JCN Journal of Clinical Nursing

Journal of
Clinical Nursing

ISSUES IN DEMENTIA CARE

An evolutionary analysis of mealtime difficulties in older adults with dementia

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Aims and objectives. To use the evolutionary method of concept analysis to identify attributes, antecedents and consequences of mealtime difficulties providing direction for assessment and management in older adults with dementia.

Background. Mealtimes encompass more than the physical act of feeding a person with dementia. Social and contextual considerations are vital considerations to improving nutritional intake. While feeding difficulties in dementia have been analysed in the literature, this paper proposes a broader scope of mealtime considerations to alleviate nutritional deficiencies often associated with dementia.

Design. Evolutionary method of concept analysis.

Methods. In 2008, literature searches using keywords (meal, history, sociology, mealtime, culture, habit, dementia, dementia) were done in CINAHL, Academic Search Premiere, MasterFILE, Americal Life and History, Communication and Mass Media Complete, EJS, Health Source Plus-Academic, PsychARTICLES and PsychINFO, ScienceDirect, Sociological Abstracts and Google. Year limits were from 1988–2008. A total of 659 abstracts were reviewed, Google, books and textbooks with relevant content.

Results. Fourty-eight sources were used in the final analysis of mealtime difficulties in older adults with dementia. A model of mealtime difficulties delineates attributes, antecedents and consequences.

Conclusions. Mealtime difficulties in dementia emerged as a concept with supporting evidence-based practice guidelines in 2003. Most research has been conducted in institutional settings, but community research is growing as the shifting demographics of ageing demand attention for this setting. Interventions vary in effectiveness for alleviating sequelae of mealtime difficulties in older adults with dementia.

Relevance to clinical practice. The conceptual model of mealtime difficulties provides a broader scope of mealtime difficulties in dementia that considers environmental, social, cultural and contextual implications with nutritional intake. The model can be used to guide future research to alleviate mealtime difficulties in older adults with dementia.

Key words: culture, dementia, feeding behaviour, meal, mealtime difficulties, nutrition, social

Accepted for publication: 17 March 2009

Introduction

Mealtime is a universal concept understood across societies and cultures, although the symbolic meanings of meals differ for groups and individuals (Fjellstrom 2004). In Western society, we understand a 'three-meals-a-day' pattern, but the timing and structure of meals possess different cultural meanings (Fjellstrom 2004). Food is used to celebrate occasions, establish and maintain group ties, cope with feelings, express emotion and to foster a sense of family and companionship (Fjellstrom 2004, Evans *et al.* 2005). Cultural identities can be linked to traditions around food

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This article has not been supported by grants or use of equipment or drugs.

doi: 10.1111/j.1365-2702.2009.02969.x

consumption, are learned in families of origin and carried through lifetimes to be passed on to future generations (Evans *et al.* 2005, Walker 2005). Cultural attributes of meals can be altered by conditions that affect cognition when long-standing patterns are forgotten by the affected individual or neglected by caregivers who assume these patterns are no longer pertinent in the midst of decline. Thus, when mealtime patterns change either by virtue of disease, caregiving, or even shifts in the living environment, ability to eat or be assisted in eating may diminish (Stockdell & Amella 2008). If these losses are significant, they can lead to malnutrition (Kayser-Jones 2000, DiMaria-Ghallili & Amella 2005).

Nutritional status is an important consideration for all health professionals; however, it is the nurse who often first recognises problems in eating and feeding that may compromise nutritional status, which is critical to promoting quality of life and preserving function (DiMaria-Ghallili & Amella 2005). When conducting inquiry into mealtime difficulties in dementia, regardless of setting, consideration must be given to factors beyond feeding behaviours to include contextual issues of social, cultural and environmental factors (Amella 2004, Stockdell & Amella 2008) (Fig. 1). Assessment should include how, when, where and with whom mealtimes take place, in addition to consideration of nutritional components of the food offered (Amella 2008a, Stockdell & Amella 2008). Available instruments to assess mealtimes compartmentalise the process and often policies meant to improve mealtimes only target limited areas for intervention (Amella 2004, 2008a, Chang & Roberts 2008b). Because of the critical nature of nutrition and the ability to not only consume adequate calories but preserve the dignity and personhood of individuals with dementia through familiar rituals, this paper will examine mealtime difficulties for persons with dementia either living at home or institutional settings. It will explore the attributes, antecedents and consequences of difficulties with mealtimes in this fast-growing population.

