Cooks and Food Service Operations Managers

Care Home ID Code	Office use only
Care Home Participant Code	Office use only

Section 1: Some questions about the care home / ward

I would like to start off by asking a few questions about the care home or hospital ward

1.1 How many of the residents / patients are living with dementia?

1.2 Are you and the catering staff employed by a private catering contractor / directly by the care home / by the NHS Catering Services?

Care Home ☐ Private Contractor ☐ NHS ☐

1.3 Do you have a group / corporate Food and Beverage Director / Manager / Executive Chef who oversees F&B matters?

Yes ☐ Detail: _____ No ☐ N/A ☐

1.4 If yes, does that rôle holder supply menus for the home or do you prepare the menus?

Rôle holder ☐ Care Home / Hospital Head Chef ☐

1.5 Does the care home or group employ dieticians and / or nutritionists

Home Dietician ☐ Home Nutritionist ☐ Group Dietician ☐ Group Nutritionist ☐ None ☐

1.6 How many and what type of staff are employed in the catering department, either directly or via the third-party contractor?

Executive / Head Chef_____ Assistant / Commis Chefs _____

Sous / Second Chefs_____ Kitchen Assistants _____

Chefs de Parti _____ Food Service Assistants _____

Care Assistants _____

who serve

1.7 Is there a Corporate Social Responsibility (CSR) policy in place for the home / business?

Yes ☐ *Please detail below* No ☐ Don't know ☐

If yes, what are the priorities? How does it apply tp your department?

1.8 What FORMAL SYSTEMS are in place, if any, to guarantee a high standard of F&B output?

Please describe:

1.8 What FORMAL SYSTEMS are in place, if any, to guarantee Person Centred Care with regard to F&B provision?

Please describe:

Section 2: Some questions about you and your job

Now I'd just like to get some detail about you and your job. If you don't want to answer any particular question, just say so.

2.1 What is your job title?

2.2 How would you describe your main duties?

2.3 Do you work a standard 5-day week and 9 to 5 work pattern, weekends, nights?

Please explain

2.4 Would you please tell me your main qualifications in regard to your job when you first joined the company?

I was totally self-taught, no formal culinary education ☐	Level 2 - C&G 151 / NVQ 2 / Certificate in Culinary Skills (3320-03) or equivalent ☐
Traditional Apprenticeship / Stage, following college input ☐	Level 3 - C&G / NVQ 3 / Diploma in Culinary Skills (3320-04) or equivalent ☐
Traditional Apprenticeship / Stage, no college input ☐	Level 4 - Foundation Degree in Culinary Arts or equivalent ☐
Modern Apprenticeship + College ☐	Level 5/6 Hospitality / Culinary Arts Degree ☐
Level 1 - C&G 147 / NVQ 1 Professional Cookery / Culinary Skills (3320) or equivalent ☐	Level 7 Post Graduate degree in Hospitality / Culinary Arts ☐
	Other. Please explain ☐

2.5 Did you WITNESS or TAKE PART in any Culinary Creativity or Innovation during your formal education?

Yes ☐ Please detail below No ☐ Go to next question

2.6 What do you most enjoy / like about your job?

2.7 What do you least like about your job?

2.8 If you could change ONE thing about your job or the care home, what would that be?

2.9 Do you consider yourself to be a valued member of the staff, essential to the well-being of the residents / patients?

2.10 Are you consulted with regard to the following aspects of food production and service by the clinical, dietician and nutritional staff? *Tick all and any that apply. Please comment on your choices in the Free Text Box below.*

Menu content & compilation	☐	Menu service & delivery	☐
Portion size	☐	Nutritional content of menu items	☐
Foods for dysphagia diets	☐	Hydration issues	☐
Food enrichment	☐	Beverage enrichment	☐

2.11 Do you have any direct input into menu development and food and beverage service here in the care home? Yes ☐ No ☐

2.12 Have you ever questioned decisions on menu development and service delivery instructions from either an operational perspective or nutritional content?

Yes ☐ *Please comment in the box below* No ☐

2.13 Do you believe a chef is on an equal professional status with nursing staff, nutritionists, or dieticians? Yes ☐ No ☐ Please explain in the box below:

2.14 Whose advice would you first seek regarding ways to improve your residents' food intake?

Please rank in order of preference.

Staff	**Ranking**
Chef	
Dietician	
Doctor	
Food Service Assistant	
Nurse	
Nutritionist	
Registered Manager / Matron	
Resident / Patient	

2.15 Please indicate your gender:

Please circle: Female Male Rather not say Other

2.16 Your age group? Please choose

Under 18	46 to 50
18 to 25	51 to 55
26 to 30	56 to 60
31 to 35	61 to 65
36 to 40	Over 65
41 to 45	Rather not say

Section 3: Care Home Hospitality Concepts

3.1 What does the word "Hospitality" mean to you in general?

3.2 How does your understanding of the word Hospitality differ from the words Hospitable and Hospitableness?

3.3 What do you understand the principles of hospitality to be, with regard to residents of care homes?

3.4 How do you apply those principles in the care home context?

Section 4: Food and Beverage Services to the Residents:

In this section would you please describe the catering systems in use and the steps to delivery of F&B services to the residents?

