

**DESCRIPTION OF THE INCIDENCE OF CONSTIPATION IN
CHILDREN POST-CHEMOTHERAPY AT THE SERUNI POLYCLINIC
ROOM, ARIFIN ACHMAD REGIONAL GENERAL HOSPITAL, RIAU
PROVINCE**

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Abstract

Dementia is a condition that affects cognitive abilities and is commonly experienced by the elderly, leading to memory decline. CST (Cognitive Stimulation Therapy) is a non-pharmacological intervention method that has been proven effective in improving cognitive function and memory in elderly individuals with dementia. This study employed a quasi-experimental method with a one-group pre-test and post-test design, involving 17 elderly participants. Memory assessment was conducted using the Mini-Mental State Examination (MMSE), and data analysis was performed using the Wilcoxon Signed Rank Test. The results showed an increase in MMSE scores after the CST intervention, with an average pre-test score of 17.53 and a post-test score of 26.59. The Wilcoxon Signed Rank Test indicated a p value of 0.001 ($p < 0.05$), suggesting a significant effect of CST on memory in elderly dementia patients. CST has been proven effective in enhancing memory function in elderly individuals with dementia. Therefore, CST can be recommended as a non-pharmacological intervention for elderly patients with cognitive impairment.

Keyword: CST (Cognitive Stimulation Therapy), Memory, Dementia, Elderly, MMSE

INTRODUCTION

Dementia is a neurodegenerative syndrome characterized by a progressive decline in cognitive functions, including impaired memory and difficulties in performing daily activities. According to Alzheimer's Disease International and the World Health Organization (WHO) (2020), more than 55 million people worldwide are living with dementia, and this number is projected to nearly double every 20 years, reaching 78 million by 2030 and 139 million by 2050. The greatest increase is expected to occur in low- and middle-income countries, accounting for approximately 71% of total cases by 2050, with the fastest-growing elderly populations found in China, India, and neighboring countries in South and Western Pacific Asia.

In Indonesia, the *Ministry of Health* (2023) reported that the prevalence of dementia is around 27.9%, with more than 4.2 million people living with the condition. Most cases are found in Java and Bali, where prevalence exceeds 20%. Dementia primarily affects individuals aged 65 years and older and is not considered a normal part of the aging process. Common symptoms include disorientation, difficulty recognizing familiar environments, and cognitive decline that affects memory, reasoning, emotional control, and social relationships (Tandanu & Sutisna, 2024). Dementia is caused by chronic or progressive brain disorders that impair memory, understanding, judgment, and language abilities (Hasifah et al., 2021). This condition presents significant challenges for the elderly, their families, and healthcare systems. Older adults with dementia often experience forgetfulness, confusion, and limited

mobility, conditions that are further aggravated by stress, thereby worsening cognitive decline. Therefore, interventions are needed that not only slow the deterioration of cognitive function but also improve the quality of life of patients.

Non-pharmacological approaches are currently recognized as safe and effective treatment options due to their minimal side effects and positive impact on cognition, mood, and behavioral symptoms in dementia patients (Firna & Pradana, 2021). One such intervention proven to be effective is Cognitive Stimulation Therapy (CST). CST is a psychosocial intervention that engages participants in group discussions and activities designed to stimulate cognitive functions such as memory, language, and problem-solving (Lia Juniarni, 2021). Several studies have demonstrated that CST improves cognitive function, independence, mood, and quality of life among elderly individuals with dementia (James et al., 2023; Turana et al., 2024). Regular cognitive activities can help slow down brain function decline and maintain thinking abilities in the elderly. Thus, the application of CST is believed to encourage older adults to remain mentally and socially active. A preliminary study conducted at UPT Pantii Sosial Tresna Werdha (PSTW) Khusnul Khotimah revealed that 5 out of 7 elderly participants (71.43%) experienced memory decline, such as forgetting where they placed items, forgetting family members' names, and forgetting their daily schedules. Caregivers also reported that most residents often forgot to take their medication without reminders. Currently, the only regular activity at the institution is weekly exercise, with no structured cognitive stimulation programs. Based on these findings, the researcher is interested in conducting a study entitled: "The Effect of Cognitive Stimulation Therapy (CST) on Memory in Elderly Dementia Patients at UPT Pantii Sosial Tresna Werdha (PSTW) Khusnul Khotimah."