Method

The evolutionary method will be used to examine the concept of mealtime difficulties, which resembles the approach popularised in nursing by Avant and Walker in the 1980's (Rodgers & Knafl 2000). A brief overview of the evolutionary model involves acknowledgement of its philosophical basis as an integration of views, mainly espoused by Wittengenstein (1953/1968) and later by Toulmin (1972) (as cited in Rodgers & Knafl 2000). The process begins with acknowledging that concept development is heavily influenced by socialisation and the process of 'enculturation' that individual disciplines provide. There may be variations of a concept due to the cyclical process of concept development. The evolutionary method is an inductive form of inquiry and analysis moving from the particular to the whole, as attributes are identified without any preconceived notions (Rodgers & Knafl 2000).

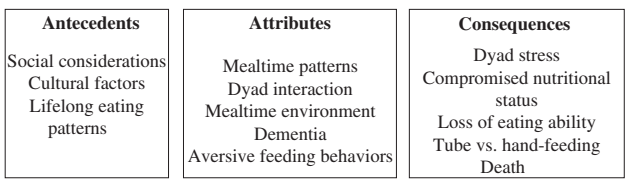

Figure 1 Model of mealtime difficulty.

While the concept of mealtime is universally understood (Fjellstrom 2004), mealtimes possess multiple overlapping and interrelated elements that are constantly changing. A complex system of social and cultural influences exist and have caused the concept of mealtime to evolve over time with changes in culture, industrialisation and various facets of modern day life. All of these contextual factors must be considered when interpreting mealtime difficulties in dementia (Rodgers & Knafl 2000, Amella 2004).

Evolutionary analysis involves development of a concept as a group of words that express characteristics of objects or phenomena common to the abstraction of the concept. The steps involved in the analysis include identifying the concept and associated surrogate terms. Sample and setting predeterminations provides the framework for rigorous data collection. The goal in data collection is to obtain relevant data to further develop attributes of the concept, antecedents and consequences and to illustrate a contextual basis for the term. Multiple sources are used, ranging from scientific literature to popular media sources, to illustrate the concept. Once the data are collected, analysis ensues, including an exemplar if one is able to be identified. The discussion of the concept analysis concludes with results and implications for further development of the concept (Rodgers & Knafl 2000).

Sample

Initially the scientific literature was examined to provide insight into the historical, social and cultural views of mealtime; this effort built the base of antecedents, attributes and consequences currently associated with mealtime. Relevant databases with electronic access from two university libraries were searched. Examination of difficulties that occur with mealtimes created the need to purposively delve into literature regarding environmental, social, historical, cultural

and other contextual issues related to mealtimes through the lens of ageing, then coupled with dementia. The time selected for the literature review extended from 1988–2008 when the initial articles began to appear primarily from Sweden, with the majority of literature drawn from 1998–2008. Articles were retrieved electronically from database or interlibrary loan services; identified textbooks and books were reviewed for review and inclusion.

The first database search was in EBSCOhost, which includes searches in the following search engines: Academic Search Premiere, MasterFILE, America Life and History, CINAHL, Communication and Mass Media Complete, EJS, Health Source Plus – Academic, PsycARTICLES and PsychINFO. Keywords used included meal or meal* AND history* or sociology, mealtime and history, mealtime and culture, mealtime and sociology, mealtime and habit, mealtime and dementia (in title fields and in all fields). This search strategy yielded a total of 249 articles.

Search continued in the database of Sociological Abstracts database using keywords mealtime or meal*, mealtime and history, mealtime and culture, mealtime and sociology* in title fields and in all fields. This search yielded a total of 121 articles.

ScienceDirect was searched using keywords mealtime or meal* AND history* or sociology, mealtime and mealtime and dementia (in all fields). This search yielded 243 articles. Ageline and Wiley databases were searched with keywords mealtime and dementia in all fields and yielded 37 and nine articles, respectively.