4.1 How many dining areas / rooms do you have in the home / ward?

4.2 How many residents / patients sit in each dining area?

4.3 What is the style of service for food and drink?

Plated from servery ☐

Self / assisted service Buffet ☐

Heated Trolley / Ganymede Trolley to satellite kitchen or ward for plating ☐

Other / combination of above Please describe in the box below. ☐

4.4 Are residents able to have food and drink delivered to their rooms / bedside, even when not ill or infirm?

Yes ☐ No ☐ Go to next question

If Yes. Please describe options

4.5 Do you use interventions such as blue plates or red glasses to increase nutritional intake and hydration?

Yes ☐ Please describe below No ☐

4.6 How important, in your opinion, is the physical environment as an aid to increasing intake of nourishment and hydration for care home / ward residents / patients?

4.7 How important, in your opinion, are the social and ambient environments in increasing intake of nourishment and hydration for care home residents / hospital patients?

4.8 How many meal periods are there on a daily basis and what are the service times of those meal periods?

Meal Period	**Tick**	**Time**
Breakfast	☐	
Morning Refreshment / Snack	☐	
Lunch	☐	
Afternoon Tea / Snack	☐	
Tea / Evening Meal	☐	
Dinner	☐	
Bed time drink / snack	☐	
All day grazing	☐	
Other	☐	

4.9 Are there any time restrictions that must be adhered to for meal times?

Yes ☐ *If yes, please describe in the text box below then go to the next question*

No ☐ Go to next question

4.10 Are any of the residents / patients involved in food preparation or service as part of their care plan? *For example, are the more able encouraged to help with non-hazardous kitchen duties or setting of tables?* Yes ☐ No ☐

Comment: -

4.11 What do you offer for breakfast? *Please attach menu if possible*

4.12 How many courses do you offer for lunch and dinner / evening meal?

Lunch	**Dinner / Evening Meal**

4.13 How many menu options are available for each course? *Please attach menu if possible*

Lunch		**Dinner / Evening Meal**	
Starter:	*Courses* or N/A ☐	Starter:	*Courses* or N/A ☐
Main Course	*Courses or* N/A ☐	Main Course	*Courses or* N/A ☐
Pudding / Dessert	*Courses or* N/A ☐	Pudding / Dessert	*Courses or* N/A ☐

4.14 Are the menus developed by you / F&B Team or are they pre-determined by your head office?

In-House ☐ Head Office ☐

4.15 Do you offer a cyclical set of menus:

Yes ☐ No ☐ If yes, how many days is your menu set for?

7 Days ☐ 14 Days ☐ 21 Days ☐ Other ☐

4.16 Do the residents choose their meals in advance from the menu set or do they choose on the day?

In Advance ☐ On the day ☐

4.17 If chosen in advance, how many days in advance is the choice made?

1 Day ☐, 2 Days ☐, 3 Days ☐, 4 Days ☐, 5 Days ☐, 6 Days ☐, 7 Days ☐, N/A ☐

4.18 Do you use Menu Engineering techniques to keep track of popular menu items to help plan for future production?

Yes ☐ No ☐

4.19 Are your menus analysed for colour contrast, texture, repetition, nutrient content?

Yes ☐ No ☐

If yes, who by? Please also give detail.

4.20 Do you put on special menu day7/*s / celebratory menus - e.g. Wimbledon, Cricket?

Yes ☐ No ☐

Please give details

4.21 Do you provide dining facilities for visitors / family?

Yes ☐ No ☐

Please give details

4.22 How do you convey the menu information to the residents / patients?

Printed Menu	Pictorial Menu
Verbally	Blackboard
Other:	

4.23 Do you use any convenience; ready prepared products such as the Steamplicity, Apetito, 3663, Brakes branded products or other chilled or frozen ready meals or partially prepared food ingredients? Yes ☐ *If yes, please describe in the text box below* No ☐

4.24 Is there a need to produce meals for people with dysphagia?

Yes ☐ No ☐ Skip to Q 4.27 Don't know ☐ Skip to Q 4.27

4.25 If yes, are these produced in-house or are they bought in from specialist suppliers?

In-House ☐ Bought In ☐

4.26 If bought in, which brand/s do you use?

4.27 How do you determine the food and beverage likes / dislikes of your residents / diners?

We ask the resident / patient directly ☐

We ask the resident's / patient's family / visitors ☐

We ask the resident's / patient's GP / Nurse ☐

Not applicable, we do not gather that data ☐

Other: Please provide your answer in the text box below ☐

4.28 What happens with this information?

We create a food passport for the resident / patient and give copies to all relevant staff. ☐

We create a Resident / Patient Care Profile and give copies to all relevant staff. ☐

Other: Please describe in the text box below ☐

4.29 Being aware that taste buds and our personal taste preferences change over time, how often is that information updated in the care home?

