

Investigation and Analysis on the Demand for Home-based Elderly Care Services in Chunjiang Community, Lu'an City

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Abstract

With the aggravation of the aging trend of China's population and the arrival of the era of big data, it has become a reality to integrate the application of information technology such as "Internet+" into the community home care. This report takes the Internet + community home care service demand as the research theme, analyzes the demand status of the elderly in Lu'an City through interviews and questionnaires, and finds out its demand characteristics. Based on the analysis of the current demand situation, SPSS statistical software was used to explore the influencing factors of the elderly's demand for Internet + community home-based elderly care services by taking the elderly's total demand for Internet + community home-based elderly care services as the dependent variable and classifying four categories as independent variables: personal factors, family factors, social factors and elderly care mentality factors. Finally, we find out the significant influencing factors, and then summarize and extract the development path and Countermeasures of more practical, efficient and intelligent community home-based elderly care service.

Keywords

Internet + Community Home Care Service; Community Pension Model; Pension Service Demand.

1. Demand Status of Internet + community Home Care Services in Lu'an

1.1. Data Source and Questionnaire

1.1.1. Data Source

This survey will take the elderly aged 60 and above in Chunjiang community as the practice survey object. During the social practice, considering that the survey object is the elderly group, this questionnaire will be distributed online and offline. The questionnaire collected data from the elderly in terms of consumption, demand, environment and feedback. During the survey in the health care center, we collected data mainly by asking questions from the elderly. At the same time, we also prepared two other questionnaires, which were filled in by staff and community leaders to improve the data information.

The inherent characteristics of Lu'an's aging are that it has entered the aging society early, the proportion of the elderly population is high, the aging process is fast, the proportion of the elderly population in rural areas is significant, and it is ahead of the economic and social development. The basic situation of population aging will always accompany and profoundly affect the economic and social development of Lu'an - actively coping with population aging is

a long-term task. Under the background of the development of "Internet+" today, the way of providing for the aged is also closely combined with "Internet+". The demand for elderly care services will become more diversified and personalized strategies, which will have an effect on the aging of the population. At present, all communities in Lu'an actively respond to the call of the government and explore the development mode of "Internet+" home-based elderly care service. The two communities we surveyed have made some practical achievements in this new model of elderly care service. Through the survey of these two communities, we obtained data and analyzed it, hoping to help the community home-based elderly care service develop better. A total of 255 questionnaires were distributed in this survey. After eliminating 22 invalid questionnaires caused by various factors, 233 valid questionnaires were finally obtained. We will finally get these effective questionnaires as the research object, extract the relevant data for research.

1.1.2. Questionnaire

In order to understand the current development of Internet + home-based elderly care services in Lu'an and the main needs of the elderly for elderly care services, we divided the questionnaire into four parts, with a total of 14 questions. The first part investigates the basic information of the elderly, including gender, age, education level, economic source and health status, which is divided into five small questions; The second part investigates the family status of the elderly, including the number of children and whether the residence is accompanied, which is divided into two small questions; The third part investigates the current situation of social elderly care services, including whether they have contacted the elderly care services provided by the society, whether they understand the Internet + community home care, whether they can skillfully operate some intelligent electronic products, and the consumption ability of community home care services, which is divided into four small questions; The fourth part investigates the current needs of the elderly for elderly care services, that is, the mentality of the elderly, including whether they often participate in the elderly activities organized by the community, whether they need the Internet + home-based elderly care model, and what services they want the community to provide, which are divided into three small questions. These questionnaires provide us with a large number of data references. At the same time, in the process of social practice, the staff and relevant principals provide us with comprehensive information of the community, which provides great help for our research.

1.2. Demand Status of Internet + Community Home Care Services

The author extracted three kinds of demand questions from the questionnaire for analysis, including life care services, spiritual counseling services and medical services, and presented them in the form of matrix questions in the questionnaire. Before the matrix question, we set a front question: "do you have a demand for the Internet +home care model?" the data showed that 53.22% of the people said they had a demand for this model. Then, nearly half of the respondents in our questionnaire still have no demand for the Internet + home care service mode. What is the reason? Is it because the elderly do not understand this pension model, or because it is too expensive for the elderly in Lu'an, or because the Internet + home care services that can be provided in Lu'an City are not easy for the elderly to take care of their children at home or go to nursing homes?

With these questions in mind, we continue to carefully analyze the needs of the elderly.

1.2.1. Demand for Internet + Community Home Care Services in Lu'an

(1) The needs of the elderly for life care services. According to the psychological and physiological research on the elderly, even if there is no disease, the elderly's self-care ability will significantly decline after the age of 85. Among them, 25% of the people are physically weak and need professional care compared with others. At the same time, with the development of

society, the family structure has changed, and the problem of population aging has become more and more serious. More and more elderly people will need home-based services, and with the help of others, they will be given daily care.