This provided a total sample of 659 articles. Abstracts were reviewed and articles were included if the study they discussed historical, cultural or sociological issues in the context of meals or mealtime and if they addresses issues with mealtimes in persons with dementia. Two articles were identified that related to artificial nutrition and whether or not this intervention qualified as a mealtime. Driven by the evolutionary model of concept analysis, these two articles were included to provide information on an identified consequence of mealtime difficulties in the reviewed literature; enteral nutrition had been used in reference to meals (Rodgers & Knafl 2000).

In considering popular literature and media that address mealtime difficulties, the keyword 'mealtime difficulty' was searched on Google using the Internet and resulted in 108 000 links. When 'mealtime difficulties in dementia' was used, 26 000 links were provided. The first few pages of links were analysed for relevance to the concept. The Internet search yielded three textbook chapters (Kedziera & Coyle 2006, Mazanec & Panke 2006, Amella 2008a) and a third book was identified providing practical information for caregivers for daily care of a person with a dementing illness (Mace & Rabins 1999). The Hartford Institute of Geriatric Nursing (HIGN) was identified as a website with clinical information on mealtime difficulties, specifically the *Try This* series (Amella & Lawrence 2008a) and the How to *Try This* series video ('How to Try This (Video): Eating and Feeding Issues in Older Adults with Dementia' 2008). The HIGN website also offered access to an electronic article (Stockdell & Amella 2008) and one other link that discussed mealtime difficulties (Amella 2008b). The HIGN website search revealed multiple resources for the concept of mealtime difficulty including continuing education, web resources, professional organisations, journal articles, patient and family resources, regulatory/authoritative sites, government information agencies and textbook chapters. These sources have been a major influence in the development of 'mealtime difficulties' as a concept and are considered in the evolutionary method of concept analysis (Rodgers & Knafl 2000).

Fourty-eight sources were used in this analysis. Rodgers and Knafl (2000) reports a sample size of 30 for a concept analysis to be 'quite small to identify a consensus in the literature or to achieve convergence in the data' and is a limitation of this analysis (p. 89). Articles were included if they provided insight to attributes commonly studied in relation to mealtimes, or problems with mealtimes in dementia. Articles were also considered regardless of care setting to provide insight from home environments and family caregivers to trained nursing staff in institutional settings. Identification of the attributes associated in the current scientific literature was a main goal with diligence given in identifying more than one source when an attribute was identified. Articles were excluded if not written in English and if information was not specific to older adult populations. Limitations include only searching through the first ten pages of Internet resources for application to the concept and the small sample used for the concept analysis.

Attributes of mealtime difficulties

Meal patterns

Components of meal structure, the daily rhythm of eating, the social aspects of eating and food choices vary across cultures (Manthorpe & Watson 2003, Fjellstrom 2004, Mellin-Olsen & Wandel 2005). Eating and mealtimes have been studied over the ages by numerous luminaries from Epicurus advocating eating to a state of satiation but not overeat, to Brillat-Savarin who promoted the concept that dining was a science, to M. F. K. Fisher who considered meals one of the arts of life. Even Florence Nightingale

developed prescriptives for the diet: 'Every careful observer of the sick will agree in this that thousands of patients are annually starved in the midst of plenty, from want of attention to the ways which alone make it possible for them to take food' (Nightingale 1860, p. 63).

In more recently history, Fjellstrom (2004) described the effects of immigration on meal patterns revealing fascinating comparisons in mealtimes when the USA moved from a rural, underdeveloped country to an affluent society. Family dynamics and the influence of children's food choices in the new culture created a subsequent impact on food choices of the family. This paper provides an illustration from a modern perspective of how mealtimes have evolved over time.

Most current cultures around the world break meal patterns into breakfast, lunch and dinner with snacks. The meal timing, social involvement of family and friends, seasonal variations and the role of work in the family all impact how, when, where and with whom food is eaten (Mellin-Olsen & Wandel 2005, Amella 2008a). Distinct patterns of family life in the customs, religion and recreational times spent are carried into old age and memories of how food was used to celebrate special occasions evokes feelings of how they enjoyed food in their youth (Evans *et al.* 2005).

