

# Research in Practice

## NUTRITIONAL NEEDS FOR OLDER PEOPLE WITH DEMENTIA

### Introduction

This essay will carry out a literature review on elderly people living with dementia and their nutritional status. It aims to explore the impact of poor nutritional intake within the population and discuss research studies that have identified the issues that are causing poor care outcomes. Firstly, the relevant domains of the NHS Outcomes Framework(2014,15) which links to this topic will be identified , highlighting the key original research studies, guidelines and the explanation for the need of this literature review. Furthermore, the essay will formulate a research question and offer methodology, using the search strategies and an explanation of the process followed. The essay will then continue to appraise and discuss the chosen research studies ,distinguish their similarities and differences and aims to identify the key findings, themes and recommendations to address the identified clinical gaps.

### Background

Malnutrition is a serious condition that occurs when a person's diet does not include the right amount of nutrients (NHS, 2013). According to the Alzheimer's Disease International (2012) "Under nutrition (insufficient calories, protein or other nutrients needed for tissue maintenance and repair) is the commonest nutritional problem, affecting up to 10% of older people living at home, 30% of those living in care homes, and 70% of hospitalized older people". Good nutrition and daily physical activities plays a huge role in many age-related conditions such as cardiovascular disease, cognitive decline, bone and joint health and their oral and dental health (British Nutrition Foundation, 2015).

Dementia is predominantly a condition that affects older people although it affects people under 65 too. It is estimated that there are around 800,000 in the UK with dementia (Age UK, 2015). Worldwide, 35.6 million people have dementia and there are 7.7 million new cases every year (WHO, 2012). Although, a range of factors like lack of mobility, isolation, medical conditions, drug nutrient interactions influences the nutritional status of elderly people, dementia can play a huge role in bringing changes and decline in nutritional intake . As dementia progresses from an early stage to the late stage it can complicate mind from simply forgetting to eat, to a stage where a person may lack the co-ordination of chew and swallow or even be unable to distinguish between food and objects (Steele, 2010).

The British Association of Parenteral and Enteral Nutrition (BAPEN, 2007) identified that the risk of malnutrition in mental health inpatient unit is 14 percent overall and 24 percent for those over 65 years-old. To identify whether someone is at risk of malnutrition the British Association for Parenteral and Enteral Nutrition introduced a Screening tool called MUST (Malnutritional Universal screening tool) on 2003 in the UK for healthcare professionals in the hospitals .The Royal College of Nursing states that , "Nutritional screening is the only way that malnourished individuals can be diagnosed and appropriate action taken". MUST has since been supported and followed by many governmental and non-governmental organizations including the Royal College of Nursing (RCN), British Dietetic Association



(BDA), Registered Nursing Home Association (RNHA). It is the most widely used screening tool in the UK. According to the BAPEN (2010) "if nutritional needs are ignored health outcomes are worse and meta-analyses of trials suggest that provision of nutritional supplements to malnourished patients reduces complications such as infections and wound breakdown by 70% and mortality by 40%". It is very important to ensure a thorough nutrition assessments and observing mealtimes to prevent weight loss and dehydration. Dementia can have a negative impact on self-feeding abilities, swallow function, and appetite (Hillard 2013). So, a holistic care paying attention to their eating behaviors, environment, preferences, cognitive ability and so on can be vitally helpful in recognizing their needs and plan care accordingly to meet a balanced diet. When food interventions are not successful then supplementary drinks like Ensure or Fortisip should be provided to increase calorie intake between meals.

The NICE Guidelines (NICE CG42), asserts that "treatment and care of patient with dementia should take into account patient's needs and preferences" and to regard "the human value of people with dementia, regardless of age and cognitive and cognitive impairment". Dementia is a very fragile subject as Disability Discriminations Acts 1995 and 2005 implies that healthcare professionals giving care should also ensure the principles of care which includes their social, physical and mental conditions (Disability Discrimination Act, 2007). The Disability Equality act 1995, Section 49A, places that "public authorities, when carrying out their functions, to have due regard to the need to promote positive attitudes towards people with disabilities". Nurses duty as a professionals includes "aim to promote and maintain independence, including mobility of people with dementia" (NICE CG42). Nurses care plans should focus on activities of daily life (ADLs) to maximize their independency, improve function, adapting and developing skills and to minimise the need for support. Nutritional support is subjected as one of the primary needs as preparing or cooking food not only falls under activities of daily life but also due to the fact food and fluid being an essential part of living. When food interventions are not successful then supplementary drinks like Ensure or Fortisip should be provided to increase calorie intake between meals.