RESEARCH METHODS

This study used a quasi-experimental design with design with a one-group pre-test and post-test approach involving 17 elderly residents aged 60 years and above diagnosed with dementia. Cognitive function was measured using the Mini-Mental State Examination (MMSE). CST sessions were conducted for two weeks and consisted of group-based discussions, memory exercises, and reality orientation activities. Data were analyzed using the Wilcoxon Signed Rank Test ($p < 0.05$).

RESEARCH RESULTS

This study involved 17 elderly respondents residing at UPT PSTW Khusnul Khotimah Pekanbaru, aged between 60 and 85 years. Based on respondent characteristics, the majority were male (9 participants or 52.9%) and female (8 participants or 47.1%), with the highest educational background being elementary school (41.2%), followed by junior high school (29.4%), senior high school (17.6%), and higher education (11.8%). Memory function was assessed using the Mini Mental State Examination (MMSE) instrument administered before and after the Cognitive Stimulation Therapy (CST) intervention. The results showed a significant improvement after the intervention. The average MMSE score during the pre-test was 17.53 and increased to 26.59 during the post-test, indicating an improvement of 9.06

points after three weeks of CST implementation. The analysis using the Wilcoxon Signed Rank Test revealed a mean rank of 8.97, a sum of ranks of 134.50, a Z-value of -3.43, and a p-value of 0.001 ($p < 0.05$). These results indicate a significant difference between pre-test and

post-test scores, suggesting that Cognitive Stimulation Therapy (CST) had a statistically significant effect on improving memory function among elderly individuals with dementia. This improvement demonstrates that regular CST activities can stimulate cognitive function through various sessions such as word games, puzzles, quizzes, reminiscence discussions, and orientation exercises that directly enhance concentration, short-term memory, and cognitive processing abilities. These activities help strengthen neural connections and maintain optimal brain function in older adults. Therefore, Cognitive Stimulation Therapy (CST) is proven effective in enhancing memory among elderly individuals with dementia and can be recommended as a safe and beneficial non-pharmacological intervention to improve the quality of life in the elderly population.

DISCUSSION

This study examined the effect of Cognitive Stimulation Therapy (CST) on memory function among elderly individuals with dementia at UPT PSTW Khusnul Khotimah. The findings revealed a significant improvement in MMSE scores, increasing from a pre-test mean of 17.53 to a post-test mean of 26.59. The Wilcoxon Signed Rank Test showed a p-value of 0.001 (<0.05), indicating a statistically significant effect of CST on memory enhancement among elderly participants. Most respondents were aged between 60–70 years and had an elementary-level education. Age was found to influence the therapy outcome, where younger elderly participants responded better to cognitive stimulation. Educational level also played a role, as participants with higher education showed better understanding and engagement during CST sessions, leading to improved cognitive performance.

CST implemented over three weeks proved effective in improving memory, attention, and cognitive function through group-based activities such as games, discussions, and creative exercises. These activities stimulated brain function, promoted neurogenesis and synaptogenesis, and strengthened social interaction among the elderly. These findings are consistent with previous studies by Spector et al. (2024), Kartika et al. (2024), and Leton et al. (2022), which demonstrated that CST effectively enhances cognitive function and quality of life in dementia patients. The researcher assumes that CST sharpens memory and slows cognitive decline in elderly individuals with dementia by combining social, cognitive, and emotional elements in an enjoyable setting. Therefore, CST can be recommended as an effective non-pharmacological intervention to improve memory and maintain cognitive function among elderly individuals with dementia, particularly when applied regularly and systematically.

CONCLUSION

The results of this study show that Cognitive Stimulation Therapy (CST) has a significant effect on improving memory function in elderly individuals with dementia at UPT PSTW Khusnul Khotimah. Based on the Wilcoxon Signed Rank Test, a p-value of 0.001 (<0.05) was obtained, indicating a significant difference between the pre-test mean score (17.53) and the post-test mean score (26.59) after the CST intervention.

These findings demonstrate that CST is effective in enhancing cognitive and memory functions among elderly patients with dementia. The structured cognitive activities in CST—such as memory games, group discussions, and problem-solving exercises—help stimulate brain function through social interaction and mental engagement, thereby slowing cognitive decline. Therefore, CST is recommended as a non-pharmacological intervention that is safe and beneficial for improving memory and quality of life in elderly individuals with dementia.

This therapy can be implemented routinely in social care institutions as a promotive and preventive approach to elderly care.

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