

Research on Intervention Strategies for Cognitive Dysfunction in the Elderly from the Perspective of Social Support Theory

Liying Liu

College of Public Management, Tianjin Vocational Institute Tianjin, 300350, China

ABSTRACT

Based on the perspective of social support theory, this paper studies the influence of the social support system on cognitive dysfunction in the elderly, including the impact on the mental health of the elderly, ways to improve the quality of life of elderly patients with cognitive dysfunction, the promoting role in the integration and participation of the elderly in society, the importance of improving the social support system in the intervention and the management of cognitive dysfunction in the elderly. In addition, this paper also proposes the social intervention strategies for cognitive dysfunction in the elderly and evaluates the effect of social support intervention on cognitive dysfunction in the elderly.

KEYWORDS

Elderly; Cognitive dysfunction; Intervention strategy; Social support theory

1. INTRODUCTION

With the rapid development of society, population aging has become one of the major challenges facing China. According to China's seventh national population census, by the end of 2020, the number of elderly people aged 60 and above was as high as 264 million, accounting for 18.7% of the total population. According to data from the National Bureau of Statistics, by 2035, it is expected that the elderly population aged 60 and above will increase to about 420 million, and the proportion will exceed 30%, entering a stage of severe aging. The National Health Commission expects that around 2050, the elderly population aged 60 and above will reach a peak of 487 million, accounting for 34.9% of the total population [1].

At the same time, the problem of cognitive dysfunction in the elderly is becoming increasingly prominent. The existence of this problem not only affects the quality of life of the elderly but also brings a heavy burden to families and society [2]. The "Specific Measures for Tianjin to Further Promote the Development of Aging Undertakings and the Construction of Elderly Care Service System" released by the General Office of the Tianjin Municipal People's Government on June 25, 2022 proposes that the Tianjin Civil Affairs Bureau is responsible for supporting community elderly care service institutions to extend service functions, develop family elderly care beds, support families to undertake elderly care functions, and tilt resources towards home-based elderly care. Support districts with conditions to explore and carry out "respite services" for family caregivers of elderly people with disabilities and cognitive impairments.

Through in-depth understanding of cognitive dysfunction, effective intervention strategies can be explored to help the elderly improve their quality of life and reduce the pressure on families and society. At the same time, this is also in line with China's national strategy of actively responding to population aging and helps to build a harmonious society and achieve sustainable development.

2. MANIFESTATIONS OF COGNITIVE DYSFUNCTION IN THE ELDERLY

2.1. Decline in Memory

As they age, many elderly people find that their memory gradually declines. This not only affects their daily lives but also poses a significant challenge to families and society. According to statistics, about 60% of elderly people will experience different degrees of memory decline after the age of 65. There are various reasons for memory decline, among which biological factors play a dominant role. The main manifestations are difficult in remembering new information and difficulty in recalling past events. This memory decline may be related to the reduction of neuronal connections in the brain and changes in neurotransmitter levels. In addition, elderly people often need to rely on memory aids such as memos or calendars to help them remember important matters. Memory decline not only affects the daily lives of the elderly but may also cause them to feel anxious and depressed. Taking patients with Alzheimer's disease as an example, symptoms such as memory decline and cognitive impairment often occur.

2.2. Emotional Cognitive Impairment

Emotional cognitive impairment is one of the common problems in cognitive dysfunction in the elderly. This impairment is mainly manifested as a decline in the ability of the elderly to recognize and understand emotions. They have difficulty understanding the emotional expressions of others and accurately recognizing and expressing their own emotions. This impairment not only affects the quality of daily life of the elderly but may also aggravate the symptoms of other cognitive impairments such as memory decline and weakened executive function. The research results of Chen Mingsen [3] and others show that the incidence of depression in elderly patients with mild cognitive impairment is 39.45%, indicating that the incidence of depressive symptoms in elderly patients with cognitive dysfunction is high. These elderly people may be unable to recognize their emotional states or make appropriate decisions based on emotions. The others found that elderly people have difficulty in recognizing their own emotions and are more likely to have psychological problems such as depression and anxiety. They may show excessive anxiety or depression when facing setbacks or stress or be unable to effectively cope with challenges in life [4].

