Journal of Landscape Architecture and Garden Design

Volume 2, Issue3, Spring 2026

E-ISSN: 3115-9265

Developing and explaining the design of a health center based on elderly rehabilitation

Farhad Karvan[1*], **Fahimeh Yousefi**[2]

1- Department of Architecture, Ha.C., Islamic Azad University, Hamedan, Iran.
2- Master's Degree Student in Architecture, Department of Architecture, Ha.C., Islamic Azad University, Hamedan, Iran.

* f.karvan@iau.ac.ir

Date of submission: 2026/01/30 Revision: 2026/07/01 Acceptance: 2026/07/13

Detailed abstract

Introduction

In this regard, the development of a health center design model based on elderly rehabilitation can be considered as an effective solution for improving the quality of life, increasing satisfaction and independence of the elderly. By focusing on empowerment and providing rehabilitation services, the health center can provide a suitable space for promoting the physical and mental health of the elderly and help them face the challenges of aging. By creating a supportive and empowering environment, this model can help the elderly to spend their old age with higher quality by maintaining independence and increasing life satisfaction. The purpose of this study is to identify and analyze the needs and challenges of the elderly in accessing rehabilitation services in the health center, and to present the components of the design of a health center based on elderly rehabilitation, with an emphasis on services, infrastructure, and resource management. Therefore, the aim of this study is to develop and explain a health center design model based on elderly rehabilitation and to investigate its role in promoting the physical, mental, and social health dimensions of the elderly. This study evaluated the effectiveness of spatial-functional components in health-oriented environments by utilizing field data analysis, conceptual design structure, and questionnaire results. The main question of this research is: What features and components should be considered in designing a health home model based on rehabilitation for the elderly to meet their physical, psychological, and social needs?

Materials and Methods

The present study is applied in terms of purpose and is a mixed-method (qualitative-quantitative) study that was conducted with the aim of developing the components of a health home design based on the rehabilitation of the elderly in the city of Hamedan.

In the first stage, in order to identify the components that affect the design of the health home, library studies and a review of scientific sources, design standards, regulations, and related research were conducted. Then, in order to complete and localize the extracted components, direct observation of the Hamedan nursing home environment was used. The observations were conducted in a structured manner and based on the researcher's checklist, and accessibility, lighting, social spaces, amenities, and quality of life were examined.

Journal of Landscape Architecture and Garden Design

Volume 2, Issue3, Spring 2026

E-ISSN: 3115-9265

In the second stage, a questionnaire was developed based on the extracted components and provided to the elderly to assess the importance and priority of each component.

The statistical population of the study included all elderly residents of the Hamedan nursing home. Due to the limited size of the population (384 people), a census method was used and all eligible elderly people were included in the study.

Inclusion criteria included the ability to respond to the questionnaire, informed consent to participate in the research, and the ability to communicate. Exclusion criteria included withdrawal from further cooperation or incomplete questionnaires.

The data obtained from the observation were analyzed using content analysis. Quantitative data were also analyzed using SPSS software and using descriptive statistics and inferential tests appropriate to the research hypotheses.

Findings

The results of the field data analysis and the questionnaire structure show that the accessibility component, spatial infrastructure, and facilitating the elderly's access to rehabilitation services with an emphasis on empowerment instead of passive care, promote functional independence, increase mobility, improve spatial access, and improve the quality of the physical environment, which, according to the field findings and the questionnaire results, are directly related to the physical health indicators of the elderly. On the other hand, strengthening social spaces, creating platforms for interaction, participating in group activities, and forming a sense of belonging and social support, which have been identified in the research findings as key components of health center design, lead to improved social health of the elderly. Also, components such as a sense of control over the environment, increased self-efficacy, the experience of psychological security, and enhanced sense of personal worth, which are reflected in the results of the quality of life section and the questionnaire data, play an effective role in improving the mental health and life satisfaction of the elderly. Accordingly, it can be concluded that the design of a rehabilitation-based health center, relying on field findings and empirical research data, by creating an integrated spatial-service system, is able to simultaneously promote the three dimensions of physical, mental, and social health of the elderly and significantly improve their quality of life. In summary, the findings show that rehabilitation-based design, beyond a purely physical intervention, acts as an integrated spatial-functional system and can simultaneously improve the quality of life of the elderly in three dimensions of physical, mental, and social health. Improving accessibility, appropriate lighting, increasing mobility, facilitating the use of assistive devices, and optimizing spatial organization play an effective role in improving physical health. Also, creating active social spaces, platforms for interaction, and group participation strengthen social capital, reduce social isolation, and improve the social health of the elderly. In the psychological dimension, components such as a sense of security, control over the environment, self-reliance, and active participation in daily life lead to increased life satisfaction and improved mental health. Overall, the results of the study indicate that the rehabilitation-based health center, by transitioning from a passive care approach to active empowerment, can be used as an efficient model in the design of health-oriented centers and policy-making in the field of aging, and provide the basis for sustainable improvement in the quality of life of the elderly.

Journal of Landscape Architecture and Garden Design

Volume 2, Issue3, Spring 2026

E-ISSN: 3115-9265

Discussion and conclusion

Based on the analysis of field data, the conceptual structure of the design of a health center based on the rehabilitation of the elderly, and the results of the questionnaire, it can be concluded that this design pattern has structural efficiency in simultaneously promoting the physical, mental, and social health of the elderly. The alignment of spatial design indicators with health components shows that rehabilitation-based design is not simply a physical intervention, but rather an integrated spatial-functional system that systematically affects the quality of life of the elderly. The results of the questionnaire indicate that improving accessibility, improving the quality of lighting, increasing the possibility of mobility, facilitating the use of assistive devices, and optimizing spatial organization play a direct role in promoting the physical health of the elderly. At the same time, the formation of active social spaces, platforms for interaction, group activities, and the possibility of participating in cultural and social activities strengthen social capital, reduce the feeling of isolation, and increase the feeling of belonging, and improve the social health of the elderly. In the psychological dimension, the results of the questionnaire show that creating a sense of security, control over the environment, self-reliance, personal worth, and active participation in daily life leads to improved mental health, increased life satisfaction, and improved quality of life experience for the elderly. These findings indicate that the rehabilitation-based health home moves beyond the logic of “passive care” and toward “active empowerment,” an approach that transforms the elderly from a service recipient into a social actor. Overall, the results of the study show that the components of the rehabilitation-based health home for the elderly, by creating a structural link between architectural design, support services, social spaces, and health-oriented infrastructure, are able to simultaneously promote the three dimensions of physical, mental, and social health of the elderly and sustainably improve their quality of life. Therefore, the results of this study can be suggested as an efficient model in spatial policy-making, planning of aging services, and designing health-oriented centers for the elderly.

Declarations.: The authors declare that they have no conflicts of interest.

Keywords: Rehabilitation, health home, nursing home, elderly.