Systematic review

Training programmes and mealtime assistance may improve eating performance for elderly long-term care residents with dementia

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Implications for practice and research

- Multifactorial rather than single component interventions are more likely to improve eating performance of older adults with dementia in long-term care.
- Future research is needed to evaluate the effectiveness and fidelity of interventions in real world settings with nursing caregivers rather than research assistants implementing the interventions.
- Longitudinal research designs are indicated to evaluate eating performance in the context of the progressive loss of eating ability associated with dementia.

Context

Ability to eat autonomously at mealtimes enhances social contact and interaction, supports adequate nutrition and intake, and promotes the enjoyment of food. Yet more than half of older adults with dementia living in long-term care lose the ability to get food into their mouths. Factors influencing eating performance include intrapersonal characteristics (eg cognitive impairment), interpersonal features (eg interactions with caregivers and other residents) and environmental aspects (eg physical elements such as noise or organisational elements such as staffing levels). Caregivers are in a strategic position to support eating ability with targeting each of these factors. The purpose of this study is to summarise mealtime interventions and to evaluate their effectiveness on the eating performance of older adults with dementia in long-term care.

Methods

This study is a systematic review that uses a novel outcome, eating performance and/or self-feeding, to identify and include studies. Guided by Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), five diverse databases were used to search and identify relevant literature published between January 1980 and June 2014; eligible studies focused on persons with dementia in long term care. The included intervention studies underwent review using the Quality Assessment Tool Quantitative Studies and the Oxford Centre for Evidence-based Medicine Levels of Evidence. Two reviewers participated in all steps.

Findings

Of the 11 included studies, only five randomised controlled trials were identified and the quality of the research overall was moderate (4/11 rated as strong). Lack of measurement validity and reliability (5/11), small (n<30), convenience samples (6/11) and lack of control of confounding (7/11) were key weaknesses. Research was generally disparate with at most three of 11 studies focusing on similar types of interventions. Retraining of residents to self-feed (3/11) and graduated prompting and positive reinforcement by staff to continue self-feeding (2/11) appeared to be effective for improving eating performance. Three multicomponent interventions also appeared to be effective.

Commentary

This systematic review was well conducted using standard methods to identify and analyse the included articles. It found that supporting eating performance can take many forms including environmental modifications, such as table setting contrast and mealtime assistance including progressive assistance from verbal prompting, to helping to initiate eating, to partial assistance. Three included articles in this review tested the impact of multicomponent interventions. The social-ecological model and models similar to it have stimulated interest in multilevel and multicomponent interventions because the reasons for poor eating performance are often multifactorial. The Making the Most of Mealtimes (M3) framework conceptualises key modifiable determinants of food and fluid intake as falling into three domains: Meal Quality (nutritious, appealing food); Mealtime Experience (eating environment); and Meal Access (dentition, dysphagia, eating ability).[1] Supporting eating performance relates directly to the meal access domain; however, the mealtime experience and meal quality are also likely to influence eating performance.

This systematic review makes an important contribution by focusing on the outcome of eating performance. A consortium of international experts and stakeholders also identified self-feeding ability as a priority area for intervention research.[2] In the practice setting, often the therapeutic goal is to maintain weight and consumption of food by providing assistance rather than promoting self-feeding. Yet, autonomous eating preserves the dignity of the resident.[3] Future research is indicated to evaluate the effectiveness and fidelity of interventions in real world settings with nursing caregivers rather than research assistants implementing the interventions.[4] Longitudinal research designs are indicated to evaluate interventions supporting eating ability, given the expected trajectory of progressive decline in eating ability associated with dementia.[5]

Competing interests The first author of this systematic review has recently accepted an invitation to participate in the I-DINE consortium led by HK.

References

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