Service Demand and Supply in Aging Society from the Perspective of Social Work

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Abstract: As the global population ages, the aging society faces unprecedented challenges, especially in terms of demand and supply of social services. Aging not only means a change in the population structure, but also puts forward new requirements for social economy, health care, elderly care services, community support and other fields. This paper first introduces the background of the aging society and the challenges it currently faces, and then reviews the research results of relevant scholars and points out their shortcomings. Subsequently, this paper adopts a combination of qualitative and quantitative research methods, and through designing experiments, collects and analyzes the current status of service demand and supply in the aging society. The experimental results show that the demand for social services in an aging society is showing a diversified trend, and the service coverage can reach up to 93%. However, there are large differences in service resources between urban and rural areas, and within urban and rural areas, which requires further optimization of resource allocation.

1. Introduction

An aging society refers to a society where the proportion of the elderly population aged 60 and above reaches or exceeds 10% of the total population, or the proportion of the elderly population aged 65 and above reaches or exceeds 7% of the total population. With the advancement of medical technology and the improvement of living standards, many countries and regions around the world are rapidly entering an aging society. From the perspective of social work, this paper deeply analyzes the current situation and problems of demand and supply of social services for the aging population, and provides a theoretical basis and practical guidance for the formulation of more scientific and reasonable social service policies for the aging population.

This paper explains the background of an aging society and deeply analyzes the challenges it is facing. This paper reviews the research results of relevant scholars in the field of service demand and supply in an aging society and objectively points out the shortcomings of these studies. On this basis, this paper adopts a research method that combines qualitative and quantitative methods. Through in-depth interviews, it comprehensively collects and deeply analyzes the current status of social service demand and supply in an aging society. The results of the experimental survey show

that the service demands of the aging society that this paper focuses on are showing a significant trend of diversification, while there are obvious shortcomings in service supply. Through further investigation, this paper points out the key findings revealed by the experimental investigation, and also points out the shortcomings in the research process. On this basis, this paper proposes the direction of future research and possible improvement strategies.

2. Related Work

In recent years, scholars have conducted extensive research on the demand and supply of services in an aging society. Some scholars pay attention to the demand and supply of health management services for the elderly, and find that the elderly have high demands in chronic disease management, rehabilitation care, etc.; other scholars focus on spiritual comfort services for the elderly, and point out that the elderly have obvious shortcomings in emotional support, psychological counseling, etc. Iijima et al. [1] focused on the future medical and social development of Japan's aging society and explored how to build a vibrant super-aging society. Dominelli[2] analyzed the challenges and coping strategies of social work during the COVID-19 epidemic from the perspective of green social work. Han et al.[3] focused on the public health perspective in China's aging process and explored the current status and development of elderly health services. Feng et al. [4] conducted an in-depth analysis of the policy background, challenges and future prospects of China' s long-term care system for the elderly. Banks et al. [5] discussed the challenges and responses faced by ethical practice in social work during the COVID-19 pandemic. Marino et al. [6] conducted a comparative analysis of the demand and supply of ecosystem services in national parks using the Italian case. Negrusa et al. [7] constructed a labor force model for anesthesia services and predicted the trends of demand and supply. SHEN et al. [8] reviewed the research progress and prospects of the supply and demand relationship of ecosystem services. Mao et al. [9] explored the impact of the digital economy on China's value-added from the dual perspectives of digital demand and supply. Kessy[10] analyzed the demand and supply aspects of accountability mechanisms in local government authorities in Tanzania. These references reveal the complexity of topics such as challenges of an aging society, social work ethics, ecosystem service balance, supply and demand of medical services, impact of the digital economy, and government responsibility mechanisms, and point out problems such as insufficient service supply, policy implementation challenges, and lack of data in current research, providing a rich theoretical and empirical basis for subsequent research. Although existing research has achieved fruitful results, there are still many shortcomings.