4.30 How do you determine whether the likes / dislikes are healthy options or "good" for the residents?

I have been educated / trained in nutrition and know how to determine what is "good" for the residents / patients. ☐

My previous culinary / cooking experience equips me to know what is "good" for the residents / patients. ☐

I follow the Hospital Caterers' Association or the National Association of Care Catering guidelines to meet the Care Quality Commission's (CQC) Fundamental Standards, ☐

I seek advice from the in-house / company dietician / nutritionist; ☐

Other. Please provide your answer in the text box below ☐

4.31 What interventions, if any, have you implemented in the past three years to improve food and drink intake for your residents?

4.32 What style of kitchen management / organisation / system is used in your establishment?

Traditional, full, Parti System	Reduced Parti System
American Production and Line Assembly Kitchen	Not applicable. We don't operate a kitchen management system; everyone does what needs to be done
Other. *Please explain*	

4.33 Are any of the following methods used in cooking from scratch?

Cook Chill, regenerate, serve ☐

Cook Freeze, regenerate, serve ☐

Cook, Hold, Serve ☐

Sous-Vide, in conjunction with any of the above ☐

Any other method *Please describe in the text box below* ☐

4.34 What type of main kitchen plant is currently in use?

Steam Convection Ovens	☐	Induction Hobs	☐
Standard Ovens	☐	Gas Hobs	☐
Fan Assisted Ovens	☐	Electric Hobs	☐
Self-Cooking Centre Ovens	☐	Solid Top Stoves	☐
Bratt Pans	☐	Jacketed Kettles	☐
Blast Chillers / Freezers	☐	Other *Please describe*	☐

4.35 Which *of the following pieces of equipment are you aware of, have used, currently use or intend to use?*

Answer Options	I have never heard of these, what are they?	I am aware of but not currently using	I am currently using these	I am aware of and considering using these:	I am aware of, would like to use, but cannot afford these:	I am aware of but have no intention of using these:
ISI Whipper						
Poly Science Anti-Griddle						
Centrifugal Juicer						
Thermal Circulator / Water Bath						
Sonicprep Homogeniser						
Rotary Evaporator						
Freeze Dryer						
CVap [1] Cook and Hold Oven						
Centrifuge						
Thermomix						
Pacojet						
Dehydrator						
Gastrovac						
Other, if you would like to offer further insights, please enter here:						

1. CVap = Controlled Vapour Technology

4.36 Do you use any menu and/or recipe development software?

Yes ☐ No ☐ Don't know ☐

4.37 Do you use any menu content analysis software to analyse your menus?

Yes ☐ No ☐ Don't know ☐

4.38 Do you have a full Food Safety and HACCP programme in place?

Yes ☐ No ☐ Don't know ☐

4.39 What would you need to do to improve the standard of cuisine for your residents / patients?

Section 5: Knowledge of Creativity and Innovation in Current F&B Production and Service, Education and Training

5.1 There have been many cuisines and cookery styles promoted over the last few years, many of which have been described as little more than gimmicks. I would now like to establish YOUR opinion on these, so; which of these "Cuisines" culinary "styles", "concepts" or Academic Disciplines have you heard of, used, consumed, or delivered?

Answer Options	**I am aware of the following styles / concepts**	**I have tried / consumed the following**	**I am using the following styles / concepts**	**I intend to research the following styles / concepts**	**I do not consider these to be Cuisines or cookery styles**
Avant-Garde Cuisine					
Haute Cuisine					
Cuisine Nouvelle					
Culinology					
Cuisine Planétaire					
Molecular Gastronomy					
De-constructivist cuisine					
Fusion Cuisine					
Constructivist Cuisine					
Experimental Cuisine					
Note a Note Cuisine					
Molecular Cuisine					
Augmented reality cuisine					
Multi-sensory Gastronomy					
Multi-sensory Cuisine					
Cuisine Deco					
Your comments, if you would like to offer further insights, please enter here:					

5.2 Which of the following natural food additives /Hydrocolloids are you aware of, are currently using or are considering using in the future? Tick all that apply.

Answer Options	**I am not aware of the following**	**I am aware of these but NOT currently using**	**I am using the following items**	**I intend to research the use of the following**	**I am aware of but have no intention of using these:**
Agar Agar					
Carrageenan - Iota Type					
Carrageenan - Kappa Type					
Cornstarch / flour					
Gelatine					
Gellan - Low Acyl (LA)					
Gellan - High Acyl (HA)					
Guar Gum					
Gum Arabic					
Konjac					
Lecithins					
Locust Bean Gum					
Malto dextrin					
Methyl Cellulose					
Pectin					
Sodium Alginate					
Xanthan Gum					
Your comments, if you would like to offer further insights, please enter here:					

5.3 Do you believe culinary creativity is the same as culinary innovation?

Yes ☐ No ☐

5.4 In your opinion do you believe creativity can be taught?

Yes ☐ No ☐

5.5 In your opinion do you believe innovation can be taught?

Yes ☐ No ☐

5.6 Do you believe it is your responsibility to be creative and innovative in the kitchen or do you believe it is the responsibility of your supervisors / managers to instruct you?

My Responsibility ☐ Supervisor / Manager Responsibility ☐

5.7 Regardless of your responses to the previous questions would you be interested in education, development and / or training in Culinary Creativity and / or Culinary Innovation to enable you to offer a more satisfying, nutritious, and profitable F&B offer to your residents?

