

Research on Reminiscence Therapy Game Design

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Abstract : The prevalence of dementia is estimated to rise to 78 million by 2030 and 139 million by 2050. Among those affected, Alzheimer's disease is the most common form of dementia, contributing to 60–70% of cases. Addressing this growing challenge is crucial, especially considering the impact on older individuals and their caregivers. To reduce the behavioral and psychological symptoms of dementia, people with dementia use a variety of pharmaceutical and non-pharmacological treatments, and some studies have found the use of non-pharmacological interventions. Treatment of depression, cognitive function, and social activities has potential benefits. Butler developed reminiscence therapy as a method of treating dementia. Through 'life review,' individuals can recall their past events, activities, and experiences, which can reduce the depression of the elderly and improve their Quality of life to help give meaning to their lives and help them live independently. The life review process uses a variety of memory triggers, such as household items, past objects, photos, and music, and can be conducted collectively or individually and structured or unstructured. However, despite the advantages of nostalgia therapy, past research has always pointed out that current research lacks rigorous experimental evaluation and cannot describe clear research results and generalizability. Therefore, this study aims to study physiological sensing experiments to find a feasible experimental and verification method to provide clearer design and design specifications for reminiscence therapy and to provide a more widespread application for healthy aging. This study is an ongoing research project, a collaboration between the School of Design at Yunlin University of Science and Technology in Taiwan and the Department of Medical Engineering at Chiba University in Japan. We use traditional rice dishes from Taiwan and Japan as nostalgic content to construct a narrative structure for the elderly in the two countries respectively for life review activities, providing an easy-to-carry nostalgic therapy game with an intuitive interactive design. This experiment is expected to be completed in 36 months. The design team constructed and designed the game after conducting literary and historical data surveys and interviews with elders to confirm the nostalgic historical data in Taiwan and Japan. The Japanese team planned the Electrodermal Activity (EDA) and Blood Volume Pulse (BVP) experimental environments and Data calculation model, and then after conducting experiments on elderly people in two places, the research results were analyzed and discussed together. The research has completed the first 24 months of pre-study, design work, and pre-study and has entered the project acceptance stage.

Keywords : reminiscence therapy, aging health, design research, life review

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