3. Method

3.1 Current Status of Aging Society

Globally, many countries and regions are facing the severe challenge of population aging. This trend not only affects social and economic development, but also brings profound changes to the traditional family structure, social security system and the quality of life of the elderly. The characteristics of an aging society are significant and multidimensional [11]. First, the continuous increase in the proportion of the elderly population is the most intuitive manifestation of an aging society. When the proportion of the population aged 60 and above exceeds 10% of the total population, or the proportion of the population aged 65 and above exceeds 7%, it means that the region has entered an aging society. Behind this data is the rapid growth in the number of elderly people and their increasing proportion in the total population.

As fertility rates have declined and life expectancy has increased, family structures have also

changed significantly. Family sizes are gradually shrinking, and the number of elderly people living alone and empty-nest families is increasing. This change not only brings inconvenience to the elderly, but also increases their emotional, social and spiritual needs. The elderly have an increasingly strong desire for emotional communication, social activities and spiritual comfort. They yearn for the love of their family, the company of their friends and the attention of society. The arrival of an aging society has also brought tremendous pressure to the social economy. The increasing pressure on pension payments has made the social security system face unprecedented challenges. At the same time, the shortage of medical resources and the surge in demand for elderly care have also brought a heavy burden to the medical and health system. How to effectively respond to these challenges and ensure the quality of life of the elderly and the stable development of the social economy has become an urgent problem to be solved[12]. Therefore, it is particularly important to build a demand and supply model for aging services. This model aims to meet the elderly's needs in life, health, emotions, etc. by deeply analyzing the diverse needs of the elderly, integrating social resources, and optimizing service supply.

3.2 Service demand and supply

In the context of an aging society, the matching of service demand and supply is particularly important. From the demand perspective, the elderly, as a special social group, have diverse and complex needs. Basic living security is the most basic need of the elderly, including care for daily life such as food, clothing, housing and transportation. As they age, the physical health of the elderly gradually declines, so health management has become one of their important needs, which covers disease prevention, medical treatment, rehabilitation care and other aspects. In addition, the elderly also need spiritual comfort. They long for the care of their family, the company of their friends, and the respect and understanding of society[13]. Social participation is also a need that the elderly cannot ignore. By participating in social activities, the elderly can maintain contact with society, slow down the aging process, and improve their quality of life.

In terms of supply, multiple entities such as the government, social organizations, and enterprises jointly bear the responsibility of providing services for the elderly. The government provides basic living security for the elderly by building elderly care service facilities and improving the social security system. Social organizations provide more meticulous care for the elderly through volunteer services and community care. Enterprises develop products and services suitable for the elderly to meet their needs in health management, leisure and entertainment, etc. However, due to differences in service quality and level between different regions and service providers, the elderly face many difficulties in enjoying services. The problem of matching supply and demand is a major problem in the provision of services for an aging society. On the one hand, the needs of the elderly are diverse and personalized, and service providers often find it difficult to accurately grasp these needs; on the other hand, the uneven distribution of service resources has also exacerbated the contradiction between supply and demand. In order to solve this problem, this paper needs to establish a more complete elderly service demand assessment system and gain a deeper understanding of the elderly's real needs [14]. At the same time, this paper also needs to strengthen the integration and optimization of service supply, improve service quality and efficiency, and ensure that the elderly can enjoy high-quality and convenient services. On this basis, this paper uses the formula of supply-demand matching to quantitatively evaluate the matching degree between service demand and supply. The formula is as follows:

$$S = \frac{\sum (D \times Q)}{\sum T}$$

(1)

In Formula 1, S represents the matching degree of supply and demand, D represents the satisfaction degree of demand, Q represents the supply of services, and T represents the total demand. This paper combines the three indicators of demand satisfaction, service supply and total demand to calculate the quantitative matching degree. This paper intuitively understands the matching between service demand and supply. When the matching degree of supply and demand is high, it means that the service provided by the service provider can meet the needs of consumers well, and the matching degree between service supply and demand is high. At this time, the service provider can continue to maintain the existing service level and supply strategy, or make fine adjustments according to market changes. When the supply-demand match is low, it means that the services provided by the service provider fail to meet the needs of consumers to some extent, or there is a large mismatch between service supply and demand[15]. At this time, service providers need to analyze the reasons in depth and take targeted measures to improve service levels and supply strategies to improve the matching between supply and demand.