2.3. Weakened Executive Function

Executive function refers to an individual's ability to plan, organize, and implement when completing tasks. For the elderly, as they age, this ability may gradually decline, making it difficult for them to effectively cope with various challenges in daily life. Among people over 65 years old, more than 40% show obvious symptoms of weakened executive function, such as difficulty in completing complex daily tasks and making decisions. This weakened executive function not only affects the quality of life of the elderly but may also increase their risk of cognitive impairment diseases such as Alzheimer's disease. The manifestation of weakened executive function disorder is the decline in the ability of the elderly to complete daily tasks, such as dressing, bathing, and cooking. Weakened executive function may be related to the degradation of the executive function area in the brain, which may lead to a decline in the decision-making ability of the elderly and a weakening of problem-solving ability. This not only affects the quality of life of the elderly but may also lead to their dependence on the help of others.

2.4. Decline in Language Ability

In cognitive dysfunction in the elderly, the decline in language ability is a significant and often overlooked problem. Elderly people will experience different degrees of decline in language ability, which not only affects their daily communication but may also lead to social isolation and further

decline in cognitive ability. There are various reasons for the decline in language ability, including biological factors such as neurodegenerative diseases and cerebral blood circulation disorders, as well as psychological factors such as psychological stress and social isolation. Elderly people may have difficulty finding appropriate words to express their meanings and understanding the language of others. This may be related to the degradation of the language processing area in the brain. The decline in language ability makes it difficult for the elderly to communicate with others, increasing their sense of loneliness and social avoidance.

2.5. Decline in Attention and Concentration

The attention of the elderly may decline, making it difficult to maintain focus for a long time. They may be more easily distracted and less sensitive to stimuli in the environment than before. This may lead to difficulties in completing tasks or participating in activities and may increase the risk of accidents or errors.

2.6. Slowed Cognitive Speed

The cognitive speed of the elderly may slow down, which may be manifested as sluggish thinking and speech responses and delays in understanding and answering questions. Elderly people may need more time to understand new information or complex concepts and may need to read or think repeatedly to understand. Slowed cognitive speed may affect the daily communication and social interaction of the elderly.

2.7. Decline in Spatial Orientation Ability

The elderly may have problems in spatial orientation, including getting lost, difficulty in recognizing object positions or difficulty in performing spatial reasoning. Elderly people may find that they are more likely to get lost in familiar or unfamiliar environments, have difficulty finding the correct direction to move forward, and have difficulty accurately placing items in specific positions and judging the distance and position of vehicles and the surrounding environment.

3. CAUSES OF COGNITIVE DYSFUNCTION IN THE ELDERLY

3.1. Biological Factors

Studies have shown that in families with cognitive dysfunction, the risk of their descendants suffering from this disorder significantly increases. For example, Alzheimer's disease, as a common cognitive dysfunction, its genetic risk factors have been widely studied. Individuals carrying certain specific gene variants may have a risk of developing Alzheimer's disease several times higher than that of the general population. In addition to genetic factors, neurodegenerative diseases are also key factors leading to cognitive dysfunction in the elderly. As people age, neurons and synapses in the brain gradually degenerate, leading to a decline in information transmission and processing ability. For example, diseases such as Parkinson's disease and Huntington's disease will have a serious impact on the cognitive function of the brain. The pathological processes of these diseases are complex, but they are all closely related to the death of neurons and the loss of synaptic function.

Cerebral blood circulation disorders cannot be ignored. Vascular dementia is a cognitive dysfunction caused by cerebrovascular diseases. When the blood vessels in the brain are damaged or blocked, it will lead to cerebral hypoxia and insufficient nutrition, thereby affecting the normal function of the brain. This situation is particularly common in the elderly because as people age, vascular elasticity and blood flow velocity will decline.

