



Analysis Of Nursing Care With The Implementation Of Reminiscence Therapy To Improve Cognitive Function In Elderly At Upt Pstw Husnul Khotimah, Riau Province

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Abstract

Background of study: Cognitive decline is common among older adults and affects memory, thinking, and communication, which can reduce quality of life. One nonpharmacological intervention that nurses can apply is reminiscence therapy, which encourages older adults to recall meaningful past experiences to stimulate cognitive activity and improve psychological well-being.

Aims and scope of paper: This scientific paper aims to analyze nursing care and evaluate the application of reminiscence therapy in improving cognitive function among older adults at UPT PSTW Husnul Khotimah, Riau Province.

Methods: The method used was a one-group pretest–posttest design with two older adults as subjects, using the Mini Mental State Examination (MMSE) before and after the intervention. The therapy was conducted for three consecutive days with a total of twelve sessions.

Result: The results showed an increase in MMSE scores from a range of 12–19 to 14–21.

Conclusion: Reminiscence therapy is effective and should be applied continuously in elderly nursing care.

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INTRODUCTION

Aging in humans is a natural process that marks the passage of three life stages: childhood, adulthood, and old age. Each stage is distinct, both biologically and psychologically. As we age, anatomical, physiological, and biochemical changes occur in the body, affecting its overall function and abilities. One of the most common changes in the elderly is a decline in brain function, or cognitive function. This decline can be caused by a reduction in the number of anatomical cells, exposure to free radicals, environmental pollution, decreased nutritional intake, or lack of physical activity, which gradually lead to changes in the anatomical and physiological structures associated with aging ([Maghfuroh, 2023](#)).

The phenomenon of cognitive decline in the elderly becomes increasingly relevant when linked to the increasing number of elderly people worldwide. The World Health Organization ([WHO, 2024](#)) released data that by 2024, the 60–64 age group will be the largest, with 351.5 million people. The 65–69 age group reached 292.5 million, the 70–74 age group 228 million, and the 75–79 age group 148.8 million. These numbers continue to decline at older ages, reaching 90.1 million in the 80–84 age range, 49.6 million in the 85–89 age range, and 19.1 million in the 90–94 age range. Furthermore, the elderly population aged 100 and over still stands at 0.6 million. This data indicates that the global elderly population continues to increase, increasing the potential for health-related problems, including cognitive impairment. ([Abd-Alrazaq et al., 2023](#); [Gonzales et al., 2022](#))

According to the 2023 Population Census, approximately 12%, or approximately 29 million, of Indonesia's population, are aged 60 and over. This figure continues to increase, from 10.8% in 2021 to 12% in 2024. It is estimated that by 2045, the number of elderly people will reach 20.3% of the total population, or approximately 65.8 million people. The province with the highest number of elderly people is Yogyakarta, with 16.69%, while Papua has the lowest percentage, at around 5%. In large cities like Jakarta, the number of elderly people also continues to grow, estimated to reach 1.2 million by 2025. Riau Province itself is not among the 10 provinces with the highest number of elderly people. According to 2023 BPS data, Riau has approximately 7.40% of its elderly population aged 60 and over. ([Hartono et al., 2025](#); [Susanti et al., 2021](#))

Based on preliminary results from November 6, 2025, a total of 90 elderly people were recorded in 2024 at the Husnul Khotimah PSTW Unit (UPT PSTW) in Riau Province. Of this total, 54 (60%) were male and 36 (40%) were female. This number reflects the increasing need for more comprehensive services, support, and attention—especially regarding the maintenance of cognitive function, which is highly susceptible to decline in the elderly. The increase in the number of elderly people is also accompanied by a rise in the prevalence of symptoms of cognitive decline, such as forgetfulness, which typically appears between the ages of 50 and 59 and affects approximately 39% of elderly people. This percentage can even increase to 85% in those over 80. Cognitive impairment not only affects memory but also impacts daily activities, reducing the quality of life for elderly people ([Panggayuh, 2025](#)).

In addition to positively influencing coping and emotional well-being in older adults, reminiscence therapy can stimulate memory, the storage site for sensory impulses that plays a crucial role in future use in regulating motor activity and thought processes ([Safitriana et al., 2023](#)). When older adults begin to recount their life experiences, they attempt to reconstruct memories from childhood, adolescence, and adulthood, as well as their relationships with family. This activity re-stimulates previously diminished brain function, allowing older adults to focus better and express themselves more easily as their language skills are re-trained ([Dwisetyo et al., 2025](#)).

Given the high rate of cognitive decline, various interventions have been developed to help older adults maintain their thinking abilities. One approach considered effective is reminiscence therapy. Reminiscence therapy is a method known to express past experiences, foster self-confidence, and foster feelings of appreciation. Thus, reminiscence therapy contributes to positive coping, which can improve older people's perceptions and emotions when facing challenges, including cognitive decline ([Wati, H., 2025](#)).