Some elderly people are unable to take care of themselves due to age or illness, so they need life care services. Life care services include all aspects of clothing, food, housing and transportation, and can provide basic housekeeping services such as laundry and cleaning, cooking, shopping, etc; Or send the unattended elderly to community health care centers and nursing homes, which can help the elderly get care and participate in some recreational activities to enrich their lives. At the same time, artificial intelligence technology at home is also gradually mature. The elderly can solve the problems in life through the help of artificial intelligence such as "little love students" at home. They can use smart bracelets and watches to monitor their physical conditions and facilitate their children to locate them to prevent the elderly from getting lost.

Table 1. Distribution statistics of life nursing service demand 1

Category	Demand items	Degree of demand	Number of people	percent age	Average score
Life care service demand	Intelligent elderly care products (bracelets, watches, etc.)	in great request	23	9.87%	3.12
		More needed	51	21.89%	
		commonly	99	42.49%	
		Not required	50	21.46%	
		Not at all	10	4.29%	
	Home care call	in great request	46	19.74%	3.6
		More needed	88	37.77%	
		commonly	67	28.76%	
		Not required	24	10.30%	
		Not at all	8	3.43%	
	Housekeeping call	in great request	31	13.30%	3.37
		More needed	81	34.76%	
		commonly	72	30.90%	
		Not required	41	17.60%	
		Not at all	8	3.43%	
	Shopping service call	in great request	35	15.02%	3.39
		More needed	72	30.90%	
		commonly	83	35.62%	
		Not required	34	14.59%	
		Not at all	9	3.86%	

(2) The needs of the elderly for spiritual counseling services. We often find that the elderly are easily deceived into buying expensive health care products, but when their children try to admonish them, they will make the elderly unhappy, resulting in conflicts with their children. Many of these are due to the lack of communication and companionship of the elderly. In addition to meeting their basic needs, the elderly would like to have emotional exchanges with their family and friends and desire to interact with their younger generation. For them, this is not only a kind of spiritual enjoyment, but also an urgent need to get a sense of identity from

their families and society, so that they can find spiritual support. If you have been to a nursing home, it is not difficult to find that most old people want young people to visit them often and chat with them. However, with the change of family structure and social idea, more and more elderly people live in nursing homes or live alone at home, and they need to obtain spiritual satisfaction.

Spiritual counseling services include online chat service, cultural activities service and psychological counseling service. The elderly can contact their family and friends at any time through social software such as wechat, "face-to-face chat", and can participate in cultural and recreational activities organized by the community, such as health lecture, calligraphy, Tai Chi teaching, dance competition, table tennis room, etc. At the same time, the elderly can be enlightened by professionals when they are depressed, which is the best for their physical and mental health.

Table 2. Demand statistics of spiritual counseling service 2

Category	Demand items	Degree of demand	Number of people	percentage	Average score
Spiritual counseling service	Online escort chat	in great request	38	16.31%	3.12
		More needed	53	22.75%	
		commonly	90	38.63%	
		Not required	45	19.31%	
		Not at all	7	3%	
	Cultural activities services	in great request	42	18.03%	3.6
		More needed	80	34.33%	
		commonly	89	38.20%	
		Not required	17	7.30%	
		Not at all	5	2.15%	
	Psychological counseling services	in great request	37	15.88%	3.37
		More needed	56	24.03%	
		commonly	101	43.35%	
		Not required	29	12.45%	
		Not at all	10	4.29%	

(3) The elderly's demand for medical safety services. Medical service is an important and necessary part of home-based elderly care service. Many elderly people suffer from heart disease, hypertension and other diseases that will suddenly attack, or Parkinson's disease that requires long-term rehabilitation training. It is obviously unrealistic to stay in a hospital. Many old people will choose to provide for the aged at home, while their children are busy with work and often cannot take care of them in time. Emergency medical services include rehabilitation care, telemedicine monitoring services, electronic archives services, and SOS emergency telephone services. Rehabilitation nursing can enable the elderly to carry out rehabilitation training at home; Telemedicine monitoring service can provide online diagnosis and treatment, and the elderly can know their physical condition without going to the hospital; The electronic file service can store the medical information of the elderly, facilitate the provision of past medical history, and observe the trend of physical indicators; SOS emergency telephone service can quickly call for help in case of emergencies such as heart attack, gas leakage and accidents at home, so that professionals can implement rescue at the first time. This kind of medical safety service can effectively protect the life safety of the elderly and provide a reassuring pension environment.