Yes ☐ No ☐

5.8 Do you believe a Care Home Catering qualification should be a compulsory element of a chef's / cook's education and training before being employed in a Care Home for people living with dementia?

Yes ☐ No ☐

5.9 Who should pay for that education / training?

Chef / Self ☐ Employer ☐ Government ☐ Industry Association ☐

5.10 Does your company / organisation provide budgeted funding for culinary education and training?

Yes ☐ No ☐

5.11 Do you feel tensions arise between you and your immediate manager over the subject of culinary education and training?

Yes ☐ No ☐

If yes, please give details:

5.12 Have you and / or your catering staff received any further qualifications or training whilst in the company / care home / hospital employment in regard to F&B Management or Culinary Management?

Yes ☐ Please detail below No ☐ Go to next question

5.13 Have you and / or your catering staff received any further qualifications or training whilst in the company / care home / hospital employment in regard to catering / cooking for, or serving people, living with dementia or other elderly and mentally impaired (EMI)?

Yes ☐ Please detail below No ☐ Go to next question

5.14 Have you received any further qualifications or training whilst in the company / care home / hospital employment in regard to Nutrition and / or Dietetics?

Yes ☐ Please detail below No ☐ Go to next question

5.15 Are you aware of any specific educational / training courses available for care home catering staff?

Yes ☐ Please detail below No ☐ Go to next question

5.16 Do you and / or your organisation view culinary creativity, excellence, and innovation as a means of gaining and / or maintaining a competitive edge in the Care Home market?

Yes ☐ No ☐

Pease explain, why is that?

5.17 Which Books; Magazines; TV programmes; Websites have influenced you most in your culinary career?

Section 6: Ethical Issues

6.1 Earlier in the interview / questionnaire you gave your job title and main responsibilities. Expanding on that how would you describe your ethical responsibilities towards people living with dementia in the care home?

6.2 As human beings do you believe we have a right to the foods we have enjoyed throughout our lives as we enter the later stages of life or even succumb to the ravages of dementia? Or perhaps we should just accept what is put in front of us?

Please explain

6.3 Does the care home / ward and/or the clinical, dietetic and nutritional staff allow or encourage the people living with dementia participate in decision making related to their food and beverage preferences?

Yes ☐ No ☐ Don't know ☐

6.4 Recent research shows that people living with dementia want to eat when they are hungry, not necessarily at fixed meal times. Are there any protocols in place to allow for that?

Yes ☐ No ☐ Skip to Q 6.5 Not Sure ☐ Skip to Q 6.5

If yes, please describe in the text box below

6.5 What are your views on this? Do you think the residents / patients would benefit from such an intervention, providing nourishment and hydration outside the standard meal times?

Section 7: Finance

7.1 Do you have budget responsibility for the F&B Costs?

I am responsible for: Food AND Beverage Costs ☐; Food Costs Only ☐ Beverage Costs Only ☐

7.2 Do you have a set budget for F&B costs?

Yes ☐ No ☐

7.3 If yes, what is that budget per person per day?

£ _____ Combined F&B Costs per person per day

£ _____ Food Costs only per person per day

£ _____ Beverage Costs only per person per day

7.4 What is the ACTUAL average F&B net cost per resident / patient per day?

7.5 Are the care home staff fed / allowed to eat the residents' / patients' food?

Yes ☐ No ☐

7.6 Are the costs of feeding the staff included in your F&B Budget?

Yes ☐ No ☐

7.7 What would you, or your care home / company, need to do to improve the profitability of your company and/or care home, or minimise losses in the case of a not-for-profit organisation?

7.8 If you are using the Molecular Gastronomy and Modernist techniques mentioned in the previous sections, have you noticed a decrease or increase in your monthly average food costs?

Yes ☐ No, Food Costs have not changed by using those techniques ☐ Not Sure ☐

If yes, please indicate the approximate savings or increase as a Pound £ figure and percentage per month.

£ Savings Food Cost per month	% of Food Cost Savings per month
£ Increase Food Cost per month	% of Food Cost Increase per month

Thank you for your participation

Appendix 10: Example Interview Transcript – Resident Manager

Care Home LN 8: RM 01.MP3

ND Researcher: [00:00:02] Right. The care home will not be identified in this research. Thank you for participating and your contributions are extremely valuable to us. And I'd like to start off by asking a few questions about the care home itself. Is the care home privately owned not within a chain.

RM: [00:00:26] Privately owned.

ND Researcher: [00:00:26] Or privately owned chain.

RM: [00:00:27] Two homes.

ND Researcher: [00:00:29] Two. So, it's a small chain isn't it.

RM: [00:00:32] Two Homes only.

ND Researcher: [00:00:36] Two homes. And is the care home purpose built or is it a conversion?

RM: [00:00:39] Conversion. This side is conversion, that side is purpose built, the cottage side.

ND Researcher: [00:00:45] So it's a mix isn't it. And when did the care home first open?

RM: [00:00:54] 1980 something. I don't know the exact date. 1980s.

ND Researcher: [00:00:57] And how many rooms are there?