The Department of Health has introduced The NHS framework which act as a catalyst for driving quality and improvement and outcome measurement throughout the NHS by encouraging a change in culture and behavior, including a renewed focus on tackling inequalities in outcomes (Department of health, 2010). The chosen topic for this essay relates to NHS Domain 2 in NHS Outcomes Framework "Enhancing quality of life for people with long term conditions" (NHS Outcome Framework 2014/15). This domain focuses on supporting people with their ongoing long term conditions by having a control over the care they receive to live healthily and independently.

### **Formulation of a Research question**

#### **What strategies can be used to enhance nutritional intake in elderly people with dementia?**

PICO framework has been used in order to formulate a research question. The PICO question format is a consistent "formula" for developing answerable, researchable questions (Kosher 2006). It helps to modify a question into ways which enables any search engine to get the most relevant literature. The formulation of a focused clinical question containing a well-structured PICO framework is



believed to be the key to efficiently finding good quality of evidence based decision for nursing practice (Sines *et al.* 2013)

P-patient = elderly people with dementia (aged 65 or over)

I- Intervention= nutritional strategies

C-Comparison= no comparison

O- Outcome= Enhance nutritional intake

Nursing research plays a huge role in developing trustworthy evidence and guiding nursing practise. Nurses are increasingly expected to understand and conduct research, and to base their professional practise on emerging evidence from research, which is to adopt an evidence based practise (Polit 2010). Evidence based practise involves of implementing the best clinical evidence in making patient care decisions. Nurses are required to base nursing actions and decisions on clinically approved evidence, which research findings are from rigorous studies providing strong evidence. Use of this strong and appropriate evidenced base nursing care can produce a positive outcomes. This literature review will help to summarize evidence obtained from studies that relates to strategies tested to enhance nutritional intake in elderly people living with dementia.

### Methodology

To find relevant research study a systematic literature search was carried out using database such as CINAHL and MEDLINE. According to (Ellis and Standing, 2013), "the more precise the subject being searched the more focused the outcome will be". The search terms used in finding the studies was "Nutrition" AND "Elderly People" AND "Dementia" which resulted in only 243. The boolean operator command was also applied in order to compress the words into finding appropriate studies. The search was narrowed from year 2006 to 2014, age were limited from 65 and over, headings used were Nutrition and Dementia, which resulted in only 54. A second search was carried out using the term "DEMENTIA" AND "Cognitive Impairment" AND "NUTRITION" which resulted in only 142. The search was further narrowed from age limit 65s over and the year was narrowed from 2007 to 2014 and 94 results were acquired, out of which only 5 studies were found in UK and Ireland. Altogether four literature met the criteria for inclusion as some studies included elderly people with nutritional problems excluding dementia whereas some literature only specified elderly and dementia and not nutrition which was excluded as an irrelevant study to review.

All the articles were independently reviewed for the inclusion and exclusion criteria. The articles which were eligible for inclusion in this literature review were journal articles whose subjects participants were elderly patients, studies done between 2005-2014, articles written in english, regardless of their geographical settings. The articles which were eligible for exclusion criteria were articles which studies were done before 2005, whose subject participants were not elderly patients, reports or uncontrolled studies and articles which were not in english. The research studies whose subject participants were although 65 years over but not living with dementia were also excluded



although they were elderly patients with poor nutritional intakes.

