Research on Renovation of Age-appropriate Services in Old Communities with Social Support

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Abstract. Under the existing endowment service mode in our countryside, community home-based old-aged insurance plays a very important role in the elderly's later life. The current elderly-friendly renovation is mainly based on facility renewal, but the improvement of the elderly care experience still needs further systematic thinking. This paper mainly researches that how to improve elderly-friendly degree and the user experience of the old-aged insurance in a perspective of the home-based old-aged insurance service, which also explores the relationship between the social model and main content of matching service design and the development opportunity of elderly-friendly service of the old communities. Being based on the model of social support composition-connection structure-influencing factors, it provides innovative models for the renovation of aging-friendly services in old communities and proposes specific renovation strategies for the design of aging-friendly services in old communities.

Keywords: Home-based elderly care; Old community; Service design; Aging adaptation

1. Introduction

Since 1999, China has entered an aging society. According to the forecast of China's elderly population released by the Academy of Social Sciences, in 2050, our country's elderly population aged 60 and above will be 1.9 times that of the same type of elderly population in 2020. With the rapid development of population aging, the problem of old-age care brought about by aging has become increasingly prominent, which has become an important challenge facing today's society. At the same time, under the "one-child" policy, family care has been weakened, and more and more elderly families have entered an "empty nest" state. Under various complex backgrounds, the social problems of the elderly have become more serious.

At present, there are three forms of elderly care services in our country: aging in place, community care, and institutional care. Based on the basic national conditions of age before it gets rich and the living characteristics of aging in place, the government has established a pension policy of family endowment as the foundation, community endowment as the support, and institutional endowment as the support. Family-centered and community-based home-based elderly care not only has the characteristics of strong pertinence, high degree of realization, and strong flexibility, but also has a high degree of recognition and integration at the social level. Under the home-based care model, the community, as the main living space and activity place, plays an important role in the process of elderly care. Therefore, the aging-appropriate transformation of the community is an important part of realizing home-based care for the aged .

Our country's current the old-age community construction is mainly divided into two kinds: new area construction and old area reconstruction. The new district construction emphasizes the elderly as the target users, and establishes a new type of community that integrates functional sectors and pension sectors. While meeting the elderly's needs for medical care, business, entertainment and other elderly care, it also ensures the safety, quietness and privacy of the elderly's living environment. However, due to the problems of large investment, long cost recovery period and low average profit rate in the initial stage of the new district construction, the society and enterprises bear great pressure. Moreover, the old-age care in the new district has higher requirements on the economic ability of the elderly. The old district reconstruction refers to renewing old communities

by adding barrier-free facilities, improving safety network and improving services, so that they can be transformed into aging communities with convenient life and services. Since 2020, the state has vigorously promoted the upgrading of old districts, and the content of the renovation is more comprehensive: from the "single renovation" in the past, it has gradually expanded to the improvement of community infrastructure, supporting facilities and public services. In contrast, judging from the existing elderly care services in the community, the overall service experience has not been systematically designed, and it is still maintained on the existing traditional and inherent model of society. The community is not only insufficient in the content of basic elderly care services, but also does not pay enough attention to emotional services. Community home-based care cannot effectively meet the needs of the elderly, so there is still a certain gap between the humanized and refined experience of elderly care services.

2. The development status and research of China's home-based elderly care service system

Although the innovative mode of home-based care for the aged in our country started late, it has developed rapidly. The innovation model of home-based care for the aged service has been introduced and carried out in many places, and has gradually matured in the practice process. In practical measures, based on the social background of the rapid development of aging, various regions are actively exploring the model of pension services. As a result, home-based elderly care service emerged as followed. This kind of new model is based on the family and community service and regards web as its media. According to the summary of experts, the existing home-based care model in my country can be divided into: the mode of government funding and hierarchical linkage; the model relies on government-led and intermediary operation; the chain operation model funded by the government and sponsored by institutions; the mode of government purchase and market operation. Through research, it is found that the development of domestic home-based care services mainly relies on the help of the government and institutions, but the hierarchical relationship and the management system are not perfect.