Dyad interaction

Multiple articles discussed the vital role that caregivers and their interaction with persons with dementia play in relation to meal intake (Altus *et al.* 2002, Amella 2002, Chang & Roberts 2008b). The quality of the interaction between the dyad can influence the proportion of food consumed (Amella 2002). Through attention to the elements of the relationship during the meal and accommodation of the needs of the person with dementia by the caregiver, food intake increased (Amella 2002). Amella (2004) provides an overview of studies demonstrating that touch, guidance and redirection and providing compassionate care result in positive outcomes in weight maintenance/gain and increased meal intake. Altus *et al.* (2002) provides further support of the importance of nursing assistant training to verbally prompt and give praise during meals, which demonstrated a significant impact on the amount of food consumed by persons with dementia.

Mealtime environment

In homes and institutions, the environment is a substantial domain that is often overlooked when providing meals to persons with dementia. Noise levels, distractions, preserving a homelike environment, reducing clutter, adequate lighting and promoting a pleasant setting are all critical components identified in multiple studies across cultures and settings (Sandman & Norberg 1988, Amella 2004, DiMaria-Ghallili & Amella 2005, Keller *et al.* 2007, Chang & Roberts 2008a).

The system of care delivery can be a facilitator of meals and impact independent eating behaviours. Sandman and Norberg (1988) found that in a setting of a mealtime where persons with varying levels of dementia ate together without nursing staff, the persons with the least amount of dementia became the 'caregivers' to those with more severe dementia. However, when nursing staff entered the environment, the roles transitioned back to all persons with dementia allowing the nursing staff to be the 'caregivers'. This provides another dimension of the effect of promoting an independent environment in settings unintentionally fostering dependent behaviours.

Dementia

Various forms of dementia exist: Most common 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). These functional losses result in an inability to manage the mechanics of eating and loss of recognition of the need to eat. Subsequently affected persons develop undernutrition or malnutrition from anorexia and involuntary weight loss, commonly leading to institutionalisation (Amella 2002, Manthorpe & Watson 2003, Keller *et al.* 2008).

The role dementia plays in malnutrition is evident in the literature (Keller *et al.* 2008, Stockdell & Amella 2008) In institutional settings, those most at risk for malnutrition have cognitive or physical impairments, do not speak English, do not have a family member involved with care and those are with swallowing difficulties (Kayser-Jones 2000).

Aversive feeding behaviours

For older adults with dementia, feeding is one of the last activities of daily living that requires assistance (Katz *et al.* 1963, Amella 2004, Chang & Roberts 2008b). Aversive feeding behaviours exhibited in the later stages of dementia include: resisting eating (turning head away while being fed, refusing to open mouth, refusing to swallow), using fingers instead of utensils, spitting out food, spillage and leaving mouth open allowing food to drop out (Watson & Deary 1996, Amella 2004, Keller *et al.* 2008). Patients also will require closer supervision, require physical help and may exhibit dysphagia or choking (Watson & Deary 1997, Amella 2002). Interpretation of these behaviours by caregivers is a critical element to how mealtime difficulties are handled. Different approaches may be warranted through repositioning, careful assessment for potential discomfort, touching the spoon to

the person's lips, or verbal cueing may result in increased oral intake. If aversive feeding behaviours are interpreted as refusal without sufficient investigation, feeding attempts may cease too soon, only increasing nutritional risk (Barratt 2004).

Antecedents

Social considerations

Social distinctions are communicated through eating meals with different symbolic meanings (Fjellstrom 2004). Even in advanced dementia, relationships are formed and maintained, eating is a multi-factorial event and human interaction is critical in meaningful social experiences during mealtime (Amella 2004, Amella & Lawrence 2008a). The quality of these reciprocal interactions and staff behaviour influence mealtimes; therefore, attention should be given to the social aspect of mealtime (Keller *et al.* 2007). Preservation of a person's social skills in dementia may be possible by observing rituals to cue desirable behaviours and increase function (Stockdell & Amella 2008).

In institutions, providing a social environment for mealtimes may be the greatest challenge, yet is one of the most powerful interventions nursing has to offer persons with dementia (Amella 2004). Family-style meals and buffet-style dining programmes have demonstrated increased interaction among residents and increased nutritional intake at mealtimes (Altus *et al.* 2002, Andreoli *et al.* 2007). Keller *et al.* (2007) discusses how in the home, caregivers may struggle to keep social norms with mealtimes. Meals help to keep the person with dementia emotionally engaged with the family, with meals often considered the 'highlight of the day', providing conversation and social interaction. Adaptations may include remaining at the table until the person with dementia can finish, promoting conversation during mealtimes and attempting to maintain social etiquette as long as possible.

