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Original Article

The Demand for and Factors Influencing Community Care Services for Older People in China

Laiyou Li a,b , Ning Sun b t, Shoukuan Wei b , Libo Yu b, Hongyu Li b, Kaiying Zhong b, Junxin Yan a ** t

^a College of Landscape Architecture, Northeast Forestry University, Harbin, P. R. China; ^b Ningbo College of Health Sciences, Ningbo, P. R. China

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SUMMARY

Background: With the increase in the aging population, improving community care services to solve the care problems of China's older adult population has become an urgent task. This study explored the community care needs of older people and how these needs are influenced by personal characteristics and level of dysfunction.

Methods: A questionnaire survey was administered to 400 older adults in 10 communities in Ningbo, Zhejiang, China, between May and October 2023. The participants completed a demographics questionnaire, a measure assessing performance in activities of daily living, and a measure of community care needs.

Results: The mean for the level of overall community care needs was 44.87 ± 2.56 , indicating low demand. The order of community care needs from high to low were medical services (17.02 ± 1.89) , spiritual comfort services (13.96 ± 1.56) , and life care services (13.89 ± 1.19) . Factors influencing participants' community care needs included level of dysfunction, age, monthly income, and living situation (p < 0.05).

Conclusions: Community care needs of older adults with different degrees of dysfunction vary and are influenced by several community factors. These findings provide a scientific basis for community-specific aging reform.

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1. Introduction

The number of older adults continues to increase globally. The 2021 National Economic and Social Development Statistics Bulletin shows that the number of people aged 60 years and older in China is approximately 267 million, accounting for 18.9% of the total population. It is the only country with an older population exceeding 200 million; China is now a mildly aging society. 1

Increased life expectancy and an increase in disabled individuals create a greater demand and better requirements for the professional, refined, and precise development of care resources for older people. However, problems and challenges in care services for older people in China persist, such as an imbalance in supply and demand and uneven service quality. Older adults are commonly regarded as a vulnerable group in terms of the physical, mental, and social aspects of health.² These issues not only affect their quality of life but also constrain the development and improvement of care services.³ Community nurses also report increased complexity among older people, requiring additional time and resources to deliver appropriate care.^{4,5}

To address this care problem, home and community-based care services (HCBS) have been advocated by the Chinese government and play an increasingly significant role in care provisions. HCBS encompass a broad range of services and support, including daily care, domestic, medical and nursing, and psychological services. HCBS help older people remain in their communities and assist them in maintaining their quality of life in familiar settings. ^{6,7} Therefore, to ensure that every older adult can receive the care services they need, it is important to explore the current demand for community care services and influencing factors for older people in China.

Previous studies have focused on community-based care services among older adults. 8,9 Japan is currently the country with the most severe aging population in the world. 10 Community services for the older population in Japan include night visit care services, care for dementia patients, and daily care for individuals in community-specific and community welfare institutions. ¹¹ The United States advocates a combination of community-based and professional long-term care services. Some communities provide daily health checks, meals, housekeeping, 24-hour home care, and medical services. 12 Germany adopted a multi-generational mutual aid model and encourages older adults to take care of themselves at home, delaying their stay in nursing homes and improving the efficiency of care resources. 13,14 Studies have indicated the predictors of older people's demand for HCBS. At the individual level, HCBS demand is mainly influenced by three categories: 15-17 (a) sociodemographic characteristics, such as gender, age, education level, and health sta-

^{*} Corresponding author. Ningbo College of Health Sciences, Ningbo, P. R. China.

E-mail address: sunning_ly@126.com (N. Sun)

^{**} Corresponding author. College of Landscape Architecture, Northeast Forestry University, Harbin, P. R. China.

E-mail address: yanjunxin@163.com (J.x. Yan)

Laiyou Li and Shoukuan Wei were the co-first author.

[†] Ning Sun and Junxin Yan contributed equally to this work.

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tus; (b) family factors, including living arrangements, marital status, and number of children; and (c) the availability of social and material resources, such as income source, household income, and the accessibility of social services.

The development of community care services for older people in China has grown rapidly, and a relatively complete community care services system has been developed. Shanghai was the first city in China to enter an aging society and is the largest city with the highest degree of aging. In 2014, Shanghai was the first city in China to propose the "embedded" community care model that involves building one or multiple "15-minute service circles" where older adults can receive daily care. ¹⁸ Guangzhou community care is guided by the service needs of the older adult population, revitalizing various care resources and building a "one-stop" and "door-to-door" comprehensive care service. The service integrates full and day care, meal assistance, cultural and entertainment activities, on-site living and medical care, rehabilitation and end-of-life care, safety assistance, spiritual comfort, family care beds, and aging-friendly renovations. ¹⁹

China has always been committed to developing community care for older people. However, with the continuous growth of the older population, the resources and costs of this process are increasing daily. The implementation process also poses problems, such as insufficient development of service resources, a single structure of service participants, and imbalanced service supply and demand processes, which require urgent improvement. Therefore, this study aimed to explore the factors influencing older people's care service demands in Chinese communities. The results have relevance for improving community care services to enhance the level of care provided to older people.