In order to further improve the service system of home-based care for the aged, internal and external scholars have discussed this issue from different perspectives. Experts put forward corresponding insights from various aspects, such as community social work, resource integration, service subjects and community services. Among them, in the research of comprehensive social support theory, a more reliable basis can be found for the system service design of community home-based elderly care.

Based on the research on social support at home and abroad, from a subjective perspective, it emphasizes that social support is a subjective feeling, and the subject receiving support is the starting point. In terms of individual use of social support, social support can be divided into emotional support, material support, information support and companionship support.

Since the 1980s, researches on the social support of the elderly in vulnerable groups, especially the elderly, have gradually emerged abroad. Karel Wenger (1989) concluded a social support model for the elderly in Beijing and Liverpool through research. And from the research we can see that among the existing social support networks for home-based care, the community-integrated support network accounts for the highest proportion, followed by family-dependent support networks. It means that pension is no longer a problem for a person or a family to consider, but a problem that individuals, families, communities and society should jointly undertake. Li Aiqin (2007) investigated the living conditions of empty-nest elderly people in Xuzhou City and found that some elderly people are facing financial difficulties, lack of care and other pension problems. She also originates the social supporting service which is based on the proposal of the old mutual helping, the home supporting, the communities service and insurance of the supporting from the authority. Zhao Lixin (2009) believes that community home-based care is an effective way to solve the pension problems. His point of view is to gradually establish a social support service system by

providing social support from the government, enterprises, social organizations and other aspects to the community, so as to promote the realization of community home-based care.

Although there is no specific definition of social service support model of the elderly group, but throughout the relevant concepts of social support, the social service support of the elderly group can be summarized as the sum of various service supports obtained by the elderly from the society and others through the social support network. It is a relatively stable social relationship formed by an elderly individual interacting with the society and others. These service supports can have a positive impact on the physical, psychological and home-based elderly care .
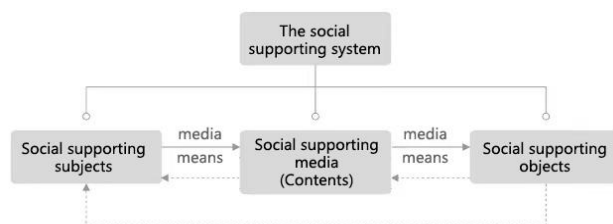
3. The opportunity of the system motivation model of home-based elderly care for the aged in the old communities with the perspective of social support

3.1 The Systematic analysis of home-based care in the old communities with the perspective of social support

The three main characters of the old communities the system of home-based care for the aged with the perspective of social support is included: social supporting subjects, social supporting objects and social supporting media. Social supporting subjects represent the relative members and the places which can offer the supporting old-age insurance. The most effective factors for aged people's experience can be summarized as two aspects: physical (Dwelling, Infrastructure, Environment) and mental (the service staff's express and attitude) Social supporting objects represent the old who need old age insurance in old communities. Above mentioned, the resources which is possessed by the serviced old people can be summarized as two kinds: personal resources (available material, time, possession and intelligence etc.) and social resources (the material and emotion acquire from social supporting network). Social supporting media represents the relative media for the system of home-based care for the aged provided by old communities, which is not only the bonds between the old and communities, but also like a bridge between old communities and social supporting. Its structure and motivation are particularly effective to the system of home-based care for the aged in old communities.

The analysis of the relationship between the system motivation model of home-based care for the aged and social supporting media.

The social supporting system is a complicated and diverse system based on social relationship, whose subject can offer multi-level media content based on user model of object. As a component of supporting media, the content of media can show consistency with its manifestation, which also means that the content decides the manifestation. The content of media is passed to the social supporting object by the manifestation of media and completes the positive action of social supporting. The social supporting object can react on social supporting subject and media attaching the use ratio of social supporting and help the subject provide higher user-satisfied social supporting content even optimize the social supporting manifestation. According these, the personal factor, development, environment and the use ratio of supporting also have an effect on it.

