

## A Pilot Study of Robot Reminiscence in Dementia Care

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**Abstract :** In care for older adults, behavioral and psychological symptoms of dementia (BPSD) like agitation and aggression are distressing for patients and their caretakers, often resulting in premature institutionalization with increased costs of care. To improve mood and mitigate symptoms, as a non-pharmaceutical approach, emotion-oriented therapy like reminiscence work is adopted in face-to-face communication. Telecommunication support is expected to be provided by robotic media as a bridge for digital divide for those with dementia and facilitate social interaction both verbally and nonverbally. The purpose of this case study is to explore the conditions in which robotic media can effectively attract attention from older adults with dementia and promote their well-being. As a pilot study, we introduced the pillow-phone Hugvie<sup>&reg;</sup>, a huggable humanly shaped communication medium to five residents with dementia at a care facility, to investigate how the following conditions work for the elderly when they use the medium; 1) no sound, 2) radio, non-interactive, 3) daily conversation, and 4) reminiscence work. As a result, under condition 4, reminiscence work, the five participants kept concentration in interacting with the medium for a longer duration than other conditions. In condition 4, they also showed larger amount of utterances than under other conditions. These results indicate that providing topics related to personal histories through robotic media could affect communication positively and should, therefore, be further investigated. In addition, the issue of ethical implications by using persuasive technology that affects emotions and behaviors of older adults is also discussed.

**Keywords :** BPSD, reminiscence, tactile telecommunication, utterances

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