

## Retraction

# Retracted: The Application of “Internet+” in the Ageing Adaptation of Elderly People with Disabilities at Home

### Journal of Mathematics

Received 19 December 2023; Accepted 19 December 2023; Published 20 December 2023

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Manipulated or compromised peer review

The presence of these indicators undermines our confidence in the integrity of the article’s content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.


The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

### References

- [1] H. Juan, L. Li, M. Jiasong, Z. Lifang, and H. Baoying, “The Application of “Internet+” in the Ageing Adaptation of Elderly People with Disabilities at Home,” *Journal of Mathematics*, vol. 2021, Article ID 6074643, 6 pages, 2021.

## Research Article

# The Application of “Internet+” in the Ageing Adaptation of Elderly People with Disabilities at Home

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Received 16 November 2021; Revised 30 November 2021; Accepted 4 December 2021; Published 16 December 2021

Academic Editor: Naeem Jan

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This paper focuses on the role of the Internet in empowering social work to intervene in ageing-in-place services for the disabled elderly in terms of time, space, and resources. Through the practical analysis of home care service providers, the advantages and characteristics of the “Internet” for ageing-in-place services for the disabled elderly are identified, as well as some of the problems that exist in the current intelligent home care service platform. This paper proposes to improve and optimize the “Internet+” by fully enhancing the technical empowerment of the Internet, improving the integration and spanning of space, and giving full play to the role of social work on the Internet. This paper proposes to improve and optimize the “Internet+” elderly home care services for the disabled, so as to solve to a certain extent the practical problems faced by the “Internet+” elderly home care services in the early stage of development. The significance of this paper is that, through the study of the “Internet+” home care services for the elderly with disabilities, the process of the services is sorted out and summarized, and suggestions and measures are put forward for its shortcomings, providing practical methods and feasible paths for future generations, which are of great significance for other social work agencies using Internet tools.

## 1. Introduction

By the end of 2019, China had 176 million elderly people aged 65 and above, accounting for 12.6 percent of the total population. As the population ages, the number of disabled elderly people in China is increasing year by year. The 2016 data show that there are 40.63 million disabled elderly people in China, and the size of the disabled elderly population will expand to 61.68 million in 2030. With this, the demand for daily care for the disabled elderly is on the rise, and long-term care services in China are in short supply, making long-term care for the elderly a serious social problem [1, 2].

The rapid onset of ageing has led to a dramatic weakening of the family's elderly care function in China at this stage [3], with families themselves finding it difficult to take on the role of caring for the elderly, especially the disabled. At the same time, however, China's entire public elderly care industry is still in its infancy, the market for elderly care is

still being explored, resources for nursing homes are scarce and costs are high, and the traditional Chinese concept that elderly people prefer to spend their old age at home and are less willing to go to nursing homes has led to a more obvious home-based nature of the elderly care sector in China. However, for the disabled elderly, ageing in place faces many challenges such as lack of care, lack of attention, and unmet spiritual needs. Along with the development of social services, especially professional social services, and with the continuous promotion of relevant government policies, more and more people, enterprises, and nonprofit organizations are joining the home care service, gradually becoming the main force of home care in China now.

Based on the intervention of social work, this paper uses Internet technology as a working vehicle to broaden the scope of social support networks for the disabled elderly, improve the efficiency of social support networks, and expand the social and environmental resources needed by the

disabled elderly. This study is of great theoretical value to the study of social work intervention in the home care of the elderly with disabilities. At the same time, the integration of the professional, humanistic, and ethical nature of social work with the timeliness, instrumentality, and extensibility of Internet technology is also of some significance to the research on the integration of social work services with the Internet.

The breakthroughs in technological tools on the Internet and the integration of these breakthroughs with existing services offer new possibilities for addressing the diverse needs of older people, especially those who are disabled [4, 5]. Likewise, this high degree of integration will lead to the satisfaction of the needs of the elderly with disabilities, the achievement of organizational efficiency, and operational goals, as well as the realization of the professional value of social work in helping people to help themselves, which will become a key focus point for the industry to break through the barriers to development and will give a strong impetus to the development of the elderly services industry. This will provide a new solution to the current and future problem of home care services for China's large elderly population, especially the rapidly growing number of disabled elderly people. In Section 2, some of the basic concepts and technologies related to our study are reviewed. In Section 3, the main theme of the paper is discussed, which comprises of the problems that elderly people with disabilities have to face. Moreover, the provision of their needs is also discussed. Section 4 presents the application of "Internet+" in the ageing adaption of elderly people with disabilities at home. In Section 5, the paper is concluded.