Cultural factors

Culinary rules, specific menus, what foods are served in what dish and the combination of foods based on the customs and traditions of a given culture may be taken for granted but play a significant role in our mealtime patterns (Fjellstrom 2004). In the Chinese culture, wasting food is seen as an offence to God, as food itself is a gift from God (Chang & Roberts 2008a). Mellin-Olsen and Wandel (2005) used focus groups to explore how meal patterns changed among Pakistani women whose families had immigrated to Norway. Using a model developed by Kocturk that categorised foods, the women discussed how food choices were made and how the influence of the Norwegian culture on their children influenced the foods eaten by the family. Meal order changed from a family mid-day hot meal to the family being scattered at lunch eating sandwiches with dinner becoming the most important meal for the family to eat together. While the three meals existed with breakfast, lunch and dinner, the impact of immigration had greatly influenced all decisions regarding mealtimes (Mellin-Olsen & Wandel 2005).

In addition to the culture where we were raised, the culture of the home or institution where a person with dementia resides is influential (Sidenvall 1999, Altus *et al.* 2002, Evans *et al.* 2005, Andreoli *et al.* 2007). Expectations of cultural norms of behaviours that should be displayed during meal, such as rules of etiquette, can impact nutritional status. Observing others who are experiencing difficulty or are being actively assisted can impact persons with little or no difficulty eating. Thus, environmental considerations should be given to seating arrangements during group mealtimes (Sidenvall *et al.* 1994).

Lifelong eating patterns

Lifelong eating patterns and preferences are driven by ethical and cultural rituals, economics and the availability of food in a given community; these factors come together to dictate eating pattern (Manthorpe & Watson 2003, DiMaria-Ghallili & Amella 2005, Evans *et al.* 2005, Amella *et al.* 2007, Martin *et al.* 2007). An example of how economics and food availability can impact nutrition is illustrated in a study by Martin *et al.* (2007). Community dwelling older adults who consumed two meals a day or less, with a chronic illness and depended on others to travel outside of the home, were at increased risk for weight loss. The authors report weight loss to be considered a sentinel event that warrants investigation and intervention.

Studies show that children and families often influence parental choices regarding meals and purchases made throughout the lifespan; the role of the family is often the centre of mealtime memories in old age (Fjellstrom 2004, Evans *et al.* 2005, Mellin-Olsen & Wandel 2005). Life changes impact the role and meaning of mealtimes and impact what and how we eat during marriage, while raising children, in widowhood and in chronic illness (Sidenvall 1999, Fjellstrom 2004, Evans *et al.* 2005).

Consequences

Dyad stress

The progressive deterioration of feeding ability in the person with dementia can cause stress for both persons in the

caregiving dyad. The occurrence and progression of the aversive feeding behaviours can cause stress for the caregiver at home and in institutions (Keller *et al.* 2008, Mace & Rabins 1999). How well caregivers adapt and provide support even in the face of these behaviours is important in maintaining nutritional status (Keller *et al.* 2008, Stockdell & Amella 2008).

The interpretation of the behaviours the person with dementia exhibits by the caregiver can also lead to increased stress (Barratt 2004, Chang & Roberts 2008a). Amella (2002) found a reciprocal quality to the mealtime relationship and nursing assistant's behaviour, categorised as 'inflexible' or appeared 'bothered', would increase stress in the dyad that resulted in dysfunctional behaviour in the person with dementia. The introduction of stress in the dyad increased these decompensatory behaviours. Communication difficulties inherent in advanced stages of the dementia are another source of stress for both the caregiver and person with dementia, as the caregiver must extrapolate meaning from behaviour and act on that meaning (Hargreaves 2008). When aversive feeding behaviours or physical problems make mealtimes difficult, nursing staff reported feelings of helplessness when trying to assist persons with dementia to eat. Caregiver burden and stress may result in less resource investment to provide nutritional support for persons with dementia and the resulting ethical dilemmas surrounding feeding can increase frustration and feelings of uncertainty in solving the feeding issues (Mamhidir *et al.* 2007).

