

**Critical Review:**

**The efficacy of interventions designed to maintain or improve self-feeding ability in elderly individuals with dementia.**

Jaime D'Arcey

M.Cl.Sc SLP Candidate

University of Western Ontario: School of Communication Sciences and Disorders

Declines in self-feeding ability are commonly seen in elderly patients with dementia, however, feeding dependence has been shown to be a significant risk factor for aspiration pneumonia (Langmore et al., 1998). The published literature investigating interventions aimed at maintaining or improving self-feeding ability in individuals with dementia were collected and critically evaluated. This critical review included three randomized clinical trials, two repeated measures studies, one case control study, and one action research study. Montessori-based intervention currently has the strongest evidence for its efficacy in this population. The behavioural and environmental interventions show promising evidence for their efficacy, however, the person-centered approach provided equivocal evidence. However, future research on self-feeding in dementia is needed before a strong conclusion can be drawn.

***Introduction***

As the baby boomer population ages, the number of individuals suffering from dementia is increasing. With disease progression, feeding and swallowing impairments typically develop, cooccurring with the normal aging related decline in the function of the swallowing mechanism. Impaired self-feeding can lead to an increased risk of aspiration, poor nutritional status and dehydration (Langmore, et al., 1998). In addition to

posttest design to evaluate the long- and short-term effect of verbal prompting and positive reinforcement on level of independence and frequency of eating in nursing home patients with dementia. The 24 nursing home residents with dementia were randomly assigned to either a treatment or control group. The intervention involved providing verbal prompts and praise related to the tasks of eating and drinking during meal times. The researchers developed the Level of Independent Eating scale that measures

design is the risk of carry over effects, however, this can be controlled for through counterbalancing the order of treatment periods (Shuttleworth, 2009a).

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**Lin and colleagues (2011)** evaluated the effectiveness of Montessori intervention methods on improving independent feeding and nutritional status of residents with dementia living in long-term care facilities. Twenty-nine individuals with dementia living in two special care units participated. A cross-over design was used, with the units randomly assigned into two sequence groups, receiving opposite order of treatment periods. The results of this study showed significant increases in both self-feeding frequency and time spent engaged in self-feeding, as well as a decreased need for nursing intervention. The study concluded that Montessori intervention protocols are effective in improving independent feeding.

The strengths of this study include implementation of a standardized treatment protocol, use of appropriate outcome measures, use of appropriate statistical analyses, and looked at multiple variables to determine the outcome of the study, including the independence, self-feeding frequency, meal durations. While the protocol was standardized, the activities were adapted to be easier or more difficult based on individual ability. The limitations of this study include the small sample size, the length of the study, and the lack of investigation into long-term effects. Although there was evidence of carry over, this study did not directly evaluate the long-term effects of the intervention.

This study provides highly suggestive evidence that Montessori-based activities may present an evidenced-based procedure that could be implemented clinically to increase independence at meal times.

**Van Ort and Phillips (1995)** investigated the effects of contextual intervention and behavioural intervention on mealtime independence for individuals with dementia. The contextual intervention involved environmental changes and mealtime rules, including reducing noise and distractions, and the individualized behavioural intervention involved use of behavioural methods, such as prompting and reinforcement. This study concluded that implementing contextual and behavioural interventions are both beneficial to mealtime independence in individuals with dementia and indicated that a combination of both may be highly beneficial in nursing care environments.

The strengths include well defined measures and definitions, high inter-rater reliability, and appropriate choice of outcome measures and statistical analyses. The limitations include a small sample size of 7



implement the above-mentioned intervention methods. However, given the evidence for the short-term effects of behavioural and environmental intervention along with the potential ease and practicality of its implementation, encourage use of this combination.

### ***Future Research***

Further study of interventions targeting self-feeding in dementia are necessary to address this issue. Larger sample sizes along with studies investigating the long-term effects of the intervention, as well as the impact of intervention on disease progression, incidence of aspiration pneumonia, and mortality secondary to development of aspiration pneumonia would be beneficial to understand the impact of these interventions.

### ***References***

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