JAMDA 16 (2015) 1062–1068

JAMDA

journal homepage: www.jamda.com

Original Study

Optimizing Eating Performance for Long-Term Care Residents With Dementia: Testing the Impact of Function-Focused Care for Cognitively Impaired

Wen Liu PhD, RN [a,*], Elizabeth Galik PhD, CRNP [a], Eun-Shim Nahm PhD, RN, FAAN [a], Marie Boltz PhD, RN, GNP-BC [b], Barbara Resnick PhD, RN, CRNP, FAAN, FAANP [a]

[a] Department of Organizational System and Adult Health, University of Maryland School of Nursing, Baltimore, MD
[b] Boston College Connell School of Nursing, Chestnut Hill, MA

Keywords:
Adults
cognitive impairment
eating performance
function-focused care
long-term care

A B S T R A C T

Objectives: The objective of this study was to evaluate the impact of a well-developed theory-based function-focused care for cognitively impaired (FFC-CI) intervention on eating performance among long-term care (LTC) residents with moderate-to-severe cognitive impairment.
Design: A secondary analysis of longitudinal data from 2 cluster-randomized controlled trials that originally tested the impact of FFC-CI on all function and physical activities.
Participants and Setting: Participants were 199 residents with moderate-to-severe cognitive impairment from 4 nursing homes and 4 assisted living facilities.
Measurements: Data at baseline, and 3 and 6 months were used. Resident outcome data used in this analysis included eating performance conceptualized using the single self-care "feeding" item in the Barthel Index, cognitive function by Mini-Mental State Examination, sitting balance conceptualized using the single "chair sit-sitting balance" item in the Tinetti Gait and Balance scale, physical capability by Physical Capability Scale, depression by Cornell Scale for Depression in Dementia, and agitation by Cohen-Mansfield Agitation Inventory (short form).
Results: At baseline, almost one-third (32.2%) of the 199 residents needed help with eating. There was no significant change with regard to eating performance over time in both groups, and no significant treatment by time difference between groups in eating performance ($P = .195$).
Conclusion: Current findings support a need to revise the FFC-CI to better address eating performance. Future work may benefit from a stronger focus on eating performance rather than the more commonly addressed functional tasks, such as bathing, dressing, and ambulation. In addition, the inclusion of a more heterogeneous group of LTC residents with regard to eating performance is needed to test the impact of the revised approach on eating performance.

Impact of Dementia on Eating Performance

An estimated 68% to 72% of residents living in assisted living facilities (ALs) and nursing homes (NHs) have some form of cognitive impairment, among which 41% to 42% have moderate to severe impairment.[1,2] Cognitively impaired residents living in long-term care (LTC) today experience greater functional decline with regard to eating compared with those without dementia.[1,3] Twenty-two percent of AL residents with cognitive impairment demonstrated functional decline in eating and required assistance, among which 24% and 65% had, respectively, moderate and severe impairment.[1] Nursing home residents with severe cognitive impairment demonstrated the greatest deterioration in eating compared with the other activities of daily living (ADLs) within 6 months after admission.[4] Eating performance is the functional performance to get food into the mouth, and is an important indicator of physical and psychosocial health as well as quality of life for LTC residents.[5] Compromised eating performance can result in inadequate intake and weight loss,[6,7] malnutrition and respiratory complications,[8] eating disability,[9] and even death.[7]

The authors declare no conflicts of interest.
The authors acknowledge that the 2 original intervention studies were supported by the Alzheimer's Association New Investigator Research Grant NIRG-09–131261, and the Robert Wood Johnson Foundation Nurse Faculty Scholar Program 66520.
* Address correspondence to Wen Liu, PhD, RN, University of Maryland School of Nursing, 655 West Lombard Street, Suite 404, Baltimore, MD 21201.
E-mail addresses: liuwenring18@gmail.com, wen.liu@umaryland.edu (W. Liu).

http://dx.doi.org/10.1016/j.jamda.2015.06.023
1525-8610/

Factors That Influence Eating Performance

Functional decline in eating performance among LTC residents with dementia often exceeds what is anticipated with aging and progression of dementia (Liu W, Galik E, Boltz M, et al. Effect of cognition and physical capability on eating performance in long-term care residents with moderate-to-severe cognitive impairment. [unpublished data]).[1,3,4] Additional interpersonal, environmental, and policy factors, as shown in Table 1, also can influence eating performance.[10,11] These multilevel factors interrelate and propose great risk of compromised eating performance among residents. Specifically, due to insufficient staffing and policies to prevent weight loss in LTC settings, caregivers may primarily focus on maintaining caloric intake and help too much with eating so as to complete feeding quickly.[12,13] Inappropriate and/or excessive assistance with feeding, regardless of residents' self-eating ability, may reinforce unintended dependence, interfere with residents' autonomy, and elicit resistance to care.[7,9]

