Clinical Scholarship

Cultural Perspectives in Feeding Difficulty in Taiwanese Elderly With Dementia
Chia-Chi Chang, Beverly L. Roberts

Objective: To investigate factors related to feeding difficulty that is shown in the interaction between nursing assistants and elderly residents with dementia.

Methods: Forty-eight residents and 31 nursing assistants were observed during meal times in a congregate dining room of a Taiwanese nursing home specializing in dementia care. Residents’ eating behaviors, the dining environment, interactions between the nursing assistant and the residents, and feeding strategies used by nursing assistants were observed. Nutritional data for residents were collected from medical charts. The EdFED Scale #2 and interviews of nursing assistants provided information about feeding difficulty. Interviews also provided data on strategies used to address feeding difficulties.

Findings: The most frequent feeding difficulty was refusal to eat (37.5%). The strategies used by nursing assistants were limited. Nursing assistants stated they needed more training to address feeding difficulty in residents with dementia.

Conclusions: Future research should be focused on the interface between the residents and nursing assistants who must identify various feeding difficulties and select appropriate interventions.

Clinical Relevance: Results might provide information that can be used to develop effective interventions and promote high-quality mealtime care in patients with dementia.

[Key words: feeding difficulty, dementia elderly, Taiwan, nursing home]


Eating is one of the most pleasurable activities in life, and self-feeding is one of the first activities learned as a child and one of the last to be lost in old age. Feeding difficulty is common in people with dementia and contributes to the high risk of malnutrition (Berry & Marcus, 2000; Wasson, Tate, & Hayes, 2001; Watson, 2002), weight loss, and dehydration (Castellanos, Silver, Gallagher-Allred, & Smith, 2003; Watson, 1997) that are leading causes of death for residents with dementia (Colodny, 2000). Especially challenging are feeding difficulties in people with dementia that interfere with the ability of caregivers to provide food and fluids (Chang & Roberts, in press).

Helping residents with eating is a major task in long-term care that is more complicated and difficult when helping those with dementia. Feeding difficulty increases as dementia progresses (Durnbaugh, Haley, & Roberts, 1996) and complicates providing adequate nutrition.

Factors Contributing to Feeding Difficulty

Physical dysfunction, psychological factors, social interactions, poor dining environment, and cultural differences contribute to feeding difficulties (Chang & Roberts, in press). Physical factors include impaired motor skills, visual impairment, dental problems or poor oral hygiene, dysphagia, and conditions that make chewing, swallowing, and manipulating eating utensils difficult (Gilmore, Tobias, & Royer, 1985; Gilmore, Wenk, Naylor, & Koss, 1994; Gilmore, Wenk, Naylor, & Stuve, 1992; Kayser-Jones & Schell, 1997a, 1997b; Watson, 2002; Watson et al., 2003). Depression is common in people with dementia and contributes to feeding difficulties (Lundquist, Bermens, & Olsen, 1997). Impaired cognition and the extra attention required for older adults to initiate and complete feeding tasks also contribute to feeding difficulties (Chang & Roberts, in press; LeClerc & Wells, 1998).
Feeding Difficulty and the Interface Between Caregivers and Residents

Feeding difficulties occur between those with dementia and the caregivers providing feeding assistance (Chang & Roberts, in press). This interaction is essential to deal effectively with feeding difficulties during meal times (Amella, 1998; Durnbaugh, Haley & Roberts, 1996; Van Ort & Phillips, 1992). Often the person being fed does not recognize the food, perceive the need to consume the food, nor perceive the caregiver as helpful.

Communication between caregiver and resident is essential to this interaction and has been associated with food intake (Amella, 1999). Although the interpretation of a resident’s behavior related to feeding difficulties might not be consistent among caregivers, refusal to eat is a common difficulty that, over time, led to fewer attempts and shorter duration for feeding assistance (Pasman, The, Onwuteaka-Philipsen, vander Was, & Ribbe, 2003). Consistency in assignments of nursing assistants to residents with dementia increased interaction with the residents (Athlin & Norberg, 1998), and adequate staffing and time to feed residents have been identified as barriers to interaction and food intake (Chang, Wykle, & Madigan, 2006).