## 2. Related Technologies and Concepts

**2.1. "Internet+" Concept.** The concept of "Internet+" has not been around for very long, and different scholars have different views on its definition, so it is easy to see that it is still a concept that is constantly being discussed and explored. The first aspect is to emphasize the impact of the Internet in the economic sphere, which is usually referred to as "Internet+traditional industries," which in fact means that traditional industries are combined with the Internet in a deeper way by relying on new technologies and developing new forms of innovation [6, 7]. It is a new way of combining traditional industries with the Internet in a more profound way, innovating and developing new forms to further enhance the transformation of traditional industries. The other side of the coin focuses on the infinite power of the Internet+ in the social sphere, as the main grip of information technology today. It is not only a tool for communication, but it has even reshaped the links and roles of traditional political, social, and economic relations. The "Internet+" is driving the deepening of new models of relationships, whether as governments, societies, or markets, which need to emerge with innovative organizational models to adapt to the new environment.

The "Internet+" technology is a new kind of information technology developed on the basis of computer technology. It consists of software, hardware, and applications. Software

refers to a variety of software that can collect, retain, search, analyses, apply, and evaluate information. Hardware refers to the mainframe and network communication facilities where data are stored, processed, and transmitted. Applications refer to the use of software or supporting technologies such as ERP to assist decision makers in developing strategies. However, some professionals combine "Internet+" technologies with hardware and software to refer to the preservation, processing, and delivery of information, while applications are the use of information. However, some professionals also combine applications with software, often ignoring the applications, but in reality, only by using information sufficiently can the capabilities of Internet+ technology be demonstrated and truly connected to the information age.

**2.2. Community Public Service.** Community public services refer to nonexclusive ones. The main providers of community public services (usually the government) use certain organizations and methods to achieve the needs of community life and work and provide noncompetitiveness in a certain area or a larger area [8, 9]. Welfare goods and services are social public services given to the community as a whole. Community public services in our country have always been a combination of nonprofit and commercial services, a combination of comprehensive and regional services, and the services of cities, streets, and neighborhood committees complement each other.

## 3. The Main Problems and Needs of the Disabled Elderly in Providing for the Aged

### 3.1. The Main Problems in Providing for the Disabled Elderly

**3.1.1. Life Care Issues.** For the disabled elderly at home, their daily life, including food, clothing, shelter, and transportation, must rely on the help of others to complete. With the continuous degradation of their physiological functions and the relatively weak welfare system and life service facilities in rural areas, their daily care problems have become the first serious problem they have to face at home without the care of their children [10, 11]. Especially, in emergencies and acute diseases, it is difficult to get a timely response, which leads to the expansion of the consequences of the accident and the inability to treat the disease in time, thereby threatening the health and safety of the disabled elderly. Figure 1 shows the difference in the care time of the family members of the disabled elderly at home with different levels of disability. It can be clearly seen that severely disabled people are mostly taken care for 4 hours, while the mildly incapable people get the least care as compared to the other two cases.

**3.1.2. Emotional Deficit Issues.** As a social animal, sociality is the basic attribute that distinguishes man from animals. In traditional societies, the family, as the basic unit of social composition, carries the most basic function of social interaction and is also the most stable and convenient place for

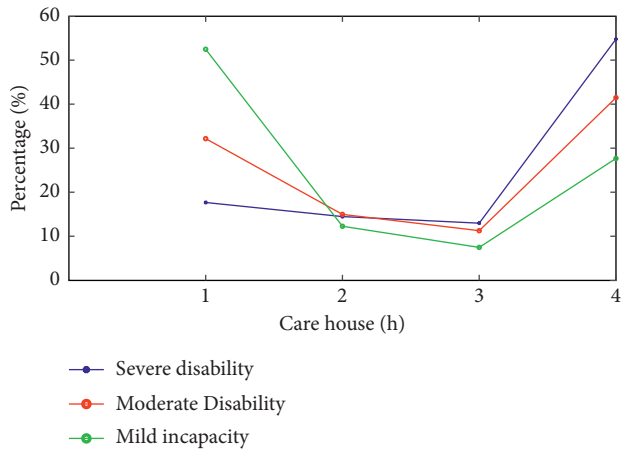


FIGURE 1: Differences in family caregiving time for older people with different levels of disability at home.

