



## Effective Interventions in Dementia Care

A review on the subjective needs of PWD revealed that people at the early to moderate stage of dementia valued well-being and coping needs over functional, instrumental supports. What they regarded as their top concerns were social supports and ways to compensate for their cognitive deficits that would help ease their grief and frustrations<sup>1</sup>. A study investigating the needs of institutionalized elderly PWD found that environmental and physical needs of the old people were usually taken care of, yet mental health care and social needs were usually unmet. The study reported that PWD, in general, lacked stimulating daytime activities, that their depression and anxiety were often left untreated, and that many revealed to have no company<sup>2</sup>. The service gap, therefore, mirrored the claim made by O'Connor, Ames, Gardner, King<sup>3</sup>, which demonstrated that human attention and enjoyable interaction in some studies (while treated as control activities) yielded comparable results as interventions such as validation therapy and progressive muscle relaxation training, providing evidence on the notion that intervention to people with dementia should take human attention or social interaction into consideration.

### Cognitive interventions

The top focus of intervention to PWD is the compensation of cognitive functioning, and the National Clinical Practice Guideline on dementia published in Britain in 2007 mentioned cognitive stimulation as the only recommended non-pharmacological therapy to remediate cognitive loss<sup>4</sup>. The therapy highlighted enjoyable activities and conversation to enhance the cognitive and social functioning of PWD. It is reported by Woods, Aguirre, Spector and Orrell<sup>5</sup> that cognitive activities facilitated memory and thinking, and some studies had also shown it to benefit one's quality of life. Also, physical exercises have shown promising results in promoting the cognitive functions of PWD. A meta-analysis that combined the effect of exercise interventions for cognitively impaired people from 1970 to 2003 reported that compared to control groups, physical exercises promoted higher improvement in cognitive tasks on a statistically significant level<sup>6</sup>.

Interventions dealing with the behavioral and psychological symptoms of dementia (BPSD) have an unbalanced proportion. It is observed that quality studies aiming at behavioral symptoms of dementia outnumbered those aiming at psychological symptoms, probably due to the different levels of disturbance; behaviors such as wandering, aggression, and yelling often required the immediate attention of caregivers, yet weeping and apathy seldom posed pressing threats, and therefore more research efforts had been focused on the behavioral management rather than the emotional wellbeing of a person<sup>7</sup>.



## Behavioral interventions

Among interventions that addressed behavioral symptoms of dementia, a systematic review that compared interventions with social attention highlighted aromatherapy and music therapy that included individualized music as interventions that were effective after controlling the care and attention of participation<sup>3</sup>.

Two studies reported a significant drop in daily agitation in PWD. Holmes, Hopkins, Hensford, MacLaughlin, Wilkinson, Rosenvinge<sup>8</sup> sprayed a 15-person dementia ward with either 2% of lavender oil or water vapor for two hours a day on alternate days, and had an observer recorded the agitation behaviors in the final hour of the 10th session. The study reported that compared to water, the median score of PWD's agitating behaviors was 20% lower when exposed to lavender. Another aromatherapy study took the effects of favorable scents into account. Ballard, O'Brien, Reichelt, Perry<sup>9</sup> randomized two nursing homes, and provided face massage with either lemon balm or sunflower oil to 71 severely demented residents with clinically significant agitation. After four weeks of daily, twice a day minute-long massage, the group using lemon balm has a significant reduction in agitation compared with the control group using the placebo sunflower oil. The increase in the quality of life scale also showed that balm facilitated social engagements.

Another therapy which yields a similar result is music therapy. Quite contrary to common belief, however, that in music therapy "off-the-shelf," soothing, or classical music were not the most effective pieces, but individualized music was<sup>3</sup>. Individualized music was most arousing when played live<sup>10</sup>, was found effective in lowering aggressive behaviors during baths<sup>11,12</sup>, and the soothing effects in lowering agitation level had lasted for 30 minutes<sup>13</sup>.

## Psychological interventions

Although limited in research efforts, reviews did suggest effective non-pharmacological interventions that aimed at enhancing the psychological wellbeing of PWD<sup>7,14</sup>. Echoing both the needs to engage in stimulating daytime activities<sup>1</sup> and the preference in individualized treatments<sup>3</sup>, Kolanowski and his colleagues<sup>15</sup> reported recreational activities that either matched PWD's former interests, their current skill levels, or the combination of both, lowered agitation to a statistically significant degree compared to the baseline, but activities that combined both interests and skill levels increased pleasure, interest and contentment statistically higher than activities that matched only the skill levels. Apart from this, physical exercises were also reported to benefit mood, reduce wandering, facilitate sleeping quality, and enhance functional ability<sup>14,16</sup>. A program that combined strength, balance, and



flexibility exercises was found to be more effective than usual walking and a conversation group. In the study, 90 nursing home residents with Alzheimer's disease were allocated to one of the three groups and engaged in the activities daily for 15 to 30 minutes. The residents were rated on two affect scales, and the study reported exercise program to be superior in generating positive effects and lowering negative effects after 16 weeks to a statistically significant level <sup>17</sup>.