RM: [00:00:58] 23 at the moment. We are expanding, to add more at a later date. There's a part finished new build extension.

ND Researcher: [00:01:12] Yeah. Ok I parked on North Street and just walk around and saw that.

ND Researcher: [00:01:18] And how many residents are there in the home?

RM: [00:01:20] At the moment 20, 20.

ND Researcher: [00:01:24] 20 but the capacity is?

RM: [00:01:25] 23.

ND Researcher: [00:01:26] 23. And which residents do you cater for, are they frail but not EMI or frail EMI or a mixture of the above?

RM: [00:01:39] They are a mixture of elderly mentally ill, learning disability, dementia, Alzheimer's and associated expressive behaviors.

ND Researcher: [00:01:51] Thank you, good. And so of that number how many, how many of the residents are actually living with dementia?

RM: [00:02:04] Err, d, d, 17.

ND Researcher: [00:02:10] 17, thank you. Catering services in the home, are they carried out in-house or do you sub-contract?

RM: [00:02:17] In house.

ND Researcher: [00:02:23] In-house. So, if they are carried out in house, do you have a group corporate food and beverage director or an Executive Chef?

RM: [00:02:31] No, no. (name) the Chef deals with all that.

ND Researcher: [00:02:33] Right.

RM: [00:02:33] It's only a small home.

ND Researcher: [00:02:36] Yes. Does the care home employ any dieticians or nutritionists?

RM: [00:02:43] No. We seek, seek external, er, referrals or from the SALT nurse or whatever if required.

ND Researcher: [00:02:53] So it's the community dieticians that will help. OK. And how many and what type of staff are employed in the catering department. So you've got one.

ND Researcher: [00:03:03] Two.

ND Researcher: [00:03:03] One Chef and an assistant chef is it, or?

RM: [00:03:07] Yes.

ND Researcher: [00:03:09] Right, OK. Do You have a specific staff who only serve food or is it care assistants who helps serve the food?

RM: [00:03:16] When you say serve food, what do you mean by that because it's rather .... the food is served by by the cook or chef. On to the plates and the carers take the plates to the residents.

ND Researcher: [00:03:32] Right okay. So it's. Yeah. So the chef is responsible for plating. That's great. Have your catering staff received any further qualification or training with regard to food and beverage management or culinary management.

RM: [00:03:49] Yes.

ND Researcher: [00:03:49] Yes.

RM: [00:03:50] Yes, the chef has, yes. The chef has, yes.

ND Researcher: [00:03:55] And have they received any specific training on cooking or serving people with dementia?

RM: [00:04:01] Yes.

ND Researcher: [00:04:05] And what was, what sort of training would that be?

RM: [00:04:09] You'll have to ask (name of cook).

ND Researcher: [00:04:09] I will, I'll ask her on Thursday. Do you have a corporate social responsibility policy?

RM: [00:04:16] What's that?

ND Researcher: [00:04:16] Er, it is something which is being demanded more and more by many, many local authorities. You have your responsibilities set out for all to read.

RM: [00:04:31] We have policies and procedures, yes.

ND Researcher: [00:04:33] So it is in a policy procedure.

RM: [00:04:42] Yes.

ND Researcher: [00:04:42] Do You offer free Wi-Fi connections to residents.

RM: [00:04:45] We do yes.

ND Researcher: [00:04:48] Some questions to some questions about you and your job if you don't want to answer any of these particular questions just say so. But what is your job title?

RM: [00:04:58] Registered Manager.

ND Researcher: [00:04:59] You are an RM. How would you describe your main duties?

RM: [00:05:09] (Chuckles) Main duties? Well, that incorporates all the five requirements of CQC (well reg), safety, responsive, recruitment, selection. Er, maintaining budgets, The whole hullabaloo. Fire Safety, the whole lot.

ND Researcher: [00:05:33] Right, thank you. And do you work a standard five-day week and 9 to 5 work pattern.

RM: [00:05:37] No.

ND Researcher: [00:05:37] No. Would you please tell me your main qualifications in regards to your job.

RM: [00:05:47] I don't actually have a main qualification. I was a nurse. I didn't keep up my

PIN number.

ND Researcher: [00:05:54] Right, OK, but you do have a nursing qualification.

RM: [00:05:57] Yep. Mental health.

ND Researcher: [00:06:03] Have you received any further qualifications or training whilst ....

RM: [00:06:07] Yes. I'm just completing a master's degree in working well with dementia.

ND Researcher: [00:06:17] Excellent. And where do you study that?

RM: [00:06:17] Lincoln University.

ND Researcher: [00:06:21] Lincoln. But What do you most enjoy about your job?

RM: [00:06:23] The residents. I like to be on the floor popping in and out and supporting the staff, yeh.

ND Researcher: [00:06:34] Excellent. Thank you. And what do you like least your job?

RM: [00:06:38] (Interruption by staff member, low voices inaudible) I can't think at least at the moment.

ND Researcher: [00:06:57] That's absolutely fine. Most managers just tend to respond to the paperwork.

RM: [00:07:01] Well yeah, there's that, yeh.