individual people to obtain emotional support. The traditional family structure, where children and even grandchildren live with the elderly, provides great emotional support and satisfaction for the elderly through long lasting interaction and a multilayered family composition. With the continuous development of social and economic development, especially in modern society where the pace of work and life is accelerating, young people are under greater mental and financial pressure and are less and less willing to communicate with the elderly, and the time and frequency of communication are decreasing, which determines that the traditional emotional support function of the family is being weakened. The most direct consequence of this weakening is a greater lack of emotional support for the elderly. Figure 2 shows the differences in the sources of emotional support for older people with different levels of disability at home.

3.1.3. *Mental Illness Issues.* Long-term emotional deprivation, loneliness, and frustration caused by living alone, coupled with a range of emotions triggered by unexpected events, leaves older people without emotional outlet and communication for a long time. This coupled with the fact that the elderly is in a period of transition and adjustment from social life and work and the psychological discomfort caused by the change in social role can easily lead to psychological disorders in the disabled elderly if these problems remain unresolved for a long time.

#### 4. The Application of “Internet+” in the Ageing Adaptation of Elderly People with Disabilities at Home

In this section, the “Internet+” has been applied to study the services and gadgets that elderly people with disabilities adapt at the home. The main topics covered in this section are the analysis of structure of “Internet+” home care service model, running through the home care services by the “Internet+” social workers for the elderly disabled people, and safeguard measures for the applications of “Internet+.”

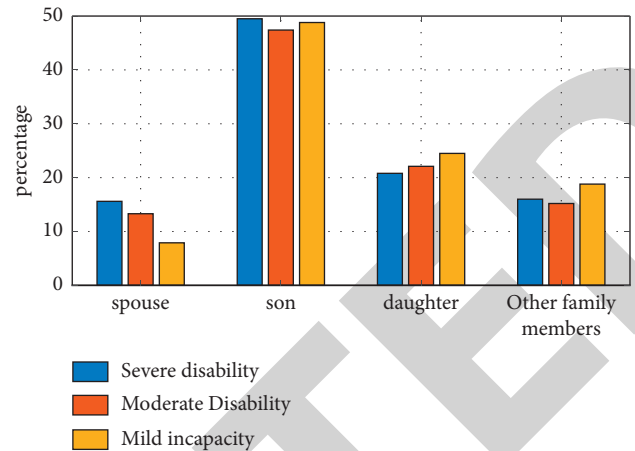


FIGURE 2: Differences in sources of emotional support for older people with different levels of disability at home.

4.1. *Structural Analysis of the “Internet+” Home Care Service Model.* In the 21st century and especially in recent years, as mobile Internet technology has matured and infrastructure has been improved, various internet-based interactive platforms have been built to provide panoramic coverage of various life scenarios of the general public. For the elderly sector, Internet-based support platforms have also emerged and are becoming an important tool to support the market expansion and daily business development of elderly institutions today. The relevant roles and institutional components of the Internet+application are shown in Figure 3. It comprises of seven components, i.e., operators, service centers, service providers, family members, doctor, community standards, and volunteers. Figure 4 shows some of the Internet health component devices for elderly people with disabilities. Five different gadgets have been listed that are blood pressure and blood glucose meters, oximeters, urine testers, smart watches, and smart mattresses.

We prefer to define traditional services for the elderly as labor intensive. The labor-intensive nature of the service industry is characterized by the need to invest a lot of manpower and time, low service efficiency, and relatively low input and output, which in turn makes it impossible for most of the organizations involved in elderly services to make a sustainable profit, let alone expand the scale of services and the industrial chain. Traditional services for the elderly with disabilities also have problems such as untimely information transmission, difficulties in optimizing the allocation of service resources, low effectiveness of continuous services, and weak support networks. However, with the introduction of an intelligent elderly service platform, the convenience, immediacy, and comprehensive resources of Internet technology have provided a new way and path to solve the traditional problems of home services for the elderly with disabilities.

