

**Critical Review:**  
**The effects of Montessori-Based Dementia Programming on engagement of persons with dementia within social contexts**

Nicole Daphne Minett  
M.Cl.Sc (SLP) Candidate  
University of Western Ontario: School of Communication Sciences and Disorders

The purpose of this critical review is to examine the effects of Montessori-based Dementia Programming (MBDP) on engagement within social contexts. Using a computerized database search strategy of studies published from 2000 to present, four papers were selected to be included in this review. Study designs include: a mixed-design treatment study, a mixed-design treatment study and non-experimental case series (1), a within-subject treatment study (1), and a within-subject pilot study. Overall, results indicate that Montessori-based activities applied within social contexts increases positive and reduces negative engagement in persons with dementia as compared to standard unit activities with positive engagement being defined as motor or verbal behaviour and listening and/or looking in response to a target activity.

***Introduction***

Dementia affects an individual reducing their ability and opportunity to engage socially with their family and within their community (Bourgeois, Dijkstra, and Hickey, 2005). This poses many barriers to quality of life (Phinney, Smith, Small, Purves, Perry, Drance, Donnelly, Chaudhury, and Beattie, 2007). To further add to these barriers are those created by the social beliefs associated with dementia (Malone & Camp, 2007). Thus a shift towards personhood in dementia care is necessary (Berger et al., 2007; Davis, Byers, Nay, and Koch 2009). Changes are occurring in activity programming for people with dementia in long-term care homes and adult day care facilities. There is a growing trend towards activity programming that fosters active and social engagement (Orsulic-Jeras, Schneider, and Camp, 2000) as a way to address barriers to quality of life in dementia care. One such program is Montessori-Based Dementia Programming (MBDP).

MBDP is based on the Montessori system of education developed by Maria Montessori (Skrajner, Malon, Camp, McGowan and Gorzelle, 2007). The key components of the Montessori philosophy as described by Jarro,

to critically evaluate existing literature regarding the effects of Montessori-based programming on levels of engagement in individuals with dementia within a social context.

### *Methods*

#### Search Strategy

Computerized databases, including SCOPUS and PsycINFO, were searched using the following search strategy: (Montessori) AND (dementia) AND (engagement). The search was limited to articles written from 2000 to present as studies before this were largely done within an individual context.

#### Selection Criteria

Studies selected for inclusion in this critical review paper were required to investigate the effects of MBDP on engagement within a social context. Studies that looked at engagement during individual Montessori activities were excluded. No limits were set on the demographics of the research participants, outcome measures, or on location of program implementation.

#### Data Collection

The results of the literature yielded the following type of articles: mixed-design treatment study (2), within-subject treatment study (1), and within-subject pilot study (1).

### *Results*

#### Statistical Analyses

Paired sample t-tests were used in all studies to investigate interaction of engagement and treatment vs. control conditions. Schneider and Camp (2002), Lee et al., (2007), and Skrajner and Camp (2007) used analysis of variance (ANOVA) to investigate interaction of engagement with other factors when more than 2 variables were being manipulated.

#### Measurement Tools

Each of the four studies reviewed use similar observational measurement tools to measure level of engagement. Studies by Skrajner and Camp (2007), and Jarrot et al. (2008) use the Menorah Park Engagement Scale (MPES) (Judge, Camp, & Orsulic-Jeras, 2000) which is designed to measure the

an activity. There are four distinct types of engagement:

**Constructive engagement (CE):** Any motor or verbal behavior exhibited in response to the target activity

**Passive engagement (PE):** Listening and/or looking in response to the target activity

**Nonengagement (NE):** Staring off into space, keeping o the activity.

**Other engagement (SE):** Either self-engagement or engagement unrelated to the target activity.

Lee, Camp, and Malone (2007) used a similar sca/F8 9.96 T(p(u)6(7.0

Engagement was measured using the MRI-ES during 3 different times of the day: (1) before activities; (2) during activities; (3) after activities.

The data was analyzed using a 2x2x3 mixed model ANOVA design with a between-subject factor (to measure group effect), and 2 within-

The data was analyzed using repeated measures analyses of Variance (ANOVA), using a priori simple contrasts (B1x treatment; B2 x treatment). A between-subject factor was also included to detect differences between groups and type of session.

No differences between sites were revealed with the exception of a significant contrast for PE during B2 where ADHC showed more PE during standard activities than during RAMP at B2. SCU showed more PE during RAMP than during standard activities at B2. Overall, results suggest that RAMP may increase positive engagement during RAMP compared with standard activities programming.

Based on the research design, this study provides level 2c evidence. The strengths of this study included clear criterion for leader qualification. In terms of participants, there was a broad range of variability in stage of dementia of those who participate. This increases the generalizability of research findings. Statistical manipulations appear to be appropriate and thorough.

The limitations reported included small sample size for both leaders and participants. Also, training was provided by the researchers. Authors indicate this to be a limitation because in order for RAMP to be a viable form of meaningful intervention for persons with dementia, training must be provided

home residents with dementia. A total of 8 residents-family dyads took part in the study. Engagement and affect were observed at baseline and then again during the test-period where family members used MPDP with the residents.

evaluate how duration of activity effected engagement (early versus late part of the visit).

Appropriate statistical analyses were conducted using paired sample t-tests and 2X2 Repeated Measures Analysis of Variance (ANOVA). An opinion survey was also used at the conclusion of the study.

Results of the study showed increased active engagement and decreased passive engagement during MBDP with family members as compared to regular activity programming. However, although there was an overall increase in active engagement during MBDP, active engagement decreased with duration of all activities. Authors noted that fatigue may be a factor influencing levels of active engagement through

47.51s note

