



Comparing the effectiveness of multisensory stimulation and cognitive rehabilitation on mental state, memory and sleep disorder in elderly women with cognitive impairments

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Email: shaban.haydari@iausari.ac.ir Received: 29.04.2022 Acceptance: 12.12.2022

Journal of
Applied Family Therapy

eISSN: 2717-2430
http://Aftj.ir

Vol. 4, No. 5, Pp: 522-546
Winter 2023

Original research article

How to Cite This Article:

Mostafavi, M., Heydari, S., & Emadian, S. O. (2023). Comparing the effectiveness of multisensory stimulation and cognitive rehabilitation on mental state, memory and sleep disorder in elderly women with cognitive impairments. *afj*. 4(5), 522-546.



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Abstract

Aim: The present study was conducted with the aim of comparing the effectiveness of multisensory stimulation and cognitive rehabilitation on mental state, clinical memory and sleep disorder in elderly women with cognitive impairments. **Methods:** The current research was conducted as a semi-experimental pre-test-post-test type with control and follow-up groups. The statistical population consisted of 30 elderly women referring to nursing homes in Tehran, who were divided into two experimental and control groups by a simple random method. To collect data from Folstein mental state questionnaires (1975), Wechsler Bluber clinical memory questionnaire (1939), Petersburg Boyce et al. sleep quality questionnaire (1989) and cognitive deficits questionnaire (national surveys standard of the Ministry of Health and Iran Statistics Center) used. The data was analyzed using SPSS-21 software and mixed analysis of variance tests. **Results:** According to the results of multisensory stimulation and cognitive rehabilitation, it improves mental status ($F=28.58, P<0.001$), clinical memory ($F=20.27, P<0.001$), and sleep disorder ($F=12.43, P<0.001$) has a significant effect in the elderly with cognitive defects ($P<0.01$). The effectiveness of cognitive rehabilitation is greater compared to multisensory stimulation on the mental state and clinical memory of the elderly ($P<0.01$); However, the effectiveness of multisensory stimulation on the sleep disorder of the elderly is more than the effectiveness of cognitive rehabilitation ($P<0.01$). **Conclusion:** This method can be used to improve the cognitive ability and, as a result, the quality of life of the elderly independently and together with clinical and subclinical cognitive treatments.

Keywords: *memory, sleep disorder, sleep state, multisensory stimulation.*

Introduction

To date, few studies have addressed the efficacy of multisensory stimulation and cognitive rehabilitation on the psychological components mentioned in the elderly, and no study has examined this issue in elderly individuals with cognitive deficits. Consequently, older adults at risk must be identified and given attention to protect them from cognitive deficits and disabilities resulting from reduced hope for life, thereby reducing their need for care resources. Given the need to enhance the awareness of service providers regarding the factors affecting the psychological characteristics of the elderly, to better assess these problems and provide necessary services to mitigate or reduce their extent. The present study sought to answer the following questions:

1. Was the effectiveness of multisensory stimulation and cognitive rehabilitation on mental status, clinical memory, and sleep disorders in elderly individuals with cognitive deficits effective in the post-test phase?
2. Was the effectiveness of multisensory stimulation and cognitive rehabilitation on mental status, clinical memory, and sleep disorders in elderly individuals with cognitive deficits sustained in the follow-up phase?

Method

The current research was conducted as a semi-experimental pre-test-post-test type with control and follow-up groups. The statistical population consisted of 30 elderly women referring to nursing homes in Tehran, who were divided into two experimental and control groups by a simple random method. To collect data from Folstein mental state questionnaires (1975), Wechsler Bluber clinical memory questionnaire (1939), Petersburg Boyce et al. sleep quality questionnaire (1989) and cognitive deficits questionnaire (national surveys standard of the Ministry of Health and Iran Statistics Center) used. The data was analyzed using SPSS-21 software and mixed analysis of variance tests.

Results

According to the results of multisensory stimulation and cognitive rehabilitation, it improves mental status ($F=28.58$, $P<0.001$), clinical memory ($F=20.27$, $P<0.001$), and sleep disorder ($F=12.43$, $P<0.001$) has a significant effect in the elderly with cognitive defects ($P<0.01$). The effectiveness of cognitive rehabilitation is greater compared to multisensory stimulation on the mental state and clinical memory of the elderly ($P<0.01$); However, the effectiveness of multisensory stimulation on the sleep disorder of the elderly is more than the effectiveness of cognitive rehabilitation ($P<0.01$).

Conclusion

The current study aimed to compare the effectiveness of multisensory stimulation and cognitive rehabilitation on mental status, clinical memory, and sleep disorders in elderly women with cognitive deficits. The results indicated that multisensory stimulation and cognitive rehabilitation were effective in improving mental status, clinical memory, and sleep disorders in elderly women with cognitive deficits.

Based on the findings of this study, it is recommended that therapy courses for cognitive rehabilitation and multisensory stimulation be provided in counseling and treatment centers and nursing homes with the aim of empowering and enhancing the

mental health of the elderly with cognitive deficits. Holistic and team approaches should be used in treating mental problems of the elderly and in preventative programs based on a rehabilitation approach to support them against diseases and life events specific to aging. Therapists should first assess the cognitive and physical health of elderly individuals in order to treat their disorder and increase positive social interactions. If symptoms are present, cognitive rehabilitation and multisensory stimulation should be used as effective and efficient treatment methods alongside other psychological approaches based on the type of existing damages. The mental condition and sleep quality of the elderly should be examined, and daily life responsibilities should be reviewed and revised based on progress in treating the disorder and their capabilities, aiming to improve physical and mental health. Programs should be developed to provide social support for the elderly by family members and counselors to enhance their quality of life. Additionally, as a practical suggestion for extending the results, the current study should be replicated in elderly populations of other cities, and training in cognitive rehabilitation and multisensory stimulation should be scheduled for counselors in nursing homes.

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