Based on preliminary results from November 6, 2025, a total of 90 elderly people were recorded in 2024 at the Husnul Khotimah PSTW Unit (UPT PSTW) in Riau Province. Of this total, 54 (60%) were male and 36 (40%) were female. This number reflects the increasing need for more comprehensive services, support, and attention especially regarding the maintenance of cognitive function, which is highly susceptible to decline in the elderly. Based on these findings, it can be concluded that reminiscence therapy is an effective method for improving cognitive function in older adults. Given the high prevalence of cognitive decline and the importance of appropriate interventions, the authors were interested in conducting a case study.

METHOD

The study used a descriptive design and a cross-sectional approach to collect primary data, explaining the application of reminiscence therapy for cognitive decline. Two respondents were selected as a sample, who were included in the intervention group. Inclusion criteria included elderly people aged 60 years and over with mild to moderate cognitive decline and who were able to communicate well. Exclusion criteria included those who were unwilling to participate, had mental disorders, were at risk of harming themselves or others, and did not complete all therapy sessions. ([Liu et al., 2021](#); [Mapelli et al., 2013](#))

The population in this study was 90 elderly people at the UPT PSTW Husnul Khotimah, Riau Province. The questionnaire instrument used for data collection was the Mini Mental State Examination (MMSE). This study was conducted at the UPT PSTW Husnul Khotimah, Riau Province, as the research location. The location was selected based on the suitability of the respondents' characteristics to the research objectives. The study was conducted from November 29 to December

1, 2025, and included personal approaches, assessment, research, and data analysis. The implementation time was adjusted according to established SOPs to ensure the research process ran effectively and optimally.

Data analysis was carried out descriptively using a case study approach, namely by comparing the results of MMSE score measurements before and after giving reminiscence therapy to each respondent, then presented in narrative and tabular form. The use of the Mini Mental State Examination (MMSE) instrument as a measuring tool also has limitations because it is influenced by the level of education, emotional condition, and communication skills of the elderly as respondents. This study has received ethical clearance and approval from the Health Ethics Committee of Hang Tuah University, Pekanbaru (No: 069/KEPK/UNIV-HTP/XII/2025-KIAN).

RESULTS AND DISCUSSION

RESULTS

Mr. U was given reminiscence therapy, which involved pre- and post-tests using the Mini Mental State Examination (MMSE) scale. The pre-test results indicated moderate cognitive decline, while the post-test results showed moderate cognitive decline with different scores. On the second day, EBN was administered again, and the pre-test results showed moderate cognitive decline in Mr. U, while the post-test results showed mild cognitive decline. On the third day, EBN was administered again, and the pre-test results showed mild cognitive decline. The post-test results again showed mild cognitive decline but with different scores, as shown in the Mini Mental State Examination (MMSE) cognitive level scale results.

Table 1. Pre-test and Post-test Assessment of Mr. U Using the Measurement Scale Mini Mental State Examination (MMSE)

No	Initials	Day	Pre-Test	Skor	Post-Test	Skor
1	Tn. U	1	Medium	12	Medium	14
		2	Medium	14	Medium	17
		3	mild	18	mild	19

The results of the reminiscence therapy implementation for Mrs. D are as follows:

Table 2. Pre-test and post-test assessment of Mrs. D using the measurement scale Mini Mental State Examination (MMSE)

No	Initials	Day	Pre-Test	Skor	Post-Test	Skor
1	Ny.D	1	Medium	15	Medium	16
		2	Medium	17	Medium	19
		3	mild	19	mild	21

The table above shows changes in Mrs. D's cognitive function. On the first day of the pre-test, Mrs. D's cognitive function was at a moderate level of cognitive impairment, with a score of 15. Similarly, on the post-test, she scored 16, which falls into the moderate category. On the second day of the pre-test, Mrs. D's cognitive function was still at a moderate level, with a score of 17. Meanwhile, on the post-test, she scored 19, which fell into the mild cognitive impairment category. On the third day, Mrs. D's pre-test score of 19 showed improvement, falling into the mild cognitive impairment category, and on the third day, her post-test score of 21 indicated mild cognitive impairment.

DISCUSSION

Analysis Based On Case Concept

Cognitive function is the brain's ability to process information, maintain attention, remember, understand language, and reason. Cognitive impairment is characterized by decreased thinking capacity, difficulty remembering, and a weakened ability to process new information due to the brain's inability to maintain neural structural integrity and processing capacity ([Zega, A, 2021](#)).

Mr. U (89 years old) and Mrs. D (74 years old), experienced cognitive decline in the form of memory impairment. Mr. U complained of frequently misplacing items, forgetting friends' names, life stories, confusion about time, place, and people around him, taking a long time to answer questions, and being easily distracted, with an MMSE score of 12. Mrs. D had difficulty remembering simple activities, and confusion about dates, times, personal identity, and locations, with an MMSE score of 15. On the second day, Mrs. D still forgot the researcher's name and the day, but recognized the location of the orphanage, and on the third day, she was able to repeat some of the reminiscence therapy material.