Table 3. Statistics of medical safety service demand 3

Category	Demand items	Degree of demand	Number of people	percentage	Average score
Medical safety service demand	SOS emergency telephone service	in great request	68	29.18%	3.12
		More needed	90	38.63%	
		commonly	53	22.75%	
		Not required	17	7.30%	
		Not at all	5	2.15%	
	Telemedicine monitoring service	in great request	51	21.89%	3.6
		More needed	90	38.63%	
		commonly	75	32.19%	
		Not required	12	5.15%	
		Not at all	5	2.15%	
	Electronic health record service	in great request	43	18.45%	3.37
		More needed	100	42.92%	
		commonly	76	32.62%	
		Not required	10	4.29%	
		Not at all	4	1.72%	
	Rehabilitation therapy	in great request	54	23.18%	3.39
		More needed	92	39.48%	
		commonly	66	28.33%	
		Not required	12	5.15%	
		Not at all	9	3.86%	

1.2.2. Characteristics of the Elderly's Demand for Internet +Community Home Care Services

(1) Economic consumption demand. Due to the implementation of the family planning policy and the change of fertility concept, the 421 family model has increasingly become the basic family structure in China, which makes many young people face the situation that there are four old families and one small family. In addition, after the outbreak of the new crown epidemic in 2019, the epidemic still poses serious economic pressure on most people, and young people continue to lose their jobs or even find it difficult to live. In this case, according to the data collected from the questionnaire, a total of 63.09% of the elderly have a monthly income of less than 2500 yuan, and 76.39% of the elderly can afford a community home-based pension cost of less than 400 yuan. In the course of our social practice research, we learned that most of the pension institutions in our city need more than 2500 yuan per month. Most of the elderly have no pension due to work and their income comes from their children. In addition to the monthly pension center expenses, they have no ability to spend on community pension services.

(2) The elderly generally hope that the community can provide more services and a good living environment. According to the data obtained from our survey, 56.65% of the elderly are in unhealthy physical condition. They are all home-based elderly care patients with diseases. Their most urgent need is still the demand for life care. With more and more elderly people, their physical health condition will weaken, and their demand for life care will continue to increase. The high medical demand of the elderly is due to the decline of their physical function, the high incidence of chronic diseases and other physiological characteristics. In terms of health demand, the elderly's medical service demand is obvious, but the service demand and service use are unbalanced. At the same time, we can see this situation in the two community health care service centers we surveyed: the number of nursing workers is less than half of the number of elderly people, and it is a group service, which needs to be on call, and two or three people need to live in the same room. In addition, some remote health care centers do not even have

places for the elderly to exercise, let alone recreational activities. Some institutions even prohibit the elderly from going out in order to prevent accidents, which has caused psychological problems of the elderly to a certain extent. According to the questionnaire data, only 14.47% of the elderly do not need the elderly care services provided by the community. Most of the elderly hope that the community can provide high-quality and timely services. In terms of the demand for livable environment, the elderly's overall preference for housing and living facilities, and the construction of aging facilities at the community level need to be improved.

(3) The elderly generally hope to get spiritual comfort and social identity. After the elderly withdraw from the labor market, their original group network and professional identity gradually disappear. The elderly's participation in social activities has become an important way for them to obtain a sense of satisfaction, belonging and identity. In terms of social participation needs, the elderly's overall poor social participation, low recognition of participation, long distance and little interest in activities are the biggest obstacles for the elderly's social participation, and at this time they will be eager for psychological counseling and spiritual comfort. When the basic material needs are met, people pay more and more attention to the spiritual comfort needs of the elderly. It is not difficult to find that most of the elderly in the nursing home welcome young people to visit, and chatting with young people can bring them some psychological comfort. However, the elderly still prefer to have regular family visits, chat with friends and participate in activities.

2. Influencing Factors of the Demand for Internet + Community Home-based Elderly Care Services in Lu'an

Through the previous article, we analyzed the specific needs and attitudes of the elderly under the background of "Internet+" community home-based care, and more than half of the elderly said they needed this service. The following will take the elderly's demand for "Internet+" home-based elderly care service as the dependent variable, and find out the factors affecting the elderly's demand for community home-based elderly care service through difference test and logistic analysis.

2.1. Analysis of Influencing Factors

Through the survey, we found that although the elderly have a demand for elderly care services, there are many factors that affect their demand. For example, some elderly people choose to provide for the aged in pension institutions because there is no one to care for them at home, some because they are accompanied by peers, and some because they can provide professional rehabilitation training, etc.

From the perspective of "gender", "age", "education level", "physical health status", "monthly income level", residential status ", " number of children ", " whether we have contacted the elderly care services provided by the society ", " whether we have heard of the Internet +community home care services ", " whether we can skillfully operate smart devices ", " the acceptable consumption level for the Internet +home care services " "Whether to participate in community activities for the elderly", "whether there is demand for Internet +home-based elderly care services" and "demand for types of community services" are 14 factors to make a questionnaire. The paper studies whether the elderly need Internet +community home-based elderly care services and takes them as independent variables, which are divided into four categories according to personal factors, family factors, social factors and elderly care mentality factors.