The Organization for Economic Co-operation and Development stated in 2011 that within high income countries, and among people aged 80 years or over who were long-term healthcare recipients, over half of them were community-dwelling <sup>18</sup>. In face of the large demand, research has shown that cognitive stimulation and physical exercise benefited PWD's cognitive wellbeing. Environmental enrichment, especially aromatherapy and personalized music therapy, helped handle behavioral symptoms. To better serve PWD, more non-pharmacological interventions should be designed on top of individualized activities and physical exercises in order to cater the psychological needs of PWD.



## References

1. van der Roest HG, Meiland FJ, Maroccini R, Comijs HC, Jonker C, Dröes R-M. Subjective needs of people with dementia: a review of the literature. *International Psychogeriatrics*. 2007;19(03):559-592.
2. Hancock GA, Woods B, Challis D, Orrell M. The needs of older people with dementia in residential care. *International journal of geriatric psychiatry*. 2006;21(1):43-49.
3. O'Connor DW, Ames D, Gardner B, King M. Psychosocial treatments of behavior symptoms in dementia: a systematic review of reports meeting quality standards. *International Psychogeriatrics*. 2009;21(02):225-240.
4. Health NCCfM. *Dementia: A NICE-SCIE guideline on supporting people with dementia and their carers in health and social care* 2007.
5. Woods B, Aguirre E, Spector AE, Orrell M. Cognitive stimulation to improve cognitive functioning in people with dementia. *Cochrane Database Syst Rev*. 2012;2.
6. Heyn P, Abreu BC, Ottenbacher KJ. The effects of exercise training on elderly persons with cognitive impairment and dementia: a meta-analysis. *Archives of physical medicine and rehabilitation*. Oct 2004;85(10):1694-1704.
7. O'Connor DW, Ames D, Gardner B, King M. Psychosocial treatments of psychological symptoms in dementia: a systematic review of reports meeting quality standards. *International Psychogeriatrics*. 2009;21(02):241-251.
8. Holmes C, Hopkins V, Hensford C, MacLaughlin V, Wilkinson D, Rosenvinge H. Lavender oil as a treatment for agitated behaviour in severe dementia: a placebo controlled study. *International journal of geriatric psychiatry*. 2002;17(4):305-308.
9. Ballard CG, O'Brien JT, Reichelt K, Perry EK. Aromatherapy as a safe and effective treatment for the management of agitation in severe dementia: the results of a double-blind, placebo-controlled trial with Melissa. *Journal of clinical Psychiatry*. 2002;63(7):553-558.
10. Sherratt K, Thornton A, Hatton C. Emotional and behavioural responses to music in people with dementia: an observational study. *Aging & Mental Health*. 2004;8(3):233-241.
11. Clark ME, Lipe AW, Bilbrey M. Use of music to decrease aggressive behaviors in people with dementia. *Journal of Gerontological nursing*. 1998;24(7):10-17.
12. Thomas DW, Heitman RJ, Alexander T. The effects of music on bathing cooperation for residents with dementia. *Journal of Music Therapy*. 1997;34(4):246-259.



13. Gerdner LA. Effects of individualized versus classical “relaxation” music on the frequency of agitation in elderly persons with Alzheimer's disease and related disorders. *International Psychogeriatrics*. 2000;12(01):49-65.
14. Hulme C, Wright J, Crocker T, Oluboyede Y, House A. Non-pharmacological approaches for dementia that informal carers might try or access: a systematic review. *International journal of geriatric psychiatry*. 2010;25(7):756-763.
15. Kolanowski AM, Litaker M, Buettner L. Efficacy of theory-based activities for behavioral symptoms of dementia. *Nursing research*. 2005;54(4):219-228.
16. Eggermont LH, Scherder EJ. Physical activity and behaviour in dementia A review of the literature and implications for psychosocial intervention in primary care. *Dementia*. 2006;5(3):411-428.
17. Williams CL, Tappen RM. Effect of exercise on mood in nursing home residents with Alzheimer's disease. *American journal of Alzheimer's disease and other dementias*. 2007;22(5):389-397.
18. Francesca C, Ana L-N, Jérôme M, Frits T. OECD Health Policy Studies Help Wanted? Providing and Paying for Long-Term Care: Providing and Paying for Long-Term Care: OECD Publishing; 2011.

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