3.2. Psychological Factors

As they age, the elderly may face various emotional problems and psychological stress, and these factors may all have a negative impact on cognitive function. For example, long-term emotional problems such as anxiety and depression may lead to cognitive impairments such as memory loss and lack of concentration. In addition, social isolation is also a common psychological problem among the elderly. It may lead to a lack of social interaction and stimulation for the elderly, thereby affecting the development of their cognitive function. The elderly are faced with multiple life changes such as retirement, bereavement of spouse, and children leaving home. These changes are often accompanied by emotional fluctuations and distress. Emotional problems not only affect the mental health of the elderly but may further aggravate the degree of cognitive dysfunction. Studies have shown that the impact of emotional problems on the cognitive function of the elderly is multifaceted. First of all, long-term emotional distress may lead to an imbalance of neurotransmitters in the brain, thereby affecting memory, thinking, and learning abilities. Secondly, emotional problems may also lead to a reduction in social activities of the elderly, further exacerbating the decline in cognitive function. Therefore, solving the emotional problems of the elderly not only helps improve their mental health but can also delay the progression of cognitive dysfunction to a certain extent.

3.3. Lifestyle Factors

Bad living habits and lack of healthy lifestyle choices may all have a negative impact on the cognitive function of the elderly. Long-term lack of sleep or poor sleep quality may lead to problems such as memory decline and lack of concentration. Therefore, creating a quiet and comfortable sleep environment for the elderly and helping them establish good sleep habits is of great significance for maintaining brain health. The research results show that elderly people with tea-drinking habits, regular physical exercise, and high educational levels have a lower incidence of mild cognitive impairment; while elderly people who drink alcohol and smoke have a significantly increased risk of mild cognitive impairment [5]. Long-term intake of high-calorie, high-fat, high-salt, and high-sugar foods and lack of necessary nutrients may all lead to a decline in the cognitive function of the elderly. People who often eat fast food, processed foods, and high-sugar drinks have a speed of cognitive decline more than twice as fast as those with healthy eating habits. According to research, moderate physical exercise can promote blood circulation and improve the cognitive function of the brain. However, many elderly people lack sufficient physical exercise due to age, health conditions or other reasons. This will not only affect their physical health but also increase the risk of cognitive dysfunction.

4. PROBLEMS IN THE SOCIAL SUPPORT SYSTEM FOR ELDERLY PEOPLE WITH COGNITIVE IMPAIRMENT

It is extremely unfortunate for the elderly to suffer from cognitive impairment, and cognitive function degradation is also irreversible. Early timely diagnosis and intervention can effectively slow down the rate of cognitive function impairment. However, since some manifestations of cognitive impairment are similar to the normal aging manifestations of the elderly, they are easily overlooked, and the condition is allowed to develop until extremely abnormal behaviors occur before being diagnosed as Alzheimer's disease by professionals. This article mainly studies the intervention of non-pharmacological treatment for elderly people with mild or moderate cognitive impairment. Analyzing the problems in the support system of service objects, it is known that the support system for elderly people with cognitive impairment mainly includes formal support resources and informal support resources. There are certain problems in both aspects.

4.1. Formal Support Resources and Problems

Formal support resources include support provided by the government, social organizations or institutions with clear responsibilities and obligations. It mainly includes public services provided by the government, professional services provided by social organizations, and specific support provided by institutions. For example, social security systems provided by the government, such as pensions, medical insurance, and unemployment insurance, provide economic and health security for the elderly. Social organizations such as charitable institutions and volunteer organizations provide various professional services for the elderly. These services include psychological counseling, legal aid, education and training, etc., to help the elderly solve problems and difficulties in life. There are also some specialized institutions, such as nursing homes and welfare institutions, that provide specific support for the elderly. These institutions provide comprehensive care and services, including living care, medical care, rehabilitation services, etc., to ensure the quality of life and health status of the elderly.