Environment and Culture

The nursing home environment contributes to feeding difficulty and poor nutritional outcomes (Chang et al., 2006; Van Ort & Phillips, 1992). Investigators have characterized some dining environments as chaotic (Clay, 2001) with features that interfere with communication between a caregiver and a resident with dementia (Amella, 1999) and with feeding residents (Backstrom, Norberg, & Borberg, 1987). A quiet, relaxed dining atmosphere increases food intake and decreases agitation (Amella, 1998; Kayser-Jones, 2000). Culturally appropriate food and mealtime procedures might also improve food intake (Sidenvall, 1999).

In Chinese culture, providing adequate food and maintaining good nutrition are not only related to physical care but are expressions of caring for the person. Within this cultural perspective, residents are expected to be dependent when they are not, and nursing assistants are expected to provide assistance as an expression of caring. These expectations might affect the presence and identification of feeding difficulties and interventions.

The research questions in this study were: (a) What are the feeding difficulties among residents with dementia in a Taiwanese nursing home? (b) What feeding strategies are used by nursing assistants to address feeding difficulties? (c) What are the interactions between nursing assistants and residents during feeding assistance? and (d) What is the mealtime environment in a Taiwanese nursing home?

Methods

A cross-sectional design was used. After human subject approval by the institutional review board, permission to conduct the study was obtained from the nursing home administrator of the largest dementia-care nursing home (78 beds) in northern Taiwan. Legal guardians of all eligible residents who participated provided informed consent and all eligible nursing assistants agreed to participate and also provided informed consent.

Setting and Sample

All nursing assistants had similar preparation for their position that is mandated in Taiwan. They received a minimum of 60 lecture hours and 40 hours of clinical training in assessment skills and knowledge to assist with activities of daily living, feeding, and mobility. All nursing assistants had at least junior high school education. Inclusion criteria were: (a) worked full time in the nursing home for at least 6 months to be able to identify feeding difficulties; (b) spoke Chinese; and (c) helped dementia residents with feeding. Thirty-six nursing assistants agreed to participate, but 5 could not because they worked the night shift and were not involved in feeding residents.

Before approaching residents, the investigator reviewed medical records to validate a diagnosis of dementia. Of the 78 residents with dementia, nursing assistants identified 48 residents who had feeding difficulty, were over 60, and received oral feedings.

Measurements

Nutritional data. The investigator reviewed medical charts for weight and height to compute BMI (body mass index). The number of teeth was assessed. The daily nutritional caloric content of meals was based on the height, weight, and activity of residents and was adjusted based upon monthly loses or gains in weight. The daily diet ranged from 1,300 to 2,000 calories. Two snacks provided 150 to 200 calories, and three meals provided 300 to 600 calories each.

The investigator (CC) observed nursing assistants feeding residents, and assessed duration of eating time and percentage of food eaten during the meal. The percentage agreement between the investigator and a nurse with research and clinical experience with older adults concerning the amount of food eaten by residents was high, 93%.

Feeding Difficulty

Feeding difficulties were categorized using the 6-item Edinburgh Feeding Evaluation in Dementia (EdFED #2) that is derived from a longer scale (Watson, 1993). The EdFED has adequate convergent and discriminant validity; good intra-rater reliability (.95) but low inter-rater reliability (.59), and a Cronbach’s alpha of .87 (Watson & Deary, 1994). Lin and Chang (2003) translated the 11-item EdFED into Chinese and found that this version had good inter-.86 to .90 and intra-rater reliability (.86). In the present study, Cronbach’s alpha for the Chinese EdFED #2 was .63 (See Table 1 for questions). The data collector rated the frequency of each behavior from 0 never to 2 often,
and ratings were summed. Observation of nursing assistants feeding residents with feeding difficulty was used to validate data from the EdFED #2 and to provide more information about feeding difficulty not found in the EdFED #2.

The investigator observed nursing assistants feeding residents during lunch and dinner because these are the major meals for Chinese people. This investigator has 10 years of experience working with adults with dementia and 5 years of research on feeding difficulties using observations as was done in the present study.

While feeding, each dyad of a resident and a nursing assistant was observed for one lunch and one dinner. Observations began in the dining environment when trays were distributed and ended when the dining cart was removed. No changes were made to the dining room or feeding routines, and no control was exerted over what resident was being assisted or what nursing assistant was helping the resident to eat. The investigator used logs and field notes to record feeding difficulty, interactions between nursing assistants and residents, time that the nursing assistant fed the resident, and the dining environment. Observational data were categorized into types of feeding difficulty, feeding strategies used by nursing assistants, and characteristics of the dining environment. A nurse with experience in working with patients with dementia and qualitative methods provided external verification of the data and classifications generated.