2. Materials and methods

2.1. Study design

A correlational cross-sectional research design was adopted. A survey questionnaire was used for data collection.

2.2. Participants

From May to October 2023, older adults were recruited for participation using convenience sampling from 10 communities in five districts of Ningbo. Eighty older adults from each district were selected, resulting in 400 participants. Questionnaires were distributed to the participants, of which 378 were completed (recovery rate: 94.5%). Of these, 370 were valid questionnaires (effective recovery rate: 92.5%).

The selection criteria were aged 60 years or older, permanent residence in Ningbo, living in the community for more than six months, and disability in activities of daily living (ADLs) based on the ADLs Scale score. The exclusion criteria were severe cognitive dysfunction or difficulty understanding instructions.

2.3. Sample size calculation

The study focuses on the correlation between sociodemographic characteristics and community care services. Multiple linear regression analysis was used to analyze the data. Twenty-five variables could be entered into the model. Given that the required sample size should be at least 10–15 times the number of variables in the model, a sample of 375 participants was required. ²⁰ Based on a valid response rate of 95%, the sample size needed was approximately 400 participants.

2.4. Data collection

Two investigators underwent training to conduct the study. All participants lived at home or in a nursing home. The nursing home or community service center managers arranged a meeting. The research objectives and methods were explained to the participants before obtaining their consent. They received the questionnaire and completed it immediately upon receipt. After completion, they placed the questionnaire in an envelope for collection by the investigators. To ensure anonymity, each completed questionnaire was assigned a code number.

2.5. Measures

2.5.1. Demographic data questionnaire

This questionnaire was developed for use in this study and surveyed information on the participant's age, gender, marital status, education, monthly income, payment methods for medical expenses, living situation (e.g., with family), and medications.

2.5.2. ADLs Scale

This scale was developed by American researchers in 1969 to determine the degree of dysfunction among older adults in ADLs. 21 It consists of 14 items. Responses are rated on a four-point scale, ranging from "cannot do it yourself" to "can do it yourself". Scores can range from 14 to 56, with higher scores indicating higher levels of dysfunction in ADLs. Scores \leq 20 indicate normal function, and scores > 20 indicate varying degrees of dysfunction (21–30 very mild, 31–40 mild, 41–50 moderate, > 50 severe). Cronbach's α for this scale was 0.92, and the content validity index was 0.86.

2.5.3. Community care needs

Community care needs were divided into three categories based on a literature review: life care, medical service, and spiritual comfort needs. These three categories were further divided into 16 subcategories. The level of demand consisted of five levels rated on a five-point scale from "not needed (1)" to "very needed (5)". Higher scores indicate higher demand for the service. The maximum scores for life care, medical services, and spiritual comfort are 25, 30, and 25 points, respectively, with a total maximum score of 80. In the prior study, Cronbach's α for the total items was 0.95. The Cronbach's α of life care, medical service, and spiritual comfort needs is 0.96, 0.95, and 0.98, respectively. 16 The content validity index, which was confirmed by an expert panel, was 0.93.

2.6. Data analysis

Epidata 3.0 software and SPSS 26.0 were used for data analysis after the logistic test. Means, standard deviations, frequencies, and percentages were used to describe demographic data and community care services. One-way ANOVA was used for continuous variables with more than two groups and two tests for categorical variables. Relationship analysis explored the correlations between participants' demographic characteristics and community care needs. Multiple linear regression analysis was conducted with the level of demand for community care services as the dependent variable and individual characteristics and dysfunction as independent variables. A finding was considered statistically significant at p < 0.05.

2.7. Ethical considerations

This study was approved by Ningbo College of Health Sciences

(NBWY-037). All participants were informed of the study's purpose and their right to withdraw at any time. Informed consent was obtained before participation.

3. Results

Women comprised the majority (68.1%) of the participants. Participants' ages ranged from 60 to 91 years, and the average age was 70.21 ± 5.98 years. Most participants were married (68.4%), and approximately 30% were widowed. Regarding education level, 59.5% had completed junior high school and below. Most participants (75.9%) lived with their families. The monthly income for the majority (70.5%) ranged from 1,001 yuan to 3,000 yuan; most (68.6%) participants had urban medical insurance (Table 1).