Although the government and social organizations provide formal support resources for the elderly, there is still an unfair distribution of resources. In some regions or groups, the elderly may not be able to obtain sufficient support. This may lead to some elderly people facing difficulties in life and unable to enjoy due welfare and services. Moreover, some service institutions may have problems of poor management and low service quality and cannot meet the needs of the elderly. In addition, some service personnel may lack professional knowledge and skills and cannot provide high-quality services. Coupled with the fact that the application and approval procedures for some formal support resources may be too complicated, making it difficult for the elderly to obtain timely and effective support. This may require the elderly to fill out a large number of forms and documents and go through cumbersome approval procedures. This not only wastes the time and energy of the elderly but may also cause some elderly people to give up seeking support because they cannot understand or complete these procedures. Moreover, formal support resources are often general and universal and may not be able to meet the individualized needs of the elderly. The situation of each elderly person is unique, and they may need specific support and services. However, the existing formal support resources may not be able to fully meet these individualized needs, resulting in some elderly people's problems not being properly resolved.

4.2. Informal Support Resources and Problem

Elderly people usually have various types of informal support resources in society, which can come from family, friends, communities, and volunteers. These resources can provide emotional, informational, and material support to the elderly. The children and grandchildren of the elderly can provide company, care, and concern to help them solve problems in life. They can also obtain emotional support from friends, including kind company, conversation, and encouragement. The community can also provide a series of services and resources for the elderly, such as medical care, entertainment activities, education and training, etc. Volunteers can also provide informational support for the elderly, such as guiding them on how to use new technological devices such as smartphones and computers. In addition, the elderly can obtain material support from family and the community. Family members can provide financial assistance to meet the living needs of the elderly. The community and social organizations can also provide various resources and services for the elderly, such as the distribution of food and medicine, shopping services, and home care.

However, due to the decline in physical condition and cognitive ability of the elderly, they may need more material and emotional support. Due to reasons such as the increased independence of children and work pressure, family members may not be able to provide sufficient support. Coupled with social competition pressure and the modernization process, the community's attention and support for the elderly may also be insufficient. In addition, volunteers generally lack understanding of cognitive impairment in the elderly, professional care knowledge, and corresponding coping skills. They do not

know how to communicate effectively with elderly people with cognitive impairment and how to provide appropriate support and care. Therefore, when facing the heavy care tasks, they often lack confidence in care and their attitude becomes increasingly negative, resulting in the elderly lacking necessary services and resources. The social circle of the elderly may become smaller and smaller, and they may face problems of loneliness and isolation and need more emotional support.

5. INTERVENTION STRATEGIES FOR COGNITIVE IMPAIRMENT IN THE ELDERLY FROM THE PERSPECTIVE OF SOCIAL SUPPORT THEORY

5.1. Family Intervention Strategy

The family, as a solid fortress in the life of the elderly, plays an irreplaceable role. Scholar Fei Xiaotong believes that the intergenerational relationship of Chinese families is a mutual feedback model, that is, parents raise children and children repay parents. Therefore, establishing an informal support network composed of relatives and friends is crucial for taking care of the lives of elderly people with cognitive impairment. Through the informal support network, relatives and friends can provide emotional support for elderly people with cognitive impairment, listen to and understand their needs and troubles, and reduce their anxiety and loneliness. Therefore, the help of family members plays a crucial role in alleviating their cognitive impairment. Social support theory emphasizes that in order to effectively implement family intervention strategies, three aspects should be mainly focused on: emotional support, cognitive training, and assistance in daily life. When the elderly face cognitive impairment, they often encounter emotional distress and psychological pressure. The listening, understanding, and encouragement of family members are particularly important. They can help the elderly establish a positive attitude towards life and effectively reduce anxiety and depression. Studies have shown that emotional support can significantly improve the quality of life and mental health of the elderly, thereby having a positive impact on their cognitive function.

Family members can stimulate the brain activities of the elderly and improve their cognitive function by interacting with them through games, reading, and discussion. Elderly people who regularly play memory games and intellectual challenges show significant improvements in memory, attention, and executive ability. As cognitive impairment worsens, the elderly may encounter many difficulties in daily life. Family members should provide necessary help and support, such as assisting with shopping, cooking, and housekeeping, to ensure the quality of life and safety of the elderly.