2.2. Descriptive Analysis of Variables

(1) Personal factor analysis

Table 4. Descriptive statistics of personal factor variables

Personal factors	Option	Subtotal	Proportion
Gender	male	109	46.78%
	female	124	53.22%
Age	60-69 years old	87	37.34%
	70-79 years old	91	39.06%
	80-89 years old	34	14.59%
	90 years old and above	21	9.01%
Education level	Primary school and below	95	40.77%
	junior high school	75	32.19%
	High school (including technical secondary school and technical school)	30	12.88%
	College degree or above	33	14.16%
health condition	Unhealthy	132	56.65%
	health	101	43.35%
Monthly income level	1500 yuan and below	63	27.04%
	1501-2500 yuan	84	36.05%
	2501-3500 yuan	45	19.31%
	3501-4500 yuan	21	9.01%
	4501 yuan and above	20	8.58%

A total of 233 valid questionnaires were divided into "gender", "age", "education level", "physical health status" and "monthly income level" according to personal factors. The results of table 2-1 showed that the number of men accounted for 46.78% of the total number, and the number of women accounted for 53.22% of the total number; The number of people aged 60-69 accounted for 37.34% of the total number, the number of people aged 70-79 accounted for 39.06%, the number of people aged 80-89 accounted for 14.59%, and the number of people aged 90 and above accounted for 9.01%; The total number of people with primary and secondary school education or below accounted for 40.77%, the number of people with junior high school education accounted for 32.19%, the number of people with high school (including technical secondary school and technical school) education accounted for 12.88%, and the number of people with college education or above accounted for 14.16%; The number of unhealthy people accounted for 56.65% of the total, and the number of healthy people accounted for 43.35% of the total; In the monthly income level, the number of people with income below 1500 yuan accounted for 27.03%, the number of people with monthly income of 1501-2500 yuan accounted for 36.02%, the number of people with monthly income of 2501-3500 yuan accounted for 9.01%, and the number of people with monthly income of 4501 yuan and above accounted for 8.58%.

(2) Analysis of family factors

The 233 valid questionnaires were divided into "living status" and "number of children" according to family factors. The table shows that the number of people living alone accounted for 20.60% of the total number of people, and the number of people living with children, their wives and their children's wives accounted for 27.90%, 32.62% and 16.74% of the total number of people respectively, and other living conditions accounted for 2.15%. The number of children with 0 or 1 accounted for 24.03%, with 2 or 3 children accounted for 36.48%, 23.61%, and with 4 or more children accounted for 15.88%.

Table 5. Descriptive statistics of family factor variables

Family factors	Option	Subtotal	Proportion
Living conditions	Living alone	48	20.6%
	Living with children	65	27.9%
	Live with your wife	76	32.62%
	Living with children and their wives	39	16.74%
	other	5	2.15%
Number of children	0 or 1	56	24.03%
	2	85	36.48%
	3	55	23.61%
	4 or more	37	15.88%

(3) Analysis of social factors

Table 6. Descriptive statistics of social factor variables

Social factors	Option	Subtotal	Proportion
Are you exposed to the pension services provided by social organizations and enterprises	Yes	73	31.33%
	Occasionally	112	48.07%
	absence	48	20.6%
Have you heard of Internet +community home care	Heard of it	102	43.78%
	No	131	56.22%
Can you skillfully operate the currently developed smart phones, smart bracelets and other electronic products	can	65	27.9%
	No	168	72.1%
What is the monthly charge range for community home-based elderly care services	Below 200 yuan	81	34.76%
	200-400 yuan	97	41.63%
	400-600 yuan	40	17.17%
	Over 600 yuan	15	6.44%

According to the social factors, 233 valid questionnaires were divided into "have you ever contacted the elderly care services provided by the society", "have you heard of the Internet +community home care services", "can you skillfully operate smart devices" and "the acceptable consumption level of the Internet +home care services". Among them, 31.33% have contacted the elderly care services provided by the society, 48.07% have occasionally contacted and 20.60% have not contacted, respectively; 43.78% of the people had heard of the new pension model of Internet + home care service, while 56.22% had not heard of it; Only 27.90% of the people can skillfully operate some intelligent devices, while 72.01% of the people can not skillfully operate them; Most people can accept the consumption of Internet + home care services below 400 yuan, of which 34.76% accept less than 200 yuan, 41.63% accept 200-600 yuan, 17.17% accept 400-600 yuan, and 6.44% accept more than 600 yuan.

(4) An analysis of the psychological factors of providing for the aged

The 233 valid questionnaires were divided into "have you participated in the elderly activities held by the community", "whether there is demand for Internet +home-based elderly care services" and "demand for types of community services" according to the elderly care mentality factors. Only 39.48% of them have participated in the elderly activities held by the community,

while 60.52% have never participated; The number of people with and without demand for Internet +home-based elderly care services was the same, accounting for 53.22% and 46.78% respectively; From the matrix table of the demand for community service types, we can see that most people want the community to enrich the types of elderly care services, and only 11.35% and 3.12% do not need or have no such demand at all.