The chosen 4 articles were further assessed for rigor following their methodologies using a critical appraisal skills. In the context of the research design, CASP helps to evaluate if the frame or construction of the study is valid to produce any strong outcome. Validity means "the approximate truth of an inference" (Polit 2012) which means the instrument's ability to consistently and accurately measure a concept of a study. Critical Appraisal Skills enables to assess the trustworthiness, relevance and results of published papers so that it can be decided if they are believable and useful (CASP 2013). Other appraisal tools like Joanna Briggs tool (JBI) and Evaluation Tool for Qualitative Studies (ETQS) are also used to test validity and rigor of research studies.

In order to extract the data from the chosen research articles Timmins and McCabe (2005) table has been used. Data extraction aims on comparing, combining and summarizing the findings of the studies. Data extraction were used depending on the study design. It involved the author's name, reference, types of study, aims, study design, data collection method, and key findings. Comparing results of all four articles data were synthesized. A meta analysis of RCT helps in gathering information from various studies and develop a common metric, an effect size (Polit 2010).

Author & Date	Reference	Types Of Study	Aim Question	Study Design	Data Collection method	Ethical Approval	Critical Appraisal	Key Findings Relevant To Your Question
McCutcheon, H et.al (2008)	Journal of Clinical Nursing	Qualitative Study	to describes the findings of a descriptive study about what nurses do to ensure that older people with dementia have adequate hydration	Randomized Control Trial	observational study	No mention of informed consent		low fluid consumption within the elderly people with dementia could have been influenced by poor nursing practice.

Allen , J (2013)	Journal of Advance Nursing	Quanti tative Study	To analyse the influence of serving method on compliance and consumptio n of nutritional supplement drinks in older adults with cognitive impairment.	Non Randomized control trial	Observational study			Nutritional supplier drinks should be given to people with dementia who are unable to feed themselves in a cup or a beaker if staff resources allow
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Orsitto,G (2008)	Clinical Nutrition	Quantitative study	The aim of this study was to evaluate the prevalence of malnutrition in older patients with mild cognitive impairment	Non- randomized Control trial (RCT)	Mini nutrition assessment (MNA)	Ethical and Informed consent gained	Malnutrition is prevalent in hospitalized elderly patients with cognitive deficit, even in those with mild cognitive impairment. It remains to be demonstrated whether improvement in nutritional status may delay progression to dementia in these patients
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Kagansky,N et.al (2005),	The American journal of clinical nutrition	Quantitative study	to identify risk factors for development of malnutrition in very old hospitalized patients and to evaluate the total Mini Nutritional Assessment	Meta analyses	Mini nutrition assessment, cClinical, laboratory, cognitive.	Informed consent gained	The prevalence of malnutrition was high in elderly hospitalized patients. Dietary habits were significant predictors of poor hospitalization outcome. A questionnaire on dietary habits can serve as a useful tool in assessing nutritional status and prognosis in elderly patients.
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## Discussion

There were two types of studies carried out in the chosen articles, they were qualitative and quantitative studies. Qualitative studies focus on describing the nature, dimensions and salience of phenomena whereas Quantitative studies focus on the prevalence, size, and measurable aspects of the phenomena. Researchers base their studies on two paradigms, known as positivist paradigm and constructivist paradigm. Usually Qualitative studies are linked with Constructivist paradigm and Quantitative Studies with Positivist paradigm. Within the Positivist paradigm, much research activity is directed at understanding the underlying cause of the phenomenon (Polit 2012) whereas Constructivist paradigm much activity is directed at understanding between human experiences and interactions.

There were four key themes that were identified from the articles. They were poor nursing, influence of serving method, cognitive impairment and dietary habits (McCutcheon et al. 2008, Allen J. 2013, Orsitto G. 2008, Kagansky et al. 2005). The four articles reviewed concluded that elderly patients with dementia were undernourished and at risk of dehydration. Article 1 findings concluded that poor nursing and staff skills can influence the nutritional status in patients with dementia. Care Quality Commission (CQC 2012) states, that more than half of the homes not meeting people's nutritional needs were also not meeting the standard about record-keeping and also failed to identify or provide support to people who were at risk of malnutrition. The theme identified in this article was valid as the current Care quality Commission agrees too. Article 2 themes were that nutritional drinks should be given to patients with dementia who can feed themselves. The result of this literature review is that there is very limited evidence to prove that serving methods can influence fluid consumption in elderly patients with dementia. The sample size used for the study is very small which influences the effect size of the findings. Hence, it could be said that there were some potential biases. For example, 31 patients from care homes and only 14 patients from hospital. As article 3 suggests that improvement in nutritional status may delay dementia there is no evidence to support this theory. Although it can be found that a study suggests regular intake of fish, vegetables and fruits are associated with reduced risk of developing dementia (Alzheimer disease 2012) there is no evidence based research.