3.3 Model of Aging Service demand and supply Based on Social Work
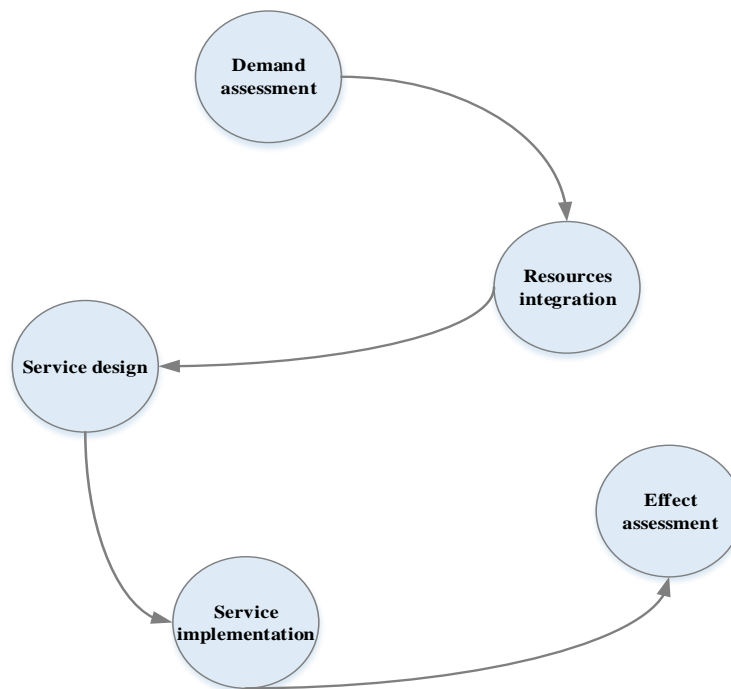

Figure 1: The operation of aging service demand and supply model

In order to study the relationship between the demand and supply of aging services and balance the current demand and supply of aging services, this paper designs a model based on social work. Figure 1 shows its operating structure.

(1) Needs assessment: In the needs assessment phase, in order to fully understand the needs of the elderly, this paper uses big data to collect the daily lives and behavioral habits of the elderly, so as to more comprehensively grasp their needs. These data sources will provide strong support for the subsequent service design of this paper [16].

(2) Resource integration: This paper actively integrates resources from the government, social organizations, enterprises and volunteers. By forming a service network, this paper achieves optimal allocation and sharing of resources and provides more comprehensive and convenient services for the elderly.

(3) Service design: Based on the results of the needs assessment, this paper designs a comprehensive service plan. This paper fully considers the individual differences and needs of the elderly, tailors the service content and methods for them, pays attention to the comprehensiveness and consistency of the service, and ensures that the elderly can enjoy a full range of services.

(4) Service implementation: This paper implements services through volunteers to ensure that service personnel have professional skills and knowledge and can provide high-quality services to the elderly in accordance with the requirements of the service plan, strengthen supervision and management of the service process, and ensure service quality and effectiveness.

(5) Effectiveness evaluation: This paper regularly collects feedback and evaluates the effectiveness of services. This paper sets up a backend feedback channel to collect the opinions and suggestions of the elderly, understand their satisfaction with the service and suggestions for improvement, reflect on and summarize the service process, and continuously adjust and optimize the service strategy to better meet the needs of the elderly [17].