Regarding dysfunction in ADLs, most participants experienced mild or extremely mild dysfunction (63.5%). An almost equal number of participants experienced moderate or severe dysfunction (Table 2).

The mean score for overall community care needs was 44.87 \pm

Table 1Demographic data of older people in the community (n = 370).

Demographic	Participants	Percentage (%)
Age		_
60–	86	23.2
70–	98	26.5
80–	120	32.5
90–	66	17.8
Gender		
Male	118	31.9
Female	252	68.1
Marital status		
Married	253	68.4
Unmarried	1	0.3
Widowed	110	29.7
Divorced	6	1.6
Education level		
Junior high school and below	220	59.5
High school	98	26.4
College	52	14.1
Monthly income		
≤ 1,000 yuan	38	10.3
1,001 yuan-3,000 yuan	261	70.5
3,001 yuan-5,000 yuan	61	16.5
> 5,000 yuan	10	2.7
Medical expense payment method		
Public medical care	35	9.5
Town medical insurance	254	68.6
New rural cooperative medical care	56	15.1
Business insurance	7	1.9
Self-pay	18	4.9
Living situation		
Living alone	17	4.6
Living with family	281	75.9
Living with a nanny	5	1.4
In a pension institution	67	18.1

2.56, indicating low demand. The highest level of demand was for medical services (17.02 \pm 1.89 points), followed by spiritual comfort (13.96 \pm 1.56 points) and life care services (13.89 \pm 1.19 points). The highest scores for participants with extremely mild, mild, and moderate and severe dysfunction were spiritual comfort, life care, and medical service needs, respectively (Table 3).

Age (p = .018), education level (p = .036), monthly income (p = .028), living situation (p = .041), and degree of dysfunction (p = .008) were significantly correlated with community care needs (Table 4).

Factors affecting community care needs were analyzed by stepwise regression, with significantly correlated demographic characteristics and degree of dysfunction as the independent variables. Degree of dysfunction was the strongest predictor, followed by age, monthly income, and living situation (Table 5).

4. Discussion

This study explored the community care needs of older people and how personal characteristics and levels of dysfunction influence these needs. The results indicated a low demand for community care services. The greatest community care need was for medical services. Factors influencing participants' community care needs included dysfunction level, age, monthly income, and living situation. The results were consistent with some domestic and foreign research. Comprehensively analyzing the current situation of community care needs and taking targeted care measures can effectively improve the quality of life of older adults in the community. These

Table 2
Degree of dysfunction (N = 370).

Degree of dysfunction	$Mean \pm SD$	n	%
Extremely mild	24.54 ± 1.90	107	28.92
Mild	$\textbf{32.69} \pm \textbf{2.11}$	128	34.59
Moderate	42.26 ± 1.66	72	19.46
Severe	$\textbf{51.48} \pm \textbf{1.71}$	63	17.03

Table 3Community care needs by degree of dysfunction (N = 370).

Need	Life care needs	Medical service needs	Spiritual comfort needs	X ²
Extremely mild	$\textbf{4.38} \pm \textbf{0.72}$	4.41 ± 0.73	4.43 ± 0.78	4.86*
Mild	$\textbf{4.47} \pm \textbf{0.71}$	4.46 ± 0.76	4.45 ± 0.78	7.52**
Moderate	4.48 ± 0.73	4.49 ± 0.74	4.47 ± 0.78	8.23**
Severe	4.49 ± 0.72	4.51 ± 0.71	4.48 ± 0.78	10.78**

Note: One-way ANOVA was used. * p < 0.05; ** p < 0.01.

Table 5Factors affecting community care needs.

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Variable	В	Beta	t	<i>p</i> -value
Age	5.68	0.26	4.89	.006
Monthly income	4.98	0.18	-5.26	.003
Living situation	-3.96	-0.07	-2.54	.038
Degree of dysfunction	8.76	0.48	6.57	.005

 $R^2 = 0.627$, adjusted $R^2 = 0.115$, F = 28.564, p < 0.001.

Table 4Correlations between demographic characteristics and community care needs.

Variable	Age	Gender	Education level	Monthly income	Marital status	Living situation	Payment method	Degree of dysfunction
Life care needs	.379*	.215	.323*	.302*	.233	.365*	.233	.456**
Medical service needs	.366*	.198	.367*	.398*	.201	.411*	.199	.479**
Spiritual comfort needs	.357*	.266	.398*	.316*	.199	.361*	.208	.428**
Community care needs	.346*	.237	.306*	.379*	.225	.358*	.246	.423**

^{*} p < 0.05; ** p < 0.01.