Article 4, highlights that a dietary habit questionnaire could serve as a nutritional tool to assess nutritional status and prognosis in elderly patients. There were no evidence or any interventions implemented which supports this findings.

**Article 1** from McCutcheon H et al.(2008) is a qualitative research based upon constructivist paradigm. In this paradigm the researcher interacts with the participants and generate findings. Seeking an indepth understanding a hypothesis were generated as low fluid consumption is influenced by poor nursing using an Inductive process. Narrative data has been obtained through the use of observational study.(Polit 2010, p.g 13), In this study a process of developing generalization from specific observations is involved called Inductive reasoning(Observing patients and nurses which are the participantants). **Article 2** from Allen, (2013) This is a quantitative study based upon positivist paradigm. The researcher has carried out a non blind randomized trial. The strength of this process is that due to randomization the participant are unknown of the process which stops them from being biased towards producing the results. The term blinding refers to keeping trial participants, investigators (usually health-care providers), or assessors (those collecting outcome data) unaware of the assigned intervention, so that they will not be influenced by that knowledge (Schulz, 2002). The participants consisted of a smaller size ( n= 45) although bigger settings than a nursing home like hospital participants were included. The study concluded that there were improvement in fluid consumption from glass/beaker, after a year. Although, the trial was undertaken for a year there were no significant changes between the two groups. **Article 3** from (Ositto, G 2008), This is a quantitative study with a very huge sample size of 623. Non Randomized control trial has been processed for data extraction. **Article 4** Kagansky et al (2005) This is a quantitative study, its paradigm is based on positivist. In data collection a meta analyses of systematic review is used. Collecting information from many studies or tests helps meta analyses draw conclusions about how big an effect an intervention has. Purposive Sampling was used, as all the patients were selected due to the fact they were in hospitals rather than commuinty, carehomes or residential homes. Purposive sampling consists of participants who are intentionally or purposefully selected because they have certain characteristics related to the purpose of the study (Neale 2009, pg 121).

Having reviewed the articles clinical gaps were identified as there were very less studies explored on the topic in the UK. It is estimated there are about 3 million people who are malnourished in the UK at any time and many more at risk of becoming malnourished (NHS, 2013). Some studies suggested that serving methods can improve hydration level in patient whereas some noticed that poor nursing care were leading patients into dehydration. One of the studies proposed that dieatry habit questionnaires could be helpful in assessing nutritional status but there were no studies or evidence carried out to prove any of these findings being used as an evidence in any nursing care plan.

Some of the research article ethical issues were identified as Article 1 and 2 researchers did not mentioned of getting any informed consent from the participantants, carer or the legal guardian. The Research Governance Framework for Health and Community Care (2006) emphasises that the importance of informed consent on the research. It also states that the dignity, safety and well-being of participant must be considered in any research.



## Conclusion

Having reviewed the articles, a gap has been explored that there is a need for continued focus on evidence based practise. It is uncertain whether articles following different methodology, objectives, findings concluding similar outcomes would be an effective interventions to implement or not? in the nursing practise. As, the incident rate of higher weight loss, malnutrition and mortality rate among elderly people with dementia there is a need for more evidence base research. It was mentioned to understand and address the needs, wants and preferences of the patients individually. Physically and mentally challenged, the patients easily lack motivation to function or perform activities of daily living. Understanding their choices, creating a family style eating environment with staff involvement, making a holistic approach can bring huge changes in their eating habits and daily life and uplift their quality of life. However, all the article concluded outcomes that can contribute in enhancing nutritional intake within the elderly people living with dementia, still more research studies could be helpful in providing more evidence to support the effectiveness of the interventions and put it into practise for better future in nursing.

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