ND Researcher: [00:07:03] And if you could change one thing about your job in a care home what would that be?

RM: [00:07:07] Erm, More, far more money to develop, to develop dementia care ie dementia garden. Er, that sort of thing, a bigger budget.

ND Researcher: [00:07:35] Yes OK.

RM: [00:07:38] And health and social care to pay a realistic price for looking after Mum and Dad people. Because it's not it's not a real price they pay care homes, nursing homes a week or what it costs for a day.

ND Researcher: [00:08:02] Do you consider yourself to be a valued member of the staff, essential to the well-being. Or do you feel you're in more of a leadership rôle. (DOORBELL INTERUPTS) or administrative rôle. Erm.

ND Researcher: [00:08:19] So do you consider yourself to be a leader more than a ... ?

RM: [00:08:21] Yes. What was the first bit of the question?

ND Researcher: [00:08:23] As a valued member of staff.

RM: [00:08:23] A valued member of staff, yes, from MY staff anyway.

ND Researcher: [00:08:31] Thank you. Are you consulted with regards to the following aspects of food production and service? By, by your chef so do you get involved in menu content and compilation?

RM: [00:08:47] We meet up once a year to discuss Yeah.

[00:08:50] So it's that is the case would that apply to the portion sizes you give?

[00:08:55] No, I don't need to because (name redacted) very very experienced and she's also what (interruption from staff member - inaudible) can you just break for a moment?

[00:09:05] Yes of course I'll just pause this. INTERVIEW AND RECORDING STOPPED. CONTINUED LATER

Links to interview recordings are available on request.

Transcripts of all interview recordings are available on request.

Appendix 11. Stages of Alzheimer's

Alzheimer's disease typically progresses slowly in three general stages: early, middle, and late (sometimes referred to as mild, moderate and severe in a medical context). Since Alzheimer's affects people in different ways, each person may experience symptoms — or progress through the stages — differently.

Overview of disease progression

The symptoms of Alzheimer's disease worsen over time, although the rate at which the disease progresses vary. On average, a person with Alzheimer's lives four to eight years after diagnosis, but can live as long as 20 years, depending on other factors. Changes in the brain related to Alzheimer's begin years before any signs of the disease. This time period, which can last for years, is referred to as preclinical Alzheimer's disease.

The stages below provide an overall idea of how abilities change once symptoms appear and should only be used as a general guide. (Dementia is a general term to describe the symptoms of mental decline that accompany Alzheimer's and other brain diseases.)

The stages are separated into three categories: mild Alzheimer's disease, moderate Alzheimer's disease, and severe Alzheimer's disease. Be aware that it may be difficult to place a person with Alzheimer's in a specific stage as stages may overlap.

Early-stage Alzheimer's (mild)

In the early stage of Alzheimer's, a person may function independently. He or she may still drive, work and be part of social activities. Despite this, the person may feel as if he or she is having memory lapses, such as forgetting familiar words or the location of everyday objects.

Symptoms may not be widely apparent at this stage, but family and close friends may take notice and a doctor would be able to identify symptoms using certain diagnostic tools.

Common difficulties include:

- Coming up with the right word or name.
- Remembering names when introduced to new people.
- Having difficulty performing tasks in social or work settings.
- Forgetting material that was just read.
- Losing or misplacing a valuable object.
- Experiencing increased trouble with planning or organizing.

During the early stage, it’s possible for people with dementia to live well by taking control of their health and wellness and focusing their energy on aspects of their life that are most meaningful to them. In addition, this is the ideal time to put legal, financial, and end-of-life plans in place because the person with dementia will be able to participate in decision-making.

Middle-stage Alzheimer's (moderate)

Middle-stage Alzheimer's is typically the longest stage and can last for many years. As the disease progresses, the person with Alzheimer's will require a greater level of care.

During the middle stage of Alzheimer’s, the dementia symptoms are more pronounced. the person may confuse words, get frustrated or angry, and act in unexpected ways, such as refusing to bathe. Damage to nerve cells in the brain can also make it difficult for the person to express thoughts and perform routine tasks without assistance.

Symptoms, which vary from person to person, may include:

- Being forgetful of events or personal history.
- Feeling moody or withdrawn, especially in socially or mentally challenging situations.
- Being unable to recall information about themselves like their address or telephone number, and the high school or college they attended.
- Experiencing confusion about where they are or what day it is.
- Requiring help choosing proper clothing for the season or the occasion.
- Having trouble controlling their bladder and bowels.
- Experiencing changes in sleep patterns, such as sleeping during the day and becoming restless at night.
- Showing an increased tendency to wander and become lost.
- Demonstrating personality and behavioral changes, including suspiciousness and delusions or compulsive, repetitive behaviour like hand-wringing or tissue shredding.

In the middle stage, the person living with Alzheimer’s can still participate in daily activities with assistance. It’s important to find out what the person can still do or find ways to simplify tasks. As the need for more intensive care increases, caregivers may want to consider respite care or an adult day center so they can have a temporary break from caregiving while the person living with Alzheimer’s continues to receive care in a safe environment.