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findings provide a scientific basis for community-specific aging reform.

4.1. Disability in ADLs among older people in the community

The results indicated that 34.59% of participants experienced mild dysfunction. The proportion of older people in this study who had a disability in ADLs was higher than that in a study conducted in Beijing. This difference may be due to Beijing's higher economic development and medical care. Therefore, in Beijing, older people with disabilities and their families have more opportunities to enjoy high-quality medical resources, which can greatly reduce the extent of their dysfunction. The results were also consistent with foreign research showing higher data on older adults with disability in south-eastern Nigeria, who have poor health status. These results suggest that, in Nigeria, as in China, aging welfare policy must be urgently formulated and implemented.

4.2. Community care needs

The overall level of community care needs was between less needed and average need, suggesting low demand. Medical services had the highest level of need, followed by spiritual comfort and life care needs. Spiritual comfort and life care were the highest needs for older adults with extremely mild and mild dysfunction, respectively. The results were consistent with foreign research. $^{\rm 25}$ Older people with extremely mild and mild dysfunction can perform most ADLs independently. Thus, the demand is highest for a more supportive environment. 26 Medical services were the highest need for participants with moderate and severe dysfunction. The results are consistent with that of another study.²⁷ Older adults with moderate or severe dysfunction will likely be dependent on one or more ADLs. Older people with moderate and severe dysfunction usually have two or more diseases, which may restrict their functional activities and warrant complete bed rest.²⁷ As such, they hope to have good medical services. These results are in line with previous studies showing that China is facing a growing gap between diversified older adult care needs and provision in urban and rural areas. 17,28 Therefore, improving community care services such as day care, meal assistance, health counseling, and entertainment activities is critical. These services can improve the quality of life and happiness of older people while reducing the burden of care on families and society.

4.3. Factors affecting community care needs

The correlations between participants' demographic characteristics and community care needs showed that age, education level, monthly income, living situation, and degree of dysfunction influenced the development of HCBS. Social workers should pay more attention to the diversity of older people and their needs. Interventions to improve health status, relieve loneliness, increase social support, and maintain or improve the quality of life of older people need to be further developed and implemented. The results were consistent with foreign research.²⁹ These results confirmed that social factors influence community care utilization through complex interactions. It distinguished the level of influences at which these factors affect patterns of use and discussed the importance of reforming community care services.

The results showed that degree of dysfunction, age, monthly income, and living situation influence community care needs among

older people. The regression analysis indicated that degree of dysfunction was the strongest predictor of the demand for community care. Thus, the greater the degree of disability, the higher the demand for community care. Older people with a high degree of dysfunction hope to enhance their quality of life through increased community care. ³⁰

The results also indicated that the older the age, the higher the demand for community care. As older people age, the functions of various organs decline, resulting in two or more diseases and complications. Long-term physical illness leads to psychological problems and reduced ability to engage in social activities. Studies show that as age increases in older people, the need for community care also increases. ^{31,32}

The regression analysis indicated that the higher the monthly income, the higher the demand for community care. Since older people may have several diseases, long-term medication and rehabilitation may be required. However, for low-income families with no financial support, their income is mainly spent on dietary needs and medical treatment rather than community care services. Low-income families may also have less access to community care services. Some studies have demonstrated that financial challenges can pose major barriers to older people using care services. ^{33,34} Therefore, income support policies should be introduced to enhance older adults' purchasing power for HCBS, such as by improving the subsidy mechanism of HCBS and providing financial support for older adults, especially those with lower incomes and living alone.

The regression analysis indicated that living alone predicted greater community care needs. Previous studies indicated that older people who were socially isolated were at greater risk of poor health outcomes, while loneliness was positively associated with the risk of having unmet care needs. Tolder people who did not live with their children had a strong willingness to obtain community care services. In Loneliness is a common and serious problem among older people. Therefore, policy guidance for special groups should be strengthened to help older people who live alone obtain community care and improve their quality of life.

These findings indicate the necessity for crafting policies that consider the factors affecting community care needs of older people, including their health and individual needs.³⁷ Implementing care initiatives aimed at enhancing the quality of services delivered to older people is crucial, as is establishing community care programs to proactively address their individual care needs. The results of this study can inform the formulation of policy measures aimed at enhancing community care services for older people in China.

4.4. Limitations and future research

This study has some limitations. First, convenience sampling was used; therefore, the sample may not be representative of China's older adult population. Second, data were obtained only from older adults in South China, which limits generalizability. In the future, the relationship between the community care needs of older adults and factors influencing these needs should be examined by conducting a cohort study on a more diverse sample.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

Declaration of funding

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