The Use and Utility of Specific Nonpharmacological Interventions for Behavioral Symptoms in Dementia: An Exploratory Study

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Objective: *This study compares different nonpharmacological interventions for persons with behavioral symptoms and dementia on frequency of use and perceived efficacy in terms of change in behavior and interest.* **Methods:** *Participants were 89 nursing home residents from six Maryland nursing homes with a mean age of 85.9 years (SD: 8.6 years). Research assistants presented interventions tailored to the participants' needs and preferences in a pre-intervention trial phase and in an intervention phase. The impact of each intervention on behavioral symptoms and on the person's interest was rated immediately after the intervention by a research assistant.* **Results:** *The most utilized interventions in both trial and treatment phases were the social intervention of one-on-one interaction, simulated social interventions such as a lifelike doll and respite video, the theme intervention of magazine, and the sensory stimulation intervention of music. In contrast, the least utilized interventions in both phases were sewing, fabric book, and flower arrangement. Interventions with the highest impact on behavioral symptoms included one-on-one social interaction, hand massage, music, video, care, and folding towels. Other high impact interventions included walking, going outside, flower arranging, food or drink, sewing, group activity, book presentation, ball toss, coloring or painting, walking, and family video.* **Conclusions:** *The results provide initial directions for choosing specific interventions for persons with dementia and also demonstrate a methodology for increasing knowledge through ongoing monitoring of practice.* (Am J Geriatr Psychiatry 2015; 23:160–170)

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Behavioral symptoms in persons with dementia increase the suffering of those persons as well as caregiver burden, increase utilization of restrictive care, and are addressed by both pharmacological[1,2] and nonpharmacological treatments.[3] These behaviors have been labeled problem behaviors, disruptive behaviors, disturbing behaviors, and agitation. Several theoretical models exist for explaining behavioral symptoms in persons with dementia; we focus on the Unmet Needs Model.[4] According to this model, behavioral symptoms arise because of one's decreased ability to meet own needs and caregivers' insufficient acknowledgment of needs that may pertain to pain/health/physical discomfort, mental discomfort (evident in affective states: depression, anxiety, frustration, boredom), the need for social contacts (loneliness), uncomfortable environmental conditions, or an inadequate level of stimulation (too low, too high, inappropriate).

Previous studies have demonstrated the efficacy of nonpharmacological interventions responding to these needs.[5] Few, however, compared the impact of different interventions on behavioral symptoms. In a study that compared person-centered showering, the towel bath, and usual care,[6] both interventions significantly decreased behavioral symptoms and aggression, but usual caretaking did not. Snoezelen therapy and reminiscence interventions each showed inconclusive effects on behavioral symptoms in a sample of 20 participants with dementia,[7] and activity of daily living intervention and a psychosocial interventions did not reduce behavioral symptoms.[8] In a comparison of validation therapy (VT), social contact (SC), and usual care (UC),[9] VT showed a significant reduction in physical aggressive behaviors, and both VT and SC participants demonstrated significant reductions in verbally aggressive behaviors based on nursing staff ratings. Nonparticipant observers, however, rated verbal aggression as reduced for those participating in SC but not VT and UC.[9] Finally, a comparison of one-on-one social contact, videotapes of family members, and music with usual care interventions revealed that although all interventions were more effective than usual care in reducing verbal agitation, one-on-one social contact intervention was the most effective.[10]

We found no studies comparing individually tailored interventions that address unmet needs and cognitive and sensory limitations of persons with dementia. Therefore, this study focuses on these questions:

1) In the process of tailoring interventions to persons with dementia who manifest behavioral symptoms, which interventions are most often used? Who receives which intervention? What is the perceived efficacy of these interventions?
2) When participants receive more than one intervention, which intervention is related to greater perceived improvements in behavioral symptoms?
3) Does the use of a trial phase improve results in the treatment phase? The hypotheses are:
   a. The rate of refusals will be lower in the treatment phase than in the trial phase.
   b. The level of success will be higher in the treatment phase than in the trial phase.

METHODS

We conducted this research as a part of a larger study on nonpharmacological interventions for behavior problems in persons with dementia.[5]

Participants and Procedure

We approached 23 Maryland nursing homes located at reasonable distances (around 40 minutes drive) from the researchers' offices in Rockville, Maryland. Seven facilities refused to participate at that point in time; seven other facilities could not provide sufficient eligible participants or did not finalize the agreement by the time data collection was completed; and in two other facilities only control condition participants were enrolled (not reported in this article). Altogether, a total of 654 eligible participants were approached for consent. Informed consent was provided by the participant, the attorney in fact, or the closest family member.[11] For 231 of the residents, consent was received. Subsequently, a group of 155 residents was randomly selected to receive intervention, or to the control group (not reported in this article, but described in Cohen-Mansfield et al.[5]). From the participants selected for intervention, 93 met inclusion criteria. Inclusion criteria were: resident lived at the nursing home for 3 weeks or more; nursing staff identified the resident as