4.1.1. *Support the Multidirectional Extension of the Network.* Through the construction of the “Internet+” intelligent home care service platform, each disabled home elderly person who participates in the platform does not just



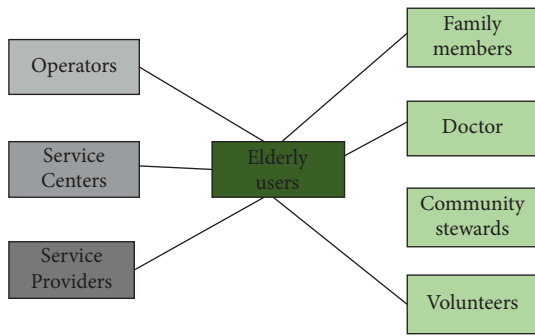


FIGURE 3: Composition of relevant players and institutions in “Internet+” applications.

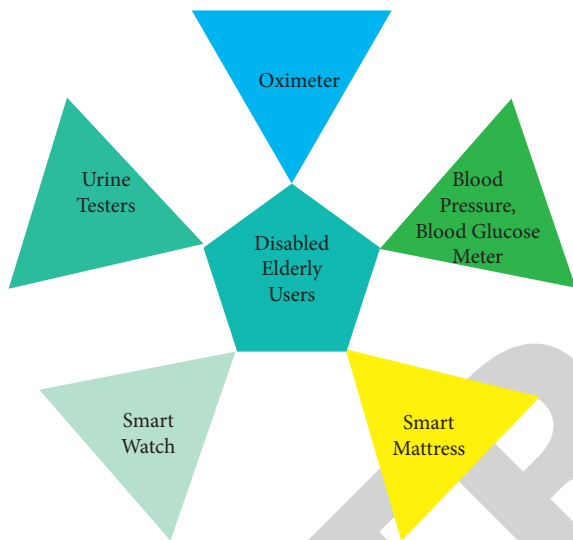


FIGURE 4: Some of the Internet health component devices for elderly people with disabilities.

become a basic member of the elderly service center, but more meaningful is the huge social support network that is accessed behind this membership network [12, 13]. The eight service areas of mobility, medical care, meals, family support, shopping, emergency assistance, and fun and travel assistance allow the disabled elderly to access a rich network of professional resources at home with just a smartphone and a mobile web platform. This network provides access to the resources they need, and through the continuity of membership, they continue to benefit from a stable, rich, and diverse network of support.

A stable, rich, and diverse network of support (Figure 5) shows the “Internet+” application model diagram.

**4.1.2. Round-the-Clock Emergency and Response.** Being alone at home is the biggest safety hazard for elderly people with disabilities who age at home. On the contrary, even if the information is passed on, traditional elderly care services or relatives of the elderly cannot provide timely feedback and assistance. The 24-hour emergency response system of the intelligent elderly care platform provides a strong guarantee for solving emergency emergencies for elderly people who

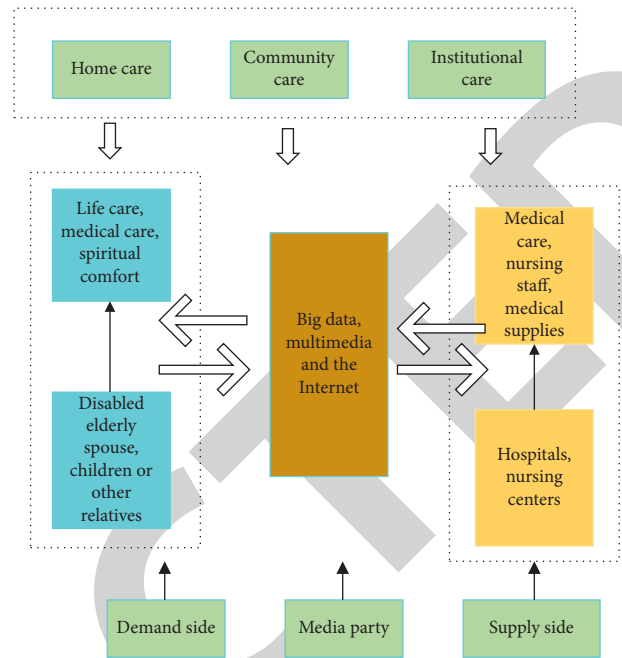


FIGURE 5: Map of the “Internet+” application model.