(Fig. 1) The dynamic model of the home-based care system in the old community with social support

3.2 The opportunity of the system motivation model of home-based care in the old communities with the perspective of social support

3.2.1   Further collaborate to the scenes of supporting subject and relative relevant people

Except the main user of the home-based aged care service, the aged, the home-based aged care scenes also include other relevant people like their relatives, friends, neighbors and other community servers. As the other part of users of the system, the relevant people will also have demand and effect. Therefore, when designing the system of the aged caring insurance service, not only should we fully consider the attendance of the relevant people, but also need to solve the relevant people's issues and demand from different prospectives and build the system of home-based care for the aged with the relevant so that can insure the integrity of the system.

3.2.2 Further matching to meet the content of supporting mediator and the requirements supporting object

From the research of social supporting, the demand of old-aged insurance from the old still have some differences when matching the services which is provided by the old communities in the interface between the old and the system of social supporting, which results that the service content needed by the old can't be provided by communities, instead some of the service is useless. For solving the problem of home-based aged care, it is necessary to learn fully about the condition of the supporting object firstly, and analysis the command for home-based aged care. At the same time, providing the all aspects old-aged insurance service should combine with the three dimensions of supporting mediator so that it can insure the demands of object matching with the supporting content.
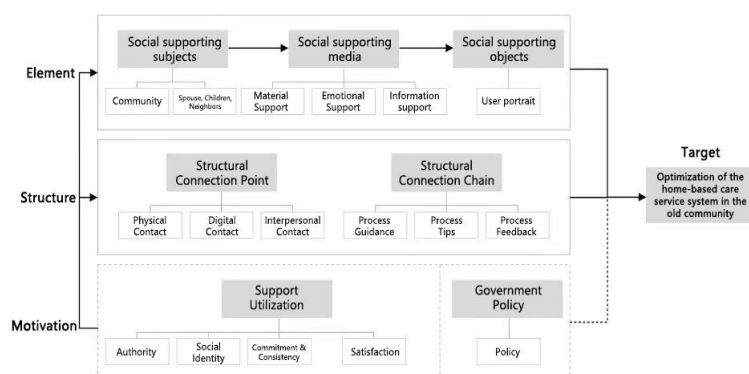
3.2.3 Further improve the utilization of supporting for the old

Fogg Behavior Model believes that there must be three characters when individuals behave: enough motivation, ability to perform behaviors and the trigger point for the behavior. In the system of home-based aged care, the basic motivation of the old is the great insurance experience. The condition and old-aged service of the communities is the ability which can satisfy the insurance command, while the origin of the service is the trigger of the old using the insurance service. Therefore, in the design of the old-aged insurance, not only should the communities provide the material of social support, but also need guide the old using the supporting service properly. At the meanwhile, the communities should optimize the behavioral contacts of elderly care services to further improve the utilization of support.

3.2.4   Further optimize the mental model of home-based aged care.

The service design emphasizes user centered and fully considers the experience of interaction between the old and the system of old-aged insurance service. Due to the weakening of physical functions, the cognitive and learning abilities of the old are also declining, resulting in a large difference between the existing mental model of the old and the performance model of old-aged insurance services. It is difficult to have a strong interface with the old-aged insurance service only depending on the efforts of the old. Therefore, the service system model should actively match the mental model of the elderly in the design process. Ensure that the content of old-aged insurance service is suitable for the old, so that they can easily understand and interface with it, thereby further improving the user experience.