4. Results and Discussion

4.1 Test design of demand and supply Model

In order to verify the effectiveness of the model, this paper designed a test plan and paid attention to details during the implementation process to ensure the reliability of the test results. This paper carefully selected elderly people with different health conditions as test subjects, and the data are shown in Table 1. These elderly people cover all age groups from 60 to 90 years old, ensuring the diversity and breadth of the sample.

Table 1: Experimental data

Group	Number of testers	Psychological well-being	Service usage frequency (times/month)
Experimental group	2000	Medium	12
Control group	2000	Medium	0
Difference value	-	-	12

This paper uses a scientific comparative experimental method to strictly compare the experimental group (elderly people who received model services) with the control group (elderly people who did not receive model services). The baseline data of the experimental group and the control group were similar before the test to ensure the fairness of the test results. This paper uses professional statistical software to process and analyze the collected data. By comparing the data of the experimental group and the control group, this paper evaluates the improvement effect of the model on service demand and supply and draws scientific conclusions.

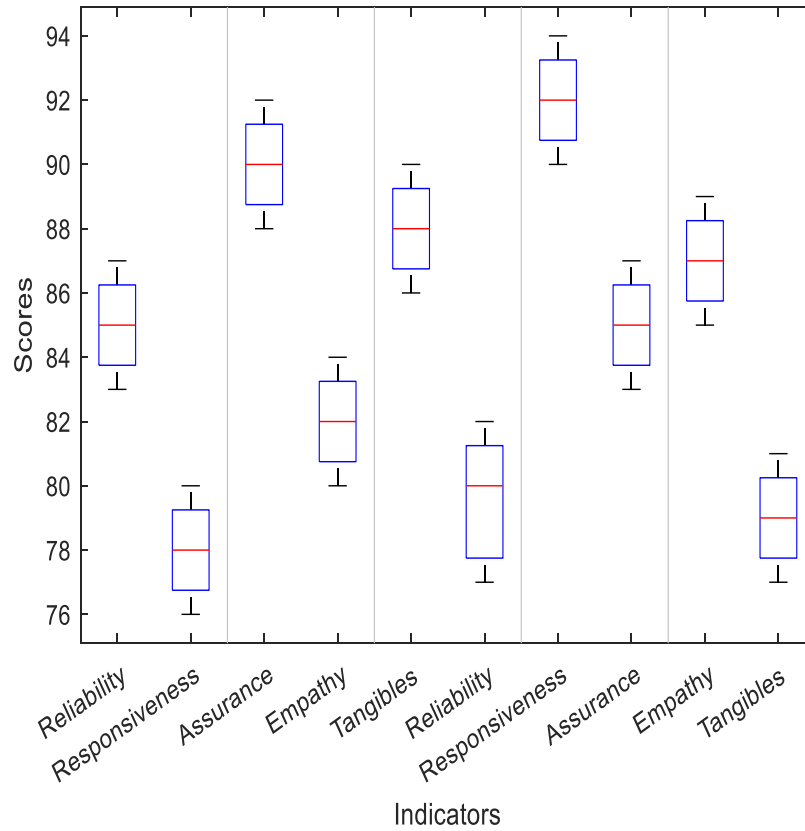## 4.2 Service Quality Indicators

Figure 2: Service quality indicators

This paper compares the scores of the experimental and control groups on five service quality indicators (reliability, responsiveness, assurance, empathy, and tangibles). The experimental group performs better than the control group on all these indicators. From Figure 2, it can be seen that in terms of reliability, the average score of the experimental group is 85, significantly higher than the control group's 78; in terms of responsiveness, the average score of the experimental group is 90, which is much higher than the control group's score of 82; in terms of assurance, the average score of the experimental group is 88, which is also higher than the control group's 80; in terms of empathy, the experimental group's average score of 92 is significantly better than the control group's score of 85; in terms of tangibility, the average score of the experimental group is 87, which is also higher than the control group's 79. These data differences indicate that the experimental group exhibits significant advantages in providing consistent and reliable services, effectively responding to the needs of the elderly, enhancing their trust, understanding and paying attention to their personalized needs, and providing tangible facilities or service environments. The analysis of variance (if the p-value is less than 0.05) further confirms the statistically significant differences between these groups, thereby supporting the overall improvement of service quality in the experimental group.