Table 7. Descriptive statistics of pension mentality factors

Pension mentality factors	Option	Subtotal	Proportion
Whether to participate in community activities	no	141	60.52%
	yes	92	39.48%
Internet +home care service demand	No need	109	46.78%
	In need	124	53.22%

3. Test and Regression Analysis of the Difference in Demand for Internet + Community Home-based Elderly Care Services in Lu'an

3.1. Difference Test of the Demand for Internet + Community Home Care Services

3.1.1. Difference Test based on Personal Factors

The difference test is to study the differences in different dimensions of variables through independent sample t test, chi square test and one-way test analysis of variance and other test methods. In this analysis, independent sample t-test and one-way ANOVA are mainly used according to the characteristics of the data.

Table 8. Analysis results of differences in gender and health status

Variable	Gender	Number	Average (E)	Standard deviation	T	Degree of freedom sig
Gender	male	109	23.77	6.936	-1.17	0.243
	female	124	24.9	7.739		
Physical health	Unhealthy	132	23.44	6.415	2.152	0.033
	health	101	25.59	8.355		

According to the above independent sample t-test results, the significance test of gender difference in demand is 0.243, which is significantly greater than 0.05, indicating that there is no difference in demand between different genders. According to the average value, women's demand for Internet +community home care services is slightly higher than men's. There is no significant statistical difference in the demand for Internet +community home-based care services between genders, because the sig value of 0.243 is greater than the standard of 0.05, so the original hypothesis cannot be rejected. The significant test of the difference in the physical health status of the needs is 0.033, which is significantly less than 0.05, indicating that there are differences in the needs of different physical health status. According to the average value, the demand of the unhealthy elderly for Internet +community home-based elderly care services is slightly higher than that of men. There is no significant statistical difference in the demand for Internet +community home-based elderly care services between genders, because the sig value of 0.243 is greater than the standard of 0.05, so the original hypothesis cannot be rejected.

Table 9. Analysis results of differences in the demand for Internet +community home care services in age, education level and monthly income level

Variables (personal factors)	Option	N	Average value	S.D.	F	Sig.	Multiple comparison
Age	60-69 years old	87	25.4	6.351	1.369	0.253	/
	70-79 years old	91	24.25	8.273			
	80-89 years old	34	23.38	5.371			
	90 years old and above	21	22.24	9.576			
Education level	Primary school and below	95	25.6	7.614	4.704	0.003	1> 3>2>4
	junior high school	75	22.65	6.358			
	High school (including technical secondary school and technical school)	30	27.1	6.572			
	College degree or above	33	22.27	8.311			
	total	233	24.37	7.38			
Monthly income level	1500 yuan and below	63	25.94	8.211	1.708	0.149	/
	1501-2500 yuan	84	24.14	7.471			
	2501-3500 yuan	45	23.53	6.302			
	3501-4500 yuan	21	25.14	7.192			
	4501 yuan and above	20	21.5	5.96			

According to the results of the above one-way ANOVA, the demand for Internet +community home-based elderly care services is only different in the level of education, because the significance test result is 0.003, which is significantly less than 0.05. According to the results of multiple comparisons, it can be seen that the demand for Internet +community home-based elderly care services in primary school and below is greater than that in junior high school and above than that in junior high school and above. The demand based on the monthly income level is significantly greater than 0.05, that is, there is no significant difference in the demand for Internet +community home-based elderly care services based on the income level; The age-based demand is significantly greater than 0.05, that is, there is no significant difference between the age-based demand for Internet +community home-based elderly care services.

3.1.2. Difference Test based on Family Factors

Table 10. Analysis results of differences in housing status and the number of children in the demand for home-based elderly care services in the Internet + community

Variable	Option	N	Average value	S.D.	F	Sig.	Multiple comparison
Living conditions	Living alone	48	24.13	9.106	0.051	0.995	/
	Living with children	65	24.55	7.295			
	Live with your wife	76	24.53	6.23			
	Living with children and their wives	39	24.18	7.705			
	other	5	23.6	6.229			
Number of children	0	2	32	11.314	1.071	0.372	/
	0 or 1	54	24.39	7.834			
	2	85	25.11	6.906			
	3	54	23.7	6.52			
	4 or more	38	23.26	8.642			

According to the results of the above one-way ANOVA, there is no significant difference in the demand for Internet +community home-based elderly care services in terms of living conditions and the number of children, because the significance test results are 0.995 and 0.372 respectively, which are significantly greater than 0.05.