are living at home [14, 15]. Through the intelligent senior care service platform, the disabled elderly can transmit information through the mobile software and receive assistance within a limited period of time. The intelligent senior care service platform allows the elderly empty nesters to transmit information via mobile software and receive feedback and services within a limited period of time.

**4.1.3. Service Efficiency Improvements.** The most distinctive feature of the “Internet+”-based senior care service platform is the high level of integration and refined allocation of resources, which, based on a large user base, can continuously reduce marginal costs and deepen the rational allocation of resources. Once the planning effect is formed, the original service links and processes will be changed, which will also bring about an increase in efficiency. It can effectively solve the drawbacks of high-service costs and the inability to achieve scale development due to the scattered living and diversified needs of elderly people living at home. At the same time, through the rational deployment and use of the online platform, the resources of the organization can be maximized and optimized.

**4.2. Practice of Home Care Services for the Disabled Elderly by the “Internet+” Social Workers.** The application of “Internet+” to long-term care for older people with disabilities requires the use of artificial intelligence, big data, and the Internet of Things to build this comprehensive service platform. It is designed to meet the needs of the elderly as far as possible and to receive, store, and feedback information about the disabled elderly via the Internet. Figure 6 shows the design of the service platform for the “Internet+” application.

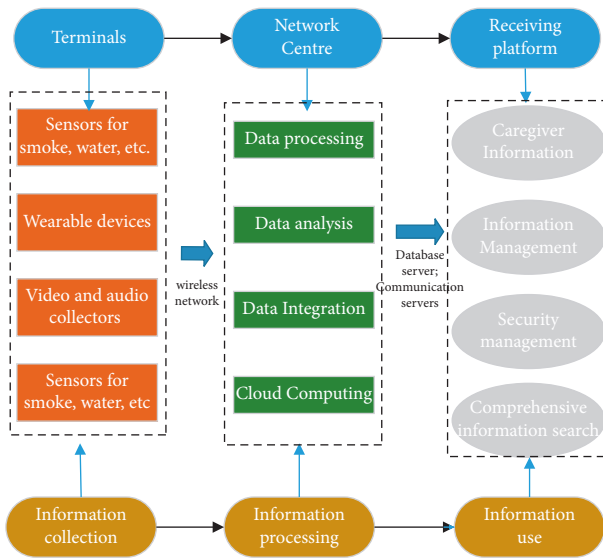


FIGURE 6: Design of the service platform for “Internet+” applications.

The terminals are used to capture the needs of older people, to sense their behavior, and to sense their surroundings. The care services are mainly provided by the elderly care service center, which provides the caregiver with a positioning device, such as a simple positioning bracelet or mobile phone, so that once the elderly person requests care, the service center can select the nearest person to the elderly person’s home for notification based on the positioning. With the development of intelligent networking, personal information needs to be fully grasped and protected against leakage. Firstly, there is a need to register all care service center staff and the elderly with disabilities in their real names. Secondly, the service center can analyse the time, number, and content of calls from the elderly to find out what the elderly need and what they are potentially looking for so that they can change from a passive service to an active one. Finally, the children of the elderly can check the health and living conditions of the elderly at anytime and anywhere through their registered accounts so that they can work outside without worries.