Late-stage Alzheimer's (severe)

In the final stage of the disease, dementia symptoms are severe. Individuals lose the ability to respond to their environment, to carry on a conversation and, eventually, to control movement. They may still say words or phrases, but communicating pain becomes difficult. As memory and cognitive skills continue to worsen, significant personality changes may take place and individuals need extensive care.

At this stage, individuals may:

- Require around-the-clock assistance with daily personal care.
- Lose awareness of recent experiences as well as of their surroundings.
- Experience changes in physical abilities, including walking, sitting and, eventually, swallowing
- Have difficulty communicating.
- Become vulnerable to infections, especially pneumonia.

The person living with Alzheimer’s may not be able to initiate engagement as much during the late stage, but he or she can still benefit from interaction in ways that are appropriate, like listening to relaxing music or receiving reassurance through gentle touch. During this stage, caregivers may want to use support services, such as hospice care, which focus on providing comfort and dignity at the end of life. Hospice can be of great benefit to people in the final stages of Alzheimer’s and other dementias and their families.

Source: alz.org/alzheimers-dementia/stages

Appendix 12. My journey and reflection

It is reasonable to say that I was a late learner throughout my early years. Having been hospitalised for several months at the age of 10, having been a hit-and-run statistic. I tried but failed the 11-Plus exam. My Mum was devastated, she was convinced that I would be a doctor one day, *though she never said what kind of doctor*, but the doors now appeared closed to an advanced, higher education. I was born and brought up on a dairy farm, but my dad contracted Brucellosis and had to give up his tenancy. Mum's idea for economic recovery was to buy a small B&B in a coastal resort in Lancashire, my first taste of the hospitality business. It is now apparent to me that no research was carried out on the pros and cons of buying in to a hospitality business or indeed, how important it was to do so. I had my pocket money for helping out. I spent my free time fishing, crabbing, and swimming in the Olympic sized open-air lido. I was happy.

At my next school I was constantly being told to shut up and stop asking so many stupid questions. At one point, our delightful careers master suggested that I got a job in a hotel, with all the other "*thickos and retards*", I still remember those disparaging words of encouragement with clarity. At the age of 16 I think many youngsters uncritically accept the words of their perceived betters and elders. This was a clear indication of the low esteem of the hotel and catering occupations within certain sections of the community. So I did. I found a summer job as a kitchen porter at a Lake District hotel, and I loved it. I started off on menial level tasks, peeling onions and potatoes, pot washing, sweeping, and mopping the kitchen floor, and even washing the boss's car for a few extra shillings. By the end of the season I was responsible for breakfast service and veg prep – none of the other cooks could make the early mornings. As the season ended, I was determined to learn more, so I enrolled on a basic City and Guilds cookery course.

In those days I knew nothing of research, but I maintained my constant inquisitiveness and never stopped asking questions, stupid or not. I found work in the UK, Switzerland, and Italy, mostly as a tour guide and sometimes in restaurants and bars. Returning to England to get married, I continued my learning as a Chef de Parti at Lancaster University's catering department. I was nominated to be the catering department's On-Job-Trainer and did teaching practice at St. Martin's College, Lancaster. A number of opportunities to work as a chef, at different levels, followed in 4-star hotels and restaurants, including the Commonwealth Holiday Inns of Canada. I was pleased to receive various on-the-job training sessions, via the Holiday Inns university programme, to help me develop.

I was eventually headhunted to become the Group Executive Chef and Food and Beverage Manager for a major sporting event catering company and was spending more time driving between cricket grounds, football stadiums and racecourses than working the kitchen lines. I was constantly looking to improve. I still didn't know of the formal research process, just finding out what I could from reading trade magazines, long before the advent of internet searches. The words method and methodology were familiar to me – but only in relation to how recipes worked!

It was during those middle career years that I underwent three laminectomy operations on my spine, putting me out of action for several months at a time. In those days a laminectomy was considered to be high risk surgery with potential complications. Fortunately, the companies I worked for were very supportive, continuing my employment with more desk-bound responsibilities. I was researching, developing new concepts, and learning much more about the financial aspects of managing a food and beverage business.

By this time my arrogance knew no bounds and my next adventure was to open my own restaurant, in a little village just outside the Norfolk coastal town of Cromer. Look at a map of England and Norfolk is the big, fat backside sticking out into the North Sea. You only go to Norfolk as a destination, you don't just pass through, there were no major trunk roads in or out. It was a BIG mistake! Although I got the restaurant into the Michelin guide in the first-year, trade nosedived during the miners' strike of March 1984 to March 1985. The majority of my local customers relied on the incoming tourism industry, mostly from the mining towns of Derbyshire, Nottinghamshire, and South Yorkshire. I too relied on the incoming trade, which virtually dried up. I managed to get a part-time lecturer position at Norwich City College, my first real foray into teaching, which helped to put food on the family table. The striking miners could not afford holidays, it was time to throw in the towel and sell the property and business before the bank took it back.