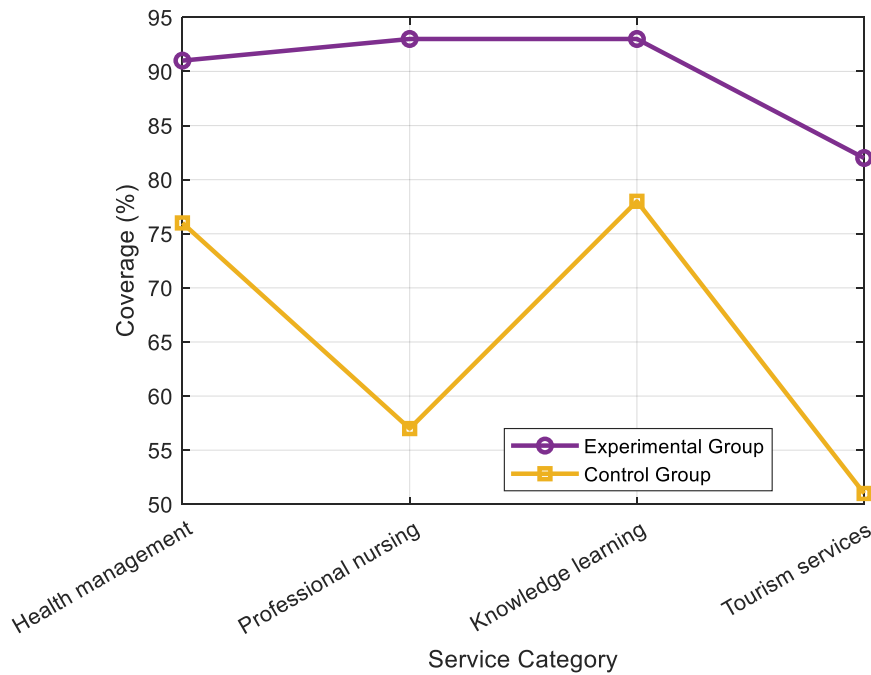## 4.3 Service Coverage Rate

Figure 3: Coverage coverage of elderly services

This paper conducts testing and analysis on the coverage rates of four service categories: health management, professional nursing, knowledge learning, and tourism services. In Figure 3, the coverage rate of the experimental group in health management is 90%, professional nursing is 93%, knowledge learning is 93%, and tourism services is 82%; the coverage rates of the control group in these categories are 76%, 56%, 78%, and 51%, respectively. The figure clearly shows that the coverage of the experimental group in all service categories is significantly higher than that of the control group, especially in the knowledge learning category where the gap is the largest. This result indicates that the strategy or intervention measures adopted by the experimental group are more effective in improving service coverage, which suggests that this method is worth promoting or adjusting to adapt to a wider range of applications. At the same time, it also suggests that the control group needs to reevaluate its strategy, especially in areas with large knowledge learning gaps.

5. Conclusion

This paper is based on the perspective of social work and adopts a combination of qualitative and quantitative research methods to deeply analyze the current situation and problems of the demand and supply of social services for the aging population. By designing a model of demand and supply, collecting data, and using statistical software for analysis, it is organized and analyzed. The experimental results show that the elderly have high demands for health management, spiritual comfort, social activities, etc., and the model can effectively cover these aspects. However, even if this study has achieved certain success, the existing service supply is still insufficient in meeting these needs, and the uneven distribution of service resources needs to be solved urgently. Subsequent, researchers can enhance the pertinence and effectiveness of service provision and optimize the allocation of service resources to improve the service level for the elderly in an aging society.

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