The biggest difference and innovation between the Internet and the traditional network are that a virtual space has been constructed through network technology. In this space, everyone can connect across space with those who can be connected within the network through the network factor, while people who were originally distributed relatively far apart in physical space can quickly gain access to each other through the network platform of the Internet. Similarly, in another dimension, people from different spaces can form a kind of fork in the network and rely on this integration of different dimensions and the formation of various fork connections, forming a complete system similar to the offline one. However, unlike the offline system, this Internet-based virtual platform also virtualizes the space requirements, solving the inconvenience and problems caused by space, which is the weakest part of the service system for the elderly with disabilities. For the intelligent ageing-in-place

service platform, the service status has been changed from the original point-to-point offline space to a point-to-point mode with virtual vouchers on the Internet, which has greatly improved the efficiency and timeliness of social worker services. More importantly, the integration of this space allows social workers to take the first step in transforming their identity. Through the construction of a virtual space and in the virtual network space, social workers have the opportunity to build an online domain containing various elements such as psychological counselling, spiritual solace, daily life information enquiry, daily care, and accident response. Within this space, the social worker coordinates the space of all parties involved in the field in a timely manner to ensure that the daily services for the elderly with disabilities are met. Free from spatial constraints in some respects, the integration of the multidimensional space provides a solid foundation for the services for the elderly with disabilities.

#### 4.3. Safeguard Measures for “Internet+” Applications.

Solving the problem of elderly people with disabilities is a matter of social development and stability, and it is a necessary path for our entire social system to self-improvement, self-growth, and self-healing. Due to their physiological, psychological, social, and family characteristics, most of the social support networks of the disabled elderly are in a state of extinction and disintegration. Under such circumstances, helping the disabled elderly to reconstruct their external social support networks to replace their own internal support networks and thus to meet the needs of the empty nesters, is one of the most important aspects of home care services for the empty nesters nowadays. As Internet technology continues to mature and Internet platforms continue to innovate, a wide range of organizations involved in the elderly care industry have begun to actively embrace the Internet, giving full play to the Internet’s tool attributes and resource integration capabilities to continuously optimize the model of home care for the elderly with disabilities, in order to solve the problem of home care services for the elderly with disabilities.

##### 4.3.1. Improving the Technological Empowerment of the Internet.

As a technology tool, the Internet is essentially a platform for sharing information and connecting multiple parties through the construction of an online contact platform, a connection that transcends time and especially physical space. In addition, the Internet itself has the functions of resource integration, process management, and optimal allocation of resources. These attributes of technology have solved many of the problems previously faced by social work in the process of home care services for the elderly with disabilities and have improved the entire home care service system. It provides a scientific, reasonable, and sustainable solution for solving the challenges of the elderly with disabilities, improving the happiness index of the elderly with disabilities in their twilight years, and safeguarding their immediate survival interests and living

foundation and can also provide a template and a reference for more social work agencies.

**4.3.2. Improving the Integration and Spanning of Space.** Under the Internet, a virtual space has been constructed through network technology. In this space, everyone can connect across space through the network factor, while people who are originally distributed relatively far away from each other can quickly get in touch through the network platform of the Internet. The integration and spatial spanning of the Internet will improve the efficiency of the intelligent elderly care platform, promote better integration of the Internet and social workers, enhance the effectiveness of the “Internet+” home care services for the disabled elderly, and lay the foundation for the future development and growth of the home care industry.

**4.3.3. Give Full Play to the Role of Social Work on the Internet.** The professional values and methods of social work can be linked online through efficient, interoperable, and co-connected Internet tools, so as to better serve those groups who do not have smartphones or do not know how to use them.

## 5. Conclusion

In this study, we have seen that the emergence and widespread use of Internet tools has reshaped the entirety of home care services for the disabled elderly, which were previously carried out entirely offline. It has created a new service environment and professional environment for frontline social workers, actively embracing the changes brought about by the Internet and reshaping the mode of social work involvement in the elderly with disabilities. The “Internet +” service model, based on the intelligent elderly service platform, lays the foundation for the development and growth of the entire home care industry in terms of the diversity of service resources, professionalism of service means, and efficiency of service, thus effectively solving the problem of home care services for the disabled elderly in society as a whole, and contributing to this will contribute to the construction of a new pattern of healthy and harmonious home care services for the elderly with disabilities.

## Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

## Acknowledgments

This article is one of the phased achievements of the “2019 National Social Science Fund Youth Project, the application of Internet technology-based home improvement guidance in the rehabilitation of disabled elderly in the community”

(project no. 19CR006), and “2018 National Natural Science Foundation of China Regional Project, the construction of a hospital-community-family integrated stroke continuation care model based on mobile Internet technology” (project no. 81860408).

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