Unemployed for the first time since my teens I found a job which took me to the United States of America, on behalf of a major UK plc, to bring back to the UK a Tex-Mex restaurant concept. My months in the USA were a real eye-opener and taught me a great deal, I was there with three other UK expats, learning the company culture and procedures. The company I was seconded to were very supportive and took me through what could be described as a minor university course of on-job-training, with class room lectures, workshops, and theoretical seminars. I shadowed a senior executive and worked in many branches of the restaurant in various States. My practitioner skills were developing every day. We returned to the UK, and we opened the first UK branch in central London, quickly followed by several more throughout the country.

After a few years of this I was approached by a head-hunting firm and offered a position with a large hotel, timeshare, and restaurant company, in Spain, as Director of Food and Beverage Operations. Now I really had to start some serious research endeavours, to match my practitioner skills. Although I had previously learnt to read and speak Italian, Spanish was new to me. Although all head office communication was in English, I had to manage the various outlet managers and supervisors, and this was undertaken in Spanish. This proved to be a steep cultural and language learning curve.

I was often approached by local tour operator managers to audit and diagnose some of their poorly performing hotels and offer advice to improve their offer. These links were to form the basis of my future consultancy career.

After five years in Spain I returned to the UK for my eldest son's education. Although there were good expat schools in Spain, they did not go beyond the age of 16. I worked a few short-term interim assignments in hospitality and tourism whilst looking for something new. I was then approached by an old colleague who was working at a London Polytechnic, asking me to apply for a new Senior Lecturer post. Although I had previously taught at Further Education level, I had no experience of Higher Education at that time, not even an Undergraduate Degree. Nothing ventured, nothing gained. I applied, was shortlisted, interviewed, and offered the job within a space of a few weeks. One of the conditions of employment was that I did an MBA! My first timetabled teaching tasks were all practically based, making good use of my practitioner skills. Colleagues delivered the theories. I, however, had a lot of catching up to do and it seemed, at times, that I was one page ahead of the students when I sat in on support seminars.

MBA, Master of Business Administration, I had to question myself, me! How did that happen? The MBA was an introduction to the library search systems, involving microfiche machines and was a fascinating yet laborious enterprise. No online searches or Google Scholar in those days. I was beginning to understand the world of research and what it meant. I found so many articles which I knew would help me, not just in my MBA, but also my teaching and personal life. I found myself leaning towards qualitative, rather than quantitative research methods preferring the beauty of qualitative research – the words, pictures, artefacts, observations, getting to know people. It's about a belief that qualitative research can humanise the sciences that qualitative research is for the curious, the open minded, the flexible.

I passed my MBA Dissertation with a Distinction. From memory, Mixed-Methods research was still in development in those days. I completed my research, on the effects the new EU Package

Travel Directive would have on the European hospitality and tourism industry by interviewing several hotel managers (I can't remember the exact number, but it was in excess of 24) from Spain, Greece, Cyprus, Malta and Tunisia and a few Tour Operator managers in those countries. This was facilitated by the major tour operator hosting a conference attended by those participants, at which I had been invited to take part. I also distributed a number of supplementary questionnaires to establish the data. Was this mixed methods research? It would seem so. In the following years I was asked time and time again to travel to various countries and provide consultancy to the tour operator contracted hotels, cruise ships and excursion venues. After five years at the old Polytechnic, now a university, it was time to move on.

Together with two colleagues from our days in Spain we created a hospitality and tourism consultancy business. It was my previous academic research activities, coupled with our pragmatic and applied way of working, that ensured success of the business. We were soon recognised as one of the leading hospitality consulting businesses with an annual turnover of £1.2 million. Part of the business, the food safety and health and safety business, was sold off to a large UK plc. After 10 years, it was recognised that we had eventually consulted ourselves out of work. The tour operators now employed their own internal consultants, even employing one of my former students!

I then returned to an academic life, starting with a part-time rôle at an East Midlands university, eventually joining Sheffield Hallam. During those years I had two Total Knee Replacement operations, the last one, part way through my research for this degree. I have significant experience of hospital catering, not all of it good but it has, at least, given me a first-hand understanding of the patient experience. If this section has been too boring or self-serving, I apologise, the intention is to help you understand the type of researcher I have become and, maybe, one day fulfil my Mum's dream for me – but not quite how she meant.

To close this Appendix I have a confession to make. I have been increasingly concerned about my cognitive abilities of late, forgetting simple things, having to re-read recipes for dishes I've been cooking forever and, being unable to remember family member and colleagues' names. I have recently undergone a couple of cognitive tests, with indications that I have Mild Cognitive Impairment (MCI). According to the Alzheimer's Association, 15-20% of persons 65 years and over have MCI. Sometimes persons with MCI progress to dementia and sometimes they do not. If a diagnosis of full dementia is confirmed, individuals typically remain at this level of impairment for between 2 – 7 years. Progression through the stages is more rapid in the later stages (dementiacarecentral.com n.d). So, it's not all bad, I had time to complete the thesis before The Senium takes hold. However, completing this thesis has proven to be a significant challenge. I

would write one section within a chapter and then write similar messages within another chapter. I would forget what I had written and had to proof read over and over again, adding significantly to the time effort required.

Would I do such a degree of research again? Let me think that one for a while.

Would I advise or encourage anyone else to complete a DBA? If you have the courage and perseverance, most definitely. Good luck.