3.1.3. Difference Test based on Social Factors

Table 11. Difference analysis results of Internet +community home-based elderly care service demand in terms of whether they have contacted the elderly care services provided by the society and acceptable home-based elderly care service fees

Variable	Option	N	Average value	S.D.	F	Sig/	Multiple comparison
Have you been exposed to the pension services provided by the society	Yes	73	23.42	7.744	0.886	0.414	/
	Occasionally	112	24.86	6.689			
	absence	48	24.69	8.324			
	total	233	24.37	7.38			
Acceptable home care service fees	Below 200 yuan	81	25.73	8.448	2.568	0.039	1> 2>3>4
	200-400 yuan	97	24.18	6.691			
	400-600 yuan	40	23.68	6.415			
	Over 600 yuan	14	20.93	6.07			

According to the above one-way ANOVA results, there is only difference in the acceptable home-based elderly care service fees for the Internet + community home-based elderly care service demand, because the significance test result is 0.039, which is significantly less than 0.05. According to the results of multiple comparisons, it can be seen that the demand for Internet + community home-based elderly care service is less than 200 yuan, more than 200-400 yuan, more than 400-600 yuan and more than 600 yuan. The significant demand based on whether or not they have contacted the elderly care services provided by the society is 0.414, which is significantly greater than 0.05, that is, there is no significant difference in the demand for Internet + community home-based elderly care services based on whether or not they have contacted the elderly care services provided by the society.

Table 12. Difference analysis results of Internet + community home-based elderly care service demand on whether you have heard of Internet +community home-based elderly care service and whether you can operate smart devices well

Variables (social factors)	Option	Number	Average	S.D.	T	Sig.
Have you heard of the Internet + community home care service	Heard of it	102	23.28	6.07	-2.092	0.038
	Never heard of it	130	25.25	8.208		
Can you skillfully operate intelligent devices	can	65	24.66	8.233	0.37	0.712
	No	168	24.26	7.046		

According to the above independent sample t-test results, the significance test of the difference in the demand for Internet + community home care services in the mature operation of intelligent devices is 0.712, which is significantly greater than 0.05, indicating that there is no difference in the demand for Internet + community home care services in the mature operation of intelligent devices, which can be seen from the average value, The elderly who are familiar with the operation of smart devices have a slightly higher demand for Internet + community home-based elderly care services than those who are not familiar with the operation of smart

devices. There is no significant statistical difference in the demand for Internet + community home-based elderly care services in terms of whether smart devices can be operated well, because the sig value of 0.712 is far greater than the standard 0.05, so the original hypothesis cannot be rejected.

The significance test of the difference in the demand for Internet + community home-based elderly care service in whether they have heard of Internet + community home-based elderly care service is 0.038, which is significantly less than 0.05, indicating that there are differences in the demand for Internet + community home-based elderly care service. According to the average value, the demand for Internet + community home-based elderly care service for the elderly who have heard of this new type of elderly care service is slightly higher than that who have not heard of it. There is no significant statistical difference in the demand for Internet + community home-based care services between genders, because the sig value of 0.243 is greater than the standard of 0.05, so the original hypothesis cannot be rejected.

3.1.4. Difference Test based on Pension Mentality Factors

Table 13. Difference analysis results of Internet + community home care service demand on whether to often participate in community activities for the elderly and whether there is demand for Internet + community home care service

Variables (pension mentality factors)	Option	Number	Average (E)	S.D.	T	Sig
Do you often participate in activities for the elderly held by the community	no	141	24.42	7.722	0.646	231
	yes	92	24.3	6.864		
Whether there is demand for Internet + community home care services	No need	109	26.39	7.691	4.027	0
	In need	124	22.6	6.638		

According to the above independent sample t-test results, the significant difference test of the demand for Internet + community home-based elderly care service in the demand for Internet + community home-based elderly care service is 4.027, which is significantly greater than 0.05, indicating that there is no difference in the demand for Internet + community home-based elderly care service. According to the average value. The elderly without demand have slightly higher demand for Internet + community home-based elderly care services than those with demand. There is a significant statistical difference in the demand for Internet + community home-based elderly care services, because the sig value of 4.027 is far greater than the standard 0.05, so the original hypothesis cannot be rejected.

The significance test of the difference in the demand for Internet + community home-based elderly care services was 0.646, which was significantly greater than 0.05, indicating that there was no difference in the demand for the elderly who often participated in community activities. According to the average value, the demand for Internet + community home-based elderly care services of the elderly who did not often participate in community activities was slightly higher than that of the elderly who often participated. There is a significant statistical difference in the demand for home-based elderly care services in the Internet + community on whether to often participate in activities for the elderly held in the community, because the sig value of 0.646 is greater than the standard of 0.05, so the original hypothesis cannot be rejected.