4.   Transformation and optimization strategy for the home-based elderly care service system in old communities
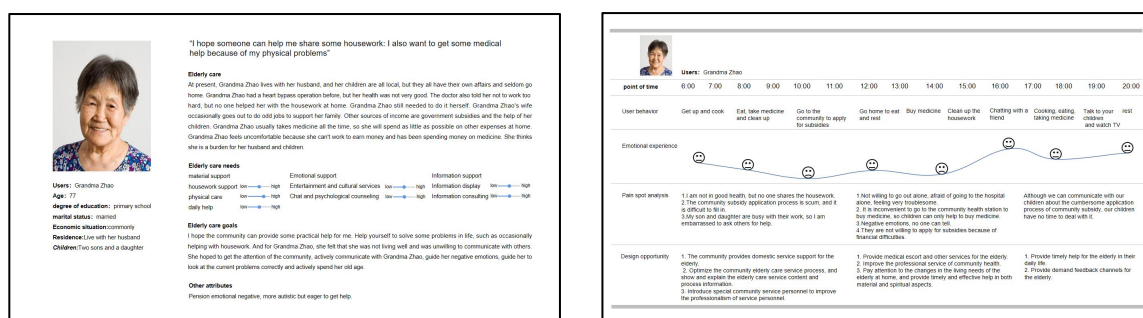
（Fig. 2）The model of home-based elderly care system

4.1 Optimization strategy for the transformation elements of the home-base care service system in old communities

First, we will coordinate all concerned parties, including old residential communities, to participate in the whole process with a focus on providing services, related stakeholders to collaborate with a focus on guidance and interaction, and external support to intervene with a focus on suggestion and assistance. As such, we can form an elderly care service body with multiple measures.

Based on the local planning of home-based care services and the actual demands for the services, we will coordinate related organizations to set up a home-based elderly care supporting network in old communities. We will also integrate services, such as daily diet, geriatrics medical care, leisure and entertainment, and information consultation etc., to provide multi-dimensional elderly care services. The problems of untimely response to elderly care and the lack of smooth information on elderly care content should be addressed. Communities should strengthen the building of service teams, and enhance the professionalism of service personnel. They should also actively organize community volunteer services for the elderly at home, navigate community service personnel, residents, and others to organize various community activities, provide diversified services for the elderly, and form a friendly service model of mutual aid. At the same time, during the construction of the home-based elderly care service system in old communities, we should shift the focus from family and interpersonal support to interaction in the elderly care support content. And we should emphasize the senior's interpersonal relationships and emotional needs, providing them with emotional and spiritual support. As a result, we can improve their experience in the multi-level elderly care service. Furthermore, through formulating a transformation plan for old communities, the government will strengthen the elderly-oriented guidance in old communities; services resources will be integrated to broaden the social supporting network of home-based care in old communities; market operation mechanism will be formed to encourage social organizations to participate in the construction of the home-based care services system in old communities; funds will be granted to promote organizations and institutions to actively explore new ways of transforming old communities, for example, introducing the new elderly care model of "Internet Plus" and building an elderly care service team based on the big data platform.

Secondly, when establishing typical user categories, we should fully combine user research on the basis of big data. We can leverage cluster analysis and other research methods to analyze users' information to portray user profiles and elderly care experience maps of the senior, and then identify their pain points based on the profiles to solve relevant problems in a targeted manner. (as shown in Figures 3 and 4)

（Fig. 3.4）User Profiles and User Experience Map

Third, on the basis of user profiles, we will offer multilevel elderly care services to them. To begin with, we will enrich the material supplies at the basic level and provide critical emotional and informational support for the elderly, for example, relieving their burden of chores; we will broaden service scopes of the community health station to meet the medical needs of the elderly. For elderly users with financial difficulties, we will help them understand and apply for relevant elderly care services, so that they can obtain basic financial subsidies and help with daily necessities. In addition, we will deepen emotional and information support and information support at the advanced level and place emphasis on information display services. We will help elderly users to participate in community elderly care activities; build an elderly care consultation platform, provide service access for elderly users to solve problems, and improve the community integration of elderly users. At the same time, we will attach importance to the suggestion of elderly users on the service contents and provide them with access to give feedback on the services, thus increasing the social participation of elderly users to realize their self-worth.