Nursing Assistant Interviews

After mealtime observations, one author (CC) interviewed nursing assistants and asked: (a) Have you had trouble feeding dementia residents? (b) What do you do when you have trouble feeding these residents? (c) What strategies do you use to feed these residents? (d) What hinders your efforts in feeding these residents? (e) What would you like to learn about feeding residents with dementia? (f) Do you have enough information to feed residents with dementia?

After transcription of the audiotapes, one author (CC) used content analysis to develop categories of feeding difficulty, feeding strategies, and need for more education regarding interventions to reduce feeding difficulty. The same geriatric researcher and clinician verified other qualitative data and categories identified from the interviews.

Results

Characteristics of the Sample

Of the 48 residents identified by nursing assistants as having feeding difficulty only 27 were also identified as having problems when assessed with the EdFED #2. Of the 21 female (43.8%) and 27 male residents (56.3%), 43.8% were married, 43.8% were widowers or widows, 8.3% were single, and 4.2% were divorced. They ranged from 63 to 91 years in age (mean 81, SD=12.19). Two were under 65, and 69% were 80 years or older. They lived in the nursing home from 5 months to 3 years (mean 20 months, SD=9.36). Residents had been diagnosed with dementia from 5 months to 12 years (mean 3 years, SD=2.55).

Residents had a mean BMI of 23.4 (SD=3.0) with a range from 18.04 to 31.26; mean number of teeth was 12 (SD=10), with a range from 0 to 30 (including the teeth in dentures). Average duration of eating time was 16.38 minutes (SD=7.58, range 3 to 37). About 41% (n=20) received a regular diet; 22.9% a soft diet; 29.2% a semi-liquid diet; and 6.3% a liquid diet. Most residents (73%) used a spoon to eat while 27% used chopsticks. The mean percentage of food ingested from what was provided on the tray was 86%, with a range from 25% to 100%.

The 31 nursing assistants ranged in age from 27 to 58 with a mean of 44.7 years (SD=5.7). Nearly all (n=28, 90.3%) were married. The average years in education was 11 (SD=2.3, range 6–15 years); the average work experience in the current nursing home was 1.8 years (SD=1.2); and the average total work experience in nursing homes was 3.6 years (SD=2.5).

Feeding Difficulty

The average EdFED #2 was 1.14 (SD=1.58, range from 0 to 7). Based on the EdFED #2, 27 of the 48 residents (56.3%) had no feeding difficulty; 4 had one; 11 had two; 5 had three; and one had four. The frequencies for each type of feeding problem are listed in the Table. The most frequent feeding problem was refusal to eat from “sometimes” to “often” (n=18). No residents left their mouths open during eating or allowed food to drop out of the mouth.

Additional problems observed during feeding were pushing away the caregiver or tray (n=2), being unable to sit still (n=2), hitting the tray or caregiver (n=1), and protruding the lips (n=2). Some residents were drowsy or had difficulty waking up (n=1), while others became angry

| Table. Feeding Difficulties of Residents With Dementia as Measured by EdFED #2 (N=48) |
|---------------------------------|---|---|---|---|
| Items                           | Never | Sometimes | Often |
| Does the resident ever refuse to eat? | 30 | 62.5 | 14 | 29.2 | 4 | 8.3 |
| Does the resident turn his head away while being fed? | 38 | 79.2 | 9 | 18.8 | 1 | 2.1 |
| Does the resident refuse to open his mouth? | 40 | 83.3 | 6 | 12.5 | 2 | 4.2 |
| Does the resident spit out his food? | 42 | 87.5 | 4 | 8.3 | 2 | 4.2 |
| Does the resident leave his mouth open allowing food to drop out? | 48 | 100 | 0 | 0.0 | 0 | 0.0 |
| Does the resident refuse to swallow? | 45 | 93.8 | 2 | 4.2 | 1 | 2.1 |
Feeding Assistance Provided by Nursing Assistants

During mealtime observations, nine nursing assistants stopped feeding residents and returned again a little later, and nine said they used verbal encouragement. Six nursing assistants offered different food or gave food choices. Despite cognitively impaired residents being potentially unable to understand verbal communication, two nursing assistants used verbal positive reinforcement such as offering to take the resident for a walk after finishing a meal. Another two nursing assistants used verbal negative reinforcement that included threats of restraint or a nasogastric (NG) tube.