The differences in Mr. U and Mrs. D's responses indicate that cognitive function is influenced by the processes of perception, attention, information processing, judgment, and memory formed from previous experiences ([Tutiary, S. K., 2024](#)). Cognitive decline is influenced by differences in age, life experiences, and physiological changes that impact attention, information processing speed, and memory. Biological, psychological, and sociocultural factors also influence the cognitive abilities of the elderly ([Melani, A., 2023](#)).

In theory, the natural aging process causes a decrease in the number of neurons, weakening of synaptic connections, and a decrease in the efficiency of neural networks. Mental, social, and physical stimulation play a crucial role in maintaining memory function. Successful aging is also influenced by social interaction and family support, as a lack of interaction can accelerate cognitive decline ([Pangesti, A. T. R., 2025; Agustin, N. K., 2024](#)). Thus, differences in age, life experience, level of social interaction, and family support are the main factors explaining the variation in cognitive and memory decline in Mr. U and Mrs. D.

Analysis Based On Intervention Implementation

Reminiscence therapy is an effective approach to improving cognitive function in the elderly because it aims to stimulate long-term memory and thinking skills by activating past memories. This therapy provides a complex effect by simultaneously stimulating the brain, emotions, and life experiences, thereby improving attention, memory, and information processing abilities. Through activities such as storytelling, viewing old photos, listening to music, or discussing past memories, seniors can re-access stored memories and strengthen neural pathways that play a role in cognitive function ([Martina, S.E., 2021; Oktavia, O., 2021](#)).

Pathophysiologically, reminiscence therapy involves encouraging seniors to recall and recount past experiences using various media. This activity stimulates long-term memory pathways and strengthens synaptic connections in the hippocampus and temporal lobe, thereby improving memory, attention, language, and executive function. The mechanism of action of this therapy is similar to sensory stimulation, but focuses on activating cognitive functions through memory, increasing neuronal activity, and brain plasticity ([Evrianasari et al., 2019; Faisah, N., 2024](#)). In the case of Mr. U and Mrs. D, reminiscence therapy was implemented. The standard operating procedure (SOP) for implementation included a pre- and post-test, with the following results:

Table 3. Pre- and post-test assessments of Mr. U and Mrs. D using the measurement scale Mini Mental State Examination (MMSE)

No	Initials	Day	Pre-Test	Skor	Post-Test	Skor
1	Tn. U	1	Medium	12	Medium	14
		2	Medium	14	Medium	17
		3	mild	18	mild	19
2	Ny. D	1	Medium	15	Medium	16
		2	Medium	17	Medium	19
		3	mild	19	mild	21

In the case of Mr. U (89 years old) and Mrs. D (74 years old), reminiscence therapy was applied for three days, with a total of 12 sessions. Results of cognitive function measurements using the Mini Mental State Examination (MMSE) showed gradual improvement. Mr. U's score increased from 12 to 19, while Mrs. D's increased from 15 to 21. These changes indicate improvements in memory, orientation, concentration, and thinking skills after therapy.

Cognitive decline in the elderly is influenced by biological aging, decreased brain mass, slowing of neural processes, as well as factors such as life experiences, previous activities, and social support. The social environment and family support play a crucial role in providing mental and emotional stimulation that helps maintain cognitive function in the elderly ([Putri, S., 2024](#); [Purnairawan, Y., 2025](#)). Thus, reminiscence therapy is an effective non-pharmacological intervention in improving and maintaining cognitive function in the elderly, strengthening memory, language skills, and social interactions, as well as supporting overall quality of life and independence.

During the implementation of this activity, there were several limitations to the research during the implementation of EBN. The author encountered obstacles when providing reminiscence therapy because other elderly people often asked to go out, which disrupted the concentration of the elderly who were undergoing therapy. Furthermore, during the assessment and implementation process, the researcher also experienced limitations in communication due to language differences, as the elderly often used OCU language, making the content of the conversation difficult to understand.

CONCLUSION

Based on nursing care for Mr. U and Mrs. D who both experienced cognitive decline with different responses, the results of the MMSE pre-test and post-test showed an increase in cognitive function. Mr. U increased from a score of 12 in the moderate category to a score of 19 in the mild category, while Mrs. D increased from a score of 15 to a score of 21. This shows that reminiscence therapy has an effect on improving the cognitive function of the elderly and can be used as a simple therapy to reduce cognitive decline. The results of this application are useful for educational institutions as learning materials and student motivation, for UPT PSTW Husnul Khotimah as an illustration of the decline in cognitive function of the elderly and alternative nursing care, for nursing science as additional information and teaching materials, for the elderly to be able to apply therapy independently to improve the quality of life, and for further researchers as a reference for further research including a combination of other therapies such as aromatherapy or dhikr.

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