Compromised nutritional status

The American society for Parenteral and Enteral Nutrition (2002) defines malnutrition as 'any disorder of nutrition status, including disorders resulting from a deficiency of nutrient intake, impaired nutrient metabolism, or overnutrition'. Protein-energy undernutrition is the most common type to occur in older adults; physical signs may include low body mass index, wasting and biochemical evidence such as low serum albumin, transferrin and pre-albumin (Barratt 2004, DiMaria-Ghallili & Amella 2005). Early satiation or loss of appetite often seen in advanced dementia may be contributing to malnutrition (Hargreaves 2008). A diet low in vitamins and trace minerals can increase confusion (Mace & Rabins 1999).

Loss of eating ability

A lack of proper assessment and effective interventions can lead to a person with dementia's progressive loss of eating ability. When caregivers see mealtime through a task-oriented lens rather than a person-centred lens, outcomes are poor (Sidenvall 1999).

Loss of the ability to recognise common objects such as food or the cutlery and tableware, is termed apraxia and is commonly seen in advanced dementia (Mamhidir *et al.* 2007, Hargreaves 2008). Agitation may occur as the ability to effectively communicate needs diminishes (Hargreaves 2008). Dysphagia, loss of the ability to effectively and safely swallow, occurs later in dementia and may make eating both difficult and unsafe (Hargreaves 2008). Persons affected may not be able to communicate their inability to swallow resulting in aversive behaviour, especially turning the head away (Stockdell & Amella 2008).

Tube-feeding or hand-feeding until death

A highly emotional and ethical consideration that will need to be addressed is whether or not a tube for feeding should be placed in the person with dementia (Mace & Rabins 1999). Cognitively intact patients who cannot take food and fluids orally to maintain nutritional status and life and must rely on tube feeding for survival, report that they do not consider the tube-feeding to be equivalent to eating. This artificial nutrition and hydration is seen as just that, not truly food and does not serving the same symbolic meaning. The tube-feeding does not fill the need for eating as a socially significant event (Walker 2005).

To date, all studies demonstrate for persons with late-stage dementia, tube feeding does not extend life, improve nutritional outcomes, reduce the incidence of infection or pressure ulcers, or improve quality of life and has been found to increase complications (Mitchell *et al.* 1997, Finucane *et al.* 1999, Meier *et al.* 2001, Murphy & Lipman 2003, DiBartolo 2006, Metheny *et al.* 2007). If the tube-feeding is used rather than hand-feeding, discomfort and suffering are a possible resulting problem (Mace & Rabins 1999, Sherman 2003). The inevitable truth is that all older adults with dementia will die, most having eaten their last meal (Sherman 2003). DiMaria-Ghallili and Amella (2005) provide specific guidelines to assist in hand-feeding until death.

Related concepts

Feeding behaviours in dementia

This concept of 'feeding behaviour' appears in the scientific literature, is a National Library of Medicine Medical Subject Heading term; a recent concept analysis was provided by Chang and Roberts (2008b) using the Walker and Avant method. While closely related to mealtime difficulties, the

authors define feeding difficulty attributes that focus on feeding. Environmental factors and dyad interactions are considered to be antecedents, while the consequences appear to be similar with inadequate food intake, malnutrition and weight loss.

Exemplar

Using interviews of 23 Canadian caregivers of persons with dementia, Keller *et al.* (2008) gathered information regarding the family perspective of mealtime experiences and the experiences of care. Findings resulted in several general concepts being identified: 'eating together is social,' 'the need to simplify,' 'feed and please,' 'throwing in the dish towel,' 'the shrinking plate,' and 'stepping in.' The article discusses how families adapt to changes in eating conduct during mealtimes as they cared for a person with dementia. Authors suggest fortifying the contextual components of meals for persons with feeding difficulties, such as the developing an environment that promotes social interaction and connection to others.

Results

The evolutionary method uses an inductive process (Rodgers & Knafl 2000) that allowed for development of the attributes, antecedents and consequences based on the literature identified through thematic analysis. Though multiple interdisciplinary databases were searched, the sample analysed for the concept analysis was composed primarily of nursing research, followed by dietician and medicine. The textbooks and websites were primarily from the discipline of nursing; the only exception being the *36-hour Day*, written by a physician for lay caregivers. The researchers in the sample provided historical, anthropological and sociological content, often from the cultural perspective of the author. International (cultural) perspectives represented included the Canada, Norway, Pakistan, Sweden, Taiwan, UK – England and Scotland and USA. The majority of the research focused in the nursing home setting, but did include studies conducted in long term care facilities (inclusive of skilled nursing homes and assisted living facilities), home settings and community settings. Multiple authors acknowledged that more research needs to be conducted in the community and home settings to provide evidence to assist the families who will be caring for an older adult with dementia as the aged population increases.