One nursing assistant stated that two or three residents might only need someone to sit beside them for residents to start feeding themselves. Five nursing assistants out of 31 stated that they sought help from nurses, six used a variety of devices to feed a resident experiencing great difficulty eating, four suggested using syringe and NG tube feeding for those residents with the most difficulty, and one suggested changing the position of residents or encouraging them to use proper utensils. Nearly all nursing assistants (93%) reported that feeding residents with dementia was time-consuming and that they lacked enough staff and knowledge to feed residents well.

The Mealtime Environment

The dining room in the present study was always crowded, and nursing assistants never had space to sit at the table or have eye contact with residents. The size of the dining room was about 300 square feet, and furniture filled most of the space. Eight to 10 residents sat at large round tables in chairs or wheel chairs, and approximately 30 residents were in the dining room at meal time. Nursing assistants had to stand to feed residents because no room was available at the table for them to sit. The rooms of residents and the kitchen were always locked, which meant that residents did not have a choice of where they ate or what food to access during and between meals.

Interaction Between Caregivers and Residents

For 50% of the residents with dementia who did not finish their meals, nursing assistants only asked residents whether they were full and did not try additional strategies to increase the amount of food eaten. Some nursing assistants stopped immediately if residents turned their heads away while others tried to continue or returned later to feed again. To reduce the time needed for feeding, some nursing assistants offered bites that were too large for the person being fed. To enhance nutrition, nursing assistants offered the most nutritious food first or mixed all the food together.

At times, they also mixed medicines with the food. During the meal, nursing assistants had little to no interaction with the residents. Even when residents wanted to talk to them, the nursing assistants either gave no response or told the residents to be quiet while eating.

Discussion

Many feeding difficulties of dementia residents found in the present study are consistent with those found in previous studies (Castellanos et al., 2003; Durnbaugh et al., 1996; Watson, 1993, 1997); refusal to eat was the most common feeding problem. Others (Pasman et al., 2003) found that repeated refusals or poor dietary intake over several days often led to reducing attempts to assist the resident with eating or passive or aggressive attempts to place food in the mouth of the resident. The drowsiness or inattentiveness to being fed might have been related to medications with sedative side effects or an aspect of dementia.

Although the EdFED #2 is often used to assess feeding difficulty, the instrument did not indicate all of the problems observed in the present study. Feeding difficulty related to the interaction with the nursing assistants needs to be added to this instrument and should include pushing away the caregiver or tray, verbal and physical resistance to feeding, and distraction while feeding. Other feeding difficulties that should be added include choking, difficulty swallowing, and responding poorly because of drowsiness.

Feeding Strategies

Nursing assistants used limited strategies to deal with feeding difficulty, and many did not use strategies that were effective especially when the residents refused food. The nursing assistants stated that they fed dementia residents the foods they believed to be most important by offering the most nutritious foods first. However, residents usually had a limited selection of foods, and their personal tastes were not considered. Mixing foods with medications found in the present study was a problem in another study in long-term care (Van Ort & Phillips, 1992) and might adversely affect drug and nutrient absorption (Hartig, 1998) and the taste of the food. The mixing of different foods as found in the present study is not usual in the Chinese culture.

Nursing assistants did not communicate with residents to verify eating and food preferences or whether residents had enough to eat. As found by others (Pasman et al., 2003), nursing assistants stated that they used their common sense to take care of residents and sometimes just followed their own beliefs.

Dining Environment

Although the dining environment is a key factor in the success of feeding (Chang et al., 2006; Van Ort & Phillips, 1992), the dining room in the present study was crowded and did not allow eye contact that might have reduced the
quality of the interaction between residents and nursing assistants that is essential to supporting eating behaviors and quantity of food consumed (Amella, 1999; Athlin & Norberg, 1998).