Effective interventions to optimize eating performance should focus on the interpersonal, environmental, and policy factors so as to promote engagement of residents in their highest level of function with regard to eating.[14] Restoring and maintaining optimal eating performance is important to help decrease caregiver burden and optimize quality of life for those living with dementia. Independent eating performance also promotes food enjoyment and social interaction during mealtimes, and helps maintain range of motion in upper extremities among residents.[15,16] In addition, it is likely that optimal self-feeding performance may help to improve overall intake and nutritional status, and optimize weight management for those who are under- or overweight.[17]

Function-Focused Care for Cognitively Impaired

Function-focused care (FFC) is an innovative philosophy of nursing care that focus on optimizing function and physical activity across a variety of physical and functional activities among residents, rather than simply completing all nursing care tasks with an effort to restore and maintain their highest level of function possible.[18,19] The FFC intervention was developed using the theory of self-efficacy (SE), which is based on social cognitive theory.[20,21] Based on the SE theory, individuals' SE (an individual's judgment of confidence to perform specific behaviors) and outcome expectations (OE; beliefs that implementing a specific behavior will lead to a desired outcome) of behavioral change can be enhanced by enactive attainment, verbal persuasion and encouragement, vicarious experience, and physiological state or feedback. The stronger an individual's SE and OE are, the more rigorously and persistently he or she makes efforts for behavior change.

Compared with the general LTC population, more individualized approaches and extensive care interactions are needed to engage cognitively impaired individuals in functional tasks and physical activities.[22] An FFC for Cognitively Impaired (FFC-CI) intervention was tailored particularly for residents with moderate-to-severe cognitive impairment using a Social Ecological Model that addressed intrapersonal, interpersonal, environmental, and policy factors associated with a variety of function and physical activities.[23,24] The FFC-CI intervention teaches and motivates nursing staff to effectively engage residents in all physical activities and functional tasks while minimizing behavioral disturbances during care interactions.[23,24] This FFC-CI approach has promoted function and physical activity,[23,24] and improved mood and decreased agitation[25] among LTC residents with moderate to severe cognitive impairment.

The FFC-CI intervention includes 4 components: (1) assessment of environment and policies, (2) education, (3) establishing FFC goals, and (4) mentoring and motivating.[23,24] At baseline, an assessment and adaptation of the environmental and policy barriers was completed to facilitate implementation of FFC-CI with regard to all care activities. Education of staff, families, and residents was then provided to incorporate the philosophy of FFC into daily care of various functional and physical activities. Person-centered and individualized FFC goals were then established for each resident, and ongoing mentoring and motivation among staff and families was provided for the sustainability of the intervention. The FFC-CI intervention is a comprehensive approach that addressed a variety of physical and functional activities across all care interactions, such as mobility, exercise, bathing, and dressing. The components that specifically focused on eating performance are shown in Table 2.

Previous research using SE theory–based techniques, such as verbal praise and encouragement, verbal prompts and cueing, and positive reinforcement, demonstrated success in promoting eating performance among LTC residents with dementia.[26–28] Such verbal assistance offered by nursing staff engaged residents to continue with eating tasks and helped to promote a maximum level of resident participation in eating, and thereby may promote self-feeding performance. These previous studies, however, were not randomized controlled trials (RCTs), had small sample size, and occurred over very short durations.[30] Building on previous work in optimizing eating performance, the purpose of this study was to evaluate the impact of the well-developed theory-based FFC-CI intervention on eating performance over 6 months. We hypothesized that the LTC residents with dementia who were exposed to the FFC-CI intervention would maintain or improve their eating performance compared with those exposed to FFC-CI Education only (FFC-ED).

Methods

Design

This study was a secondary analysis using longitudinal data from 2 cluster- RCTs that tested the efficacy of the FFC-CI intervention on function and physical activity among LTC residents with moderate to

Table 1
Factors that Influence Eating Performance

Levels	Factors
Interpersonal	• Perceptions among nursing and family caregivers that cognitively impaired residents with dementia are unable to eat independently and that feeding the residents is a way of being caring and nurturing[1,2] • Custodial care practice that is task-oriented instead of resident-oriented, with greater focus on intake of food versus eating process, and more emphasis on adequate caloric intake and minimum weight loss versus little attention on optimizing eating performance[1,3,4]
Environmental	• Unavailability of supportive and safe physical environment with assistive devices (eg, adaptive bowls, plates, and utensils, and no-spill cups) and adaptive equipment (eg, adaptive chair height) for eating[5]
Policy	• Staffing policies that result in high workload and insufficient staff for mealtime supervision and assistance in terms of optimizing eating performance[4,6,7] • Institutional policies that restrict independent performance of eating tasks due to safety concerns (eg, aspiration and choking)[1,8] • NH quality policies related to the quality indicator of minimizing the percentage of long-stay residents who had a weight loss of 5% or more of the baseline weight in the past month or 10% or more of the baseline weight in the past 6 months who were not on a physician-prescribed weight-loss regimen noted in an Minimum Data Set (MDS) assessment during the selected quarter.[9]