Family members can also adjust the family environment, such as increasing lighting and reducing noise, to reduce the cognitive burden on the elderly. In this way, the family can provide a more comfortable and safe living environment for the elderly and help alleviate their cognitive impairment.

5.2. Theoretical Analysis of Community Intervention Strategy

Community intervention strategies mainly cover aspects such as providing cognitive training, establishing support networks, carrying out health education, and promoting social activities. By providing information and education, it helps elderly people with cognitive impairment and their families improve their ability to cope with the disease. And through the linking of resources and services, the ability of the cared-for can be qualitatively improved in a "hematopoietic" way, thereby improving their happiness in home-based care. The community can regularly organize cognitive training activities such as memory games and intellectual puzzles to stimulate the brain activities of the elderly and delay the decline of cognitive function. Studies have shown that elderly people participating in cognitive training have significant improvements in memory, attention and other aspects. For example, the "wise elderly" project in a certain community has effectively improved the cognitive function of the elderly by organizing them to participate in cognitive training.

The community can establish volunteer teams to provide help and support in daily life for the elderly. These volunteers can accompany the elderly in outdoor activities, shopping, and seeking medical treatment, effectively reducing their psychological pressure and loneliness. In addition, the community can also establish mutual aid groups to encourage the elderly to communicate and share experiences with each other, thereby enhancing their social ability and sense of belonging. In addition, the community can also carry out health education activities to popularize relevant knowledge about cognitive impairment to the elderly and help them understand how to prevent and improve cognitive impairment. By holding lectures and distributing promotional materials, the health awareness and self-care ability of the elderly are improved. For example, the community can regularly hold "healthy aging" lectures and invite experts to explain the prevention, treatment methods and precautions of cognitive impairment to the elderly, which is welcomed by the majority of the elderly.

5.3. Government Intervention Strategy

As the representative of social public interests, the government's intervention can not only provide macro policy support and resource allocation but also guide all sectors of society to participate and form a joint force. In the intervention of cognitive impairment in the elderly, the role of the government cannot be underestimated. The government can provide legal protection for the intervention of cognitive impairment in the elderly by formulating and implementing relevant policies. It can introduce preferential policies for elderly health services to encourage medical institutions and community service institutions to provide cognitive function assessment and intervention services for the elderly. It can also set up special funds to support the research of relevant scientific research projects and promote the innovation and development of intervention technologies for cognitive impairment. The government can introduce professional institutions to provide intervention services for cognitive impairment in the elderly by purchasing services. These professional institutions usually have advanced assessment technologies and intervention methods and can provide personalized services for the elderly. This can not only improve the professionalism and coverage of services but also promote the development of related industries and form a virtuous circle.

The government can also improve public awareness and understanding of cognitive impairment in the elderly through publicity and education. The government can organize experts to conduct popular science lectures and produce promotional materials to popularize knowledge and intervention methods of cognitive impairment to the public, advocate all sectors of society to pay attention to the spiritual life of the elderly, and provide more social and entertainment activities for the elderly to help them maintain a positive attitude towards life.

6. SUMMARY

The research on intervention strategies for cognitive impairment in the elderly from the perspective of social support theory shows that social support plays an important role in improving cognitive function in the elderly, promoting mental health, increasing social interaction, and improving quality of life. Different types of social support have different impacts on cognitive impairment in the elderly. Therefore, it is necessary to formulate individualized social support intervention strategies according to the individual differences and needs characteristics of the elderly.

In particular, cognitive impairment is increasingly prominent among the elderly population and has become a major challenge currently facing society. At this time, the intervention of social support is particularly crucial. Through comprehensive strategies and multi-party cooperation, comprehensive support and services are provided for affected elderly people and their families. This is not only to improve their elderly care environment and quality of life but also a deep concern for their well-being. The in-depth participation of social support not only concerns the individual happiness of elderly people with cognitive impairment but also has a profound impact on the harmony and progress of the entire society. Therefore, we need to work together to create a more friendly, supportive, and inclusive

elderly care environment for this group. Through our efforts, let elderly people with cognitive impairment receive practical care and love and make their later years full of comfort and safety.

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