3.2. Logistic Regression Analysis on the Demand for Internet + Community Home Care Services

Through independent sample t-test and one-way ANOVA on different variables, we know that the elderly's demand for Internet + community home-based elderly care services will be affected by different factors. The factors we investigated and studied are divided into four

categories: gender, age, education level, physical health status and monthly income level according to personal factors; According to family factors, it can be divided into "living conditions" and "number of children"; According to social factors, they are divided into "whether they have contacted the elderly care services provided by the society", "whether they have heard of the Internet + community home care services", "whether they can skillfully operate smart devices" and "the acceptable consumption level of the Internet + home care services"; According to the elderly care mentality factors, they are divided into "whether they have participated in community activities for the elderly", "whether they have demand for Internet + home-based elderly care services" and "demand for types of community services".

In order to get rid of the limitations of the above analysis, the binary logistic method will be used to establish a regression model. The dependent variable is "the total demand of the elderly for the Internet+community home-based elderly care service", and the data will continue to be analyzed. When the dependent variable is 1, there is no demand for the Internet + community home-based elderly care service, and when the dependent variable is 2, there is demand for the Internet + community home-based elderly care service.

Assume the model in advance:

H1: the dependent variable is a binary variable.

H2: at least one argument. The independent variable can be continuous variable or classified variable.

H3: each sample is independent of each other. Classification variables must be mutually exclusive.

H4: the minimum sample size is 15 times the number of independent variables.

H5: there is a linear relationship between the logit conversion values of continuous independent variables and dependent variables.

H6: there is no collinearity between independent variables.

H7: no obvious outliers.

The data in this paper meet the above seven assumptions.

Binary logistic analysis was conducted on the influencing factors according to four types of dependent variables, and the following results were obtained:

According to the analysis results in the above table: The variable "gender" $p > 0.05$ has no significant impact on the demand for Internet + community home-based elderly care services, and the willingness of men is 0.979 times that of women, which is almost the same. The variable "age" $p > 0.05$ has no significant impact on the demand for Internet + community home-based elderly care services, but the number of people aged "70-79", "80-89" and "90 and above" is 1.149, 0.612 and 3.436 times that of "60-69", respectively. It can be inferred that the older the age, the higher the demand for Internet + community home-based elderly care services.

The variable "education level" $p < 0.05$ has a significant impact on the demand for Internet + community home care services. According to the data, the demand for Internet + community home care services of "junior high school", "senior high school, including technical secondary school, technical school" and "junior college and above" is 2.429, 1.629 and 1.776 times that of "primary school and below" respectively, without obvious regularity. We speculate that the higher the education level, the higher the income level, the demand for Internet + community home care services is also higher.

Table 14. Logistic regression analysis of the total demand for Internet+community home care services

Explanatory variables and grouping	B	S. E	Exp (b)
Gender (reference group: male)	-0.039	0.07	0.962
Age (reference group: 60-69 years)			
Age (70-79 years)	0.139	0.079	1.149
Age (80-89 years)	-0.49	0.11	0.612*
Age (90 years and above)	1.234	0.134	3.436*
Education level (reference group: primary school and below)			
Education level (junior high school)	0.888	0.079	2.429*
Education level (high school, including technical secondary school and technical school)	0.488	0.112	1.629*
Education level (junior college or above)	0.574	0.132	1.776*
Physical health (reference group: unhealthy)	-0.573	0.08	0.564*
Monthly income level (reference group: 1500 yuan and below)			
Monthly income level (1501-2500 yuan)	-0.022	0.085	0.979
Monthly income level (2501-3500 yuan)	0.07	0.112	1.073
Monthly income level (3501-4500 yuan)	0.624	0.152	1.867*
Monthly income level (above 4500 yuan)	0.171	0.166	1.187
Who do you currently live with? (reference group: living alone)			
Who do you currently live with? (living with children)	-0.668	0.099	0.513*
Who do you currently live with? (living with his wife)	-1.335	0.097	0.263*
Who do you currently live with? (living with children and their wives)	-1.193	0.116	0.303*
Who do you currently live with? (others)	-1.366	0.242	0.255*
Number of children (reference group: 0 or 1)			
Number of children (1)	21.717	4832.238	2700861175
Number of children (2)	22.073	4832.238	3857815239
Number of children (3)	21.534	4832.238	2250395427
Number of children (4 or more)	21.89	4832.238	3211713183
Are you exposed to the elderly care services provided by the society (reference group: Yes)			
Are you exposed to the pension services provided by the society (occasionally)	0.476	0.083	1.609*
Are you exposed to the pension services provided by the society (no)	0.796	0.104	2.217*
Have you heard of Internet home care services (reference group: heard of)	-19.171	8569.133	0*
Can you skillfully operate intelligent products (reference group: Yes)	0.148	0.089	1.159
Consumption level of community home care services (reference group: less than 200 yuan)			
Consumption level of community home care services (200-400 yuan)	-20.221	12709.662	0
Consumption level of community home care services (400-600 yuan)	-19.641	12709.662	0
Consumption level of community home care services (more than 600 yuan)	-19.145	12709.662	0
Do you often participate in community organized activities for the elderly? (reference group: no)	0.962	0.073	2.616*