Interaction of Nursing Assistants and Residents

Interaction between caregivers and residents is extremely important during mealtime, and the quality of it is an important predictor of the amount of food consumed (Amella, 1999). Nursing assistants must be able to understand what residents want to communicate and to respond appropriately while maintaining a high quality of interpersonal interaction. Communication is difficult or impossible when a resident is severely cognitively impaired, and the eating environment is cramped, noisy, and chaotic. Most residents in the present study had no verbal communication with nursing assistants. Although continuity of assignments of nursing assistants to feed residents was not measured in the present study, others have found that such continuity increased interaction between them (Athlin & Norberg, 1998).

It is a challenge to determine whether residents’ refusal to eat is a wish to die or the result of brain lesions associated with dementia (Michaelsson, Norberg, & Norberg, 1987). Interpretation of verbal and nonverbal interpretation of the same resident can differ widely among nursing assistants (Pasman et al., 2003) and might also lead to changes in feeding behaviors of nursing assistants. Those who thought a resident was full stopped the feeding. If they believed the resident was not full, they tried other strategies to continue the feeding.

Characteristics of the interaction and behavior of nursing assistants influence the amount of food eaten. Residents have been found to consume significantly more food when nursing assistants focused on the interpersonal process during feeding and allowed residents greater control (Amella, 1999). Resident-oriented assignments instead of task-oriented assignments (e.g., feeding residents) have also been found to increase the quality of interactions between nursing assistants and residents and to increase the amount of food consumed (Athlin & Norberg, 1998).

Despite the role of high-quality interpersonal interaction, nursing assistants in this study stated that number of staff and amount of time to feed residents were inadequate—factors reported in other Taiwanese nursing homes (Chang et al., 2006). In the present study, the average duration of feeding was 16.38 minutes (range 3 to 37 minutes), which is similar to previous findings that 94% of the residents in a long-term care facility finished their meals in 20 minutes (Crogan & Shultz, 2000). The short duration of feeding assistance, inadequate staffing and dining room characteristics might have contributed to rushed and inattentive interaction with residents and might have contributed to nursing assistants focusing on the task of feeding instead of interaction. Nursing assistants might have found that it was easier and faster to feed residents than to support the independence of residents in this activity (Amella, 1999).

Cultural Perspectives

In Chinese culture, food is considered a gift from God and wasting it will be punished by God. These beliefs might explain why forcing or threatening residents to eat is common in Taiwanese nursing homes but also raises ethical issues regarding these practices. This might also explain the high percentage of food ingested (86%) and high BMI in this study. If residents are unable to consume an adequate amount of nutritious food, a nurse and long-term care administrator will ask a family member to take the resident to a hospital where a physician can provide consultation and make a decision regarding tube feeding. Ethical issues and decision-making regarding feeding assistance and use of tube feedings requires further investigation (Michaelsson et al., 1987). Decisions about whether to continue feeding patients with dementia or to use tube-feeding are difficult to make and depend on several considerations.

Limitations

Results of this study must be interpreted with caution because only one nursing home in Taiwan was studied and the sample size was small. Although many of the findings are consistent with those found in Western cultures, there may be significant differences in Chinese culture and characteristics of Chinese long term-care settings, nursing assistants, and residents with dementia. A greater understanding of the roles, perceptions, and beliefs of residents and nursing assistants is needed to provide a fuller understanding of feeding difficulty and effective interventions. Another limitation was lack of consideration of effects of sedative medication.

Conclusions

Although addressing feeding difficulty requires multidisciplinary cooperation and interventions, feeding residents in long-term care facilities is a primary task of nursing assistants (Backstrom et al., 1987; Brush, Meehan, & Calkins, 2002; Clay, 2001; Lin & Chang, 2003). Although more nursing staff might improve the ability of nursing assistants to provide adequate support during meal time, further training might improve their ability to successfully address feeding difficulties. A comprehensive feeding-skills training program must include the assessment of multidimensional aspects of feeding difficulty and effective interventions. The culture of the long term care facility must change so that needs of residents (instead of tasks) become the focus of attention. More research is needed to deal with ethical, legal, and clinical practices concerning feeding difficulty in people with dementia. Consideration should also be given to cultural beliefs and practices of healthcare providers and recipients.
Feeding Difficulty

Clinical Resources

- The Alzheimer’s Association website: http://www.alz.org/
- Elderly Health Services, Department of Health in Hong Kong: http://www.info.gov.hk/elderly/english/healthinfo/elderly/feeding-e.htm

References


