

## Effectiveness of digital reminiscence therapy using large screens on BPSD in people with dementia



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**Background:** Since the eyes are an extension of the brain, people with dementia also experience ocular degeneration. This deterioration is associated with various visual impairments, such as reduced contrast sensitivity. However, no existing reports address rehabilitation approaches for dementia that specifically consider these visual impairments.□

**Methods:** Digital reminiscence therapy(D-RT) was conducted in small groups using an 85-inch large screen and a high-resolution, high-brightness projector. The study employed a crossover design, alternating between a digital reminiscence therapy period and a standard intervention period. The primary outcome measures included BPSD, assessed using the NPI-NH, and care burden. Secondary outcome measures consisted of cognitive function, evaluated with the MMSE, and depression, assessed using the GDS-15.

**Results:** A total of 45 participants were included in the experiment. During the D-RT period, NPI mental symptom scores were significantly lower compared to the usual intervention period ( $P = 0.0122$ ). Caregiver burden scores also showed a significant reduction during the D-RT period ( $P = 0.0148$ ). Additionally, MMSE scores improved significantly in the digital reminiscence therapy period ( $P = 0.0134$ ); however, no significant difference was observed in GDS-15 scores.

**Discussion and Conclusions:** D-RT utilizing a large screen and high-resolution, high-brightness projectors, helps compensate for declines in visual, attentional, and auditory functions in people with dementia, thereby facilitating their participation in reminiscence therapy. Since non-participation in activities is a contributing factor to BPSD, removing barriers to engagement likely resulted in a reduction in behavioral and psychological symptoms, as well as a decrease in caregiver burden.

### Biography:

Born in 1963, obtained an occupational therapist license in 1998. After a decade of clinical experience in psychiatric hospitals and long-term care facilities, transitioned to academia in 2007, teaching at vocational schools and universities. Earned a Doctor of Health Science degree in 2013, specializing in dementia rehabilitation. In recent years, research has focused on the use of life story books and reminiscence therapy to alleviate behavioral and psychological symptoms of dementia (BPSD) in affected individuals.