4.2 Construction strategies for the transformation structure of the home-based care service system in old communities

First, the strategy of perception-driven design of service connection points includes: enriching types and amount of connecting points to improve the problem-solving capacity; optimizing the interactive form of connecting points to enhance the problem-solving efficiency; responding timely to the feedback of connecting points to boost the corresponding perception of elderly users. Second, the strategy of segmentation-optimized link chain design includes: offering clear and user-friendly process guidance to improve the comprehension efficiency of the elderly; providing foolproof and timely process hints to improve elderly users' perception control; providing visible and effective process feedback to enhance interaction and emotional connections. We will improve the usage fluency for the elderly users based on the elements extracted from multiple scenes; enhance the satisfaction of elderly users based on the connection of various elements of the time node.

Strategy	Strategy details	Goal
The design strategy of segmentation-optimized link chain	Respond to the feedback of connecting points timely	Optimize the service content and expression form based on the feedback of connecting points to enhance the satisfaction of elderly users.
	Offer clear and user-friendly process guidance	In order to improve the service understanding of elderly users, reduce the learning cost of service process by providing clear and user-friendly process guidance.
	Provide foolproof and timely process hints	In order to improve the service completion of elderly users, the content perception of the service process is increased by providing foolproof and timely process hints.
	Provide visible and effective process feedback	By providing visible and effective process feedback and collecting effective feedback from elderly users, the service process can be optimized pertinently.
	Extract elements from multiple scenes	In order to improve the integrity of service process, by extracting the complete elements of multiple scenarios, the joint participation of service elements is guaranteed.
	Concatenate elements with time nodes	In order to improve the service experience of elderly users, the behavior path of the service process is optimized by connecting various elements of the time node.

（Fig. 5）Strategy for constructing the structure of home care

4.3 Motivation guidance strategy for the transformation of home-based care service system in old communities

First, we will explore the in-depth demand in the elderly care scenes. By tapping into the elderly care scenes and the multidimensional elderly care needs, we will provide sustainable momentum for the elderly care system in old communities. According to the demand hierarchy theory and the priority of elderly users' needs for elderly care services, we sort out the framework of their needs for the services and form a diversified home-based care service system. While satisfying their diversified needs, we also enrich their experience dimensions. Second, leveraging the external forces of policy and support utilization to enhance user participation. Government policies should be made full use of to provide directional guidance for service transformation in old communities. In the home-based elderly care service, authority can make the information more convincing. Therefore, through official propaganda and expert recommendation, the authority of elderly care content can be increased, and the trust and utilization of the elderly care services can be improved. Additionally, elderly care demand, government policies and support utilization as the internal and external factors, both are essential for the formation and development of the elderly care service system. Consequently, in the design process of the elderly care service system, it is necessary to take the elderly users' needs as the basis, government policies and support utilization as the help, with the internal and external forces reinforcing each other and working together to develop and optimize the elderly care service system.

Conclusion

To sum up, this project cuts into the construction of home-based care services in old communities from the perspective of social support and corresponds to the service transformation from the composition content, connection structure, and influencing factors. It further identifies the main role of old communities in elderly care services and expands scopes of service principal and levels of service content; rearranges the structural content of the elderly care service system and effectively attaches the optimized content of the elderly care service to physical carriers in old communities; gives play to the innovation ability of various influence factors to optimize the home-based care service system step by step and propose transformation strategies for the design of elderly-oriented services in old communities.

5. Conclusion

Under the background of population aging, the problem of elderly-friendly has become a problem that we need to pay attention to and solve urgently. With the development of economy, our country actively responds to the problem of population aging; and under the guidance of relevant departments, renovation projects of old communities have been launched across the country. The renovation of old areas in our country is still in infancy. However, with the improvement of theory and the continuous development of new technologies, more professionals from different fields will participate in the aging adaptation of old communities in the future， and provide solutions for the renovation of old infrastructure, the introduction of intelligent service system, the training of service personnel and the construction of new service scenarios. Scholars are working together to build a community-based elderly-oriented service system to improve the elderly's experience of home-based care, which has a certain social significance for promoting the research on aging.

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