Researchers demonstrate varying approaches to alleviating the problem of mealtime difficulties in dementia. The majority of research focused on the nursing home setting and the process of how mealtimes are carried out, inclusive of social, cultural and nutritional content of mealtimes. Others focused on staff training in the nursing home setting with varying interventions. In 2003, the Agency for Healthcare Research and Quality (AHRQ) released evidence-based national guidelines for mealtime difficulties and in 2008 these guidelines were updated (Amella 2008a, AHRQ 2008). These guidelines for practice include consideration for social, cultural, environmental factors, as well as establishing evidence-based practice guidelines in nursing.

Chang and Roberts (2008b) included social, cultural and environmental issues in their study, through identification of the related concept – feeding difficulty in dementia. The literature on feeding difficulties has grown since the mid-1990's with work by Watson (1994) and the development of the only instrument currently in clinical use, the Edinburgh Feeding Evaluation in Dementia Scale (EdFED) by Watson and Deary (Amella & Lawrence 2008a, Stockdell & Amella 2008, Watson 1996, Watson & Deary 1997). While feeding behaviours are a part of mealtime difficulties in older adults with dementia, the scope of mealtime difficulties examines issue from a broader perspective. From the review of the scientific literature, books and textbooks, it appears that most scientists acknowledge the complexities of mealtimes, while the research may focus on specific lines of inquiry.

Implications

Future research needs to change the view of eating and feeding difficulties from an isolated phenomenon to examination of this problem in the context of a mealtime that includes social, cultural and environmental issues (Manthorpe & Watson 2003, Barratt 2004, Amella 2008b). Great strides have been made recently in the development and promotion of mealtime difficulties in dementia as a concept. Evidence-based guidelines for practice have been available since 2003, yet there remains a continued need for translational research in fostering implementation of evidence-based practice into the field of dementia and nutritional issues (Amella 2004, Barratt 2004).

Attention should be given to improving measurement strategies to include more than weight as an outcome (Chang & Roberts 2008a,b). Functional ability should be carefully assessed as a method to maximise existing strengths and promote some level of independence and dignity (Stockdell & Amella 2008). The Katz Activities of Daily Living and other more discriminating instruments are recommended in the national practice guidelines (AHRQ 2008) and are part of the *Try This* series available at http://ConsultGeriRN.org. Current instruments do not fully assess the range of contextual

issues related to mealtime difficulties (Chang & Roberts 2008a,b). Recently, a feeding difficulty instrument (EdFED) created by Watson (1996) and Watson and Deary (1997) have been brought forward to clinical practice in nursing (Amella & Lawrence 2008b). Textbooks in the discipline for evidence-based gerontological nursing practice include the concept as a chapter separate from the basic nutritional assessment (Amella 2008a). This step in the development of the concept is critical to changing practice at the bedside and nursing's role to support family caregivers.

Educational resources for family caregivers and nursing staff continue to be needed to promote best practice in the care of older adults experiencing mealtime difficulties in dementia (Keller *et al*. 2008, Stockdell & Amella 2008). Recent evidence exists that mealtime difficulties are being addressed (Amella 2008a) and practice recommendations are making progress into clinical practice through training nurses to assess and intervene with mealtime difficulties issues. The work the John A. Hartford Foundation and New York University's Hartford Institute for Geriatric Nursing have created several resources that can be used to alleviate mealtime difficulties (Amella & Lawrence 2008a,b, 'How to Try This (Video): Eating and Feeding Issues in Older Adults with Dementia' (2008).

Future research should continue to focus on nursing home issues related to mealtime difficulties and the effectiveness of interventions, but should also broaden to include other long-term care settings and include a special focus on the home setting. With an unprecedented growth in the ageing population, demand for education and support for families is only expected to increase. Mealtimes are events that occur several times daily and will be in the forefront of problems experienced in the care of progressively declining persons with dementia.

Contributions

Study design: MBA; data collection and analysis: MBA, EJA and manuscript preparation: MBA, EJA.

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