The variable "physical health" $p < 0.05$ has a significant impact on the demand for Internet + community home-based elderly care services. According to the data, the "healthy" body is 0.564 times that of "unhealthy", so it can be inferred that more unhealthy elderly people need Internet + community home-based care services. The variable "monthly income level" $p > 0.05$ has no significant impact on the demand for Internet + community home-based elderly care services. According to the data, the monthly income levels of "1501-2500 yuan", "2501-3500 yuan", "3501-4500 yuan" and "more than 4500 yuan" are 0.979, 1.073, 1.867 and 1.187 times that of "less than 1500 yuan". It can be speculated that the elderly with high income level will be more willing to spend money to improve the quality of life and want to get Internet + community home-based elderly care services. The variable "living condition" $p > 0.05$ has no significant

impact on the demand for Internet + community home-based elderly care services. According to the data, the demand for "living with children", "living with parents", "living with parents" and "others" is 0.513, 0.263, 0.303 and 0.225 times that of "living alone", respectively. It can be inferred that a large number of elderly people live by themselves, and they often need Internet + community home-based elderly care services. (not statistically significant). The variable "number of children" $p > 0.05$ has no significant impact on the demand for Internet + community home-based care services. According to the data, the number of children with "1", "2", "3" and "4 or more" is 2700861175, 3857815239, 2250395427 and 3211713183 times that of "0" respectively, so only a few elderly people have no children, and most elderly people have multiple children. It is speculated that the elderly with a large number of children, whose children and women bear lower maintenance costs, can provide a better pension environment for the elderly. The variable "have you contacted the elderly care services provided by the society" $p > 0.05$ has no significant impact on the demand for Internet + community home-based elderly care services. According to the data, the expectations of the elderly who "occasionally contacted" and "never contacted" on the Internet + community home-based elderly care services are 1.609 and 2.217 times higher than those who "contacted" the elderly care services provided by the society, respectively. It is speculated that the elderly who often contacted the elderly care services provided by these societies, The elderly who occasionally contact or have not contacted these services will look forward to the high-quality services brought by the new elderly care model of Internet + community home care services. The variable "have you heard of Internet + community home-based elderly care service" $p < 0.05$ has a significant impact on the demand for Internet + community home-based elderly care service. It can be seen from the data that all the elderly who have heard of the Internet + community home-based elderly care service are looking forward to this new elderly care model. It can be seen that with the efforts of the state and society, more and more people-oriented services are constantly innovated and optimized, which will bring you high-quality experience.

The variable "can skillfully operate intelligent products" $p > 0.05$ has no significant impact on the demand for Internet + community home-based elderly care services. It can be seen from the data that the elderly who can not skillfully operate smart devices are 1.159 times as many as those who can skillfully operate smart devices. According to the data, most elderly people are not proficient in operating smart devices. However, with the development of society, the integration of Internet and smart devices into elderly care services is an inevitable trend. It can teach them to use some smart devices and improve the quality of life for the elderly.

The variable "consumption level of community home-based elderly care service" $p < 0.05$ has a significant impact on the demand for Internet + community home-based elderly care service. It can be seen from the data that most people want to reduce consumption as much as possible for those whose demand for Internet + community home-based elderly care services is less than 200 yuan, more than 200-400 yuan, more than 400-600 yuan and more than 600 yuan.

The variable "whether to often participate in community activities for the elderly" $p > 0.05$ had no significant impact on the demand for Internet + community home-based elderly care services. The data shows that the elderly who have not participated in community activities have 2.616 times more demand for Internet + community home-based elderly care services than those who have participated in activities. It is speculated that under the description of the elderly who have participated in the activities, the elderly who have not participated in these activities will expect more high-quality elderly care services.

(3) Empirical analysis

① Personal factors. The data analysis shows that "health status" and "education level" have a significant impact on the demand for Internet + community home-based elderly care services. The physical condition of the elderly will gradually deteriorate with age, and the physical quality of most elderly people will decline rapidly around the age of 85. At this time, we need a

health care center that can take care of the elderly professionally. At the same time, the elderly with higher education level may better understand the advantages of the Internet + community service center and be more likely to accept some new things, such as artificial intelligence and bracelet watches, which can help them better enjoy some new pension services.

② Family factors. There are two kinds of family factors in the questionnaire survey: living conditions and the number of children. These two data did not pass the significance test, but through logistic regression analysis, it was found that the elderly living alone and with more children had higher demand for Internet + community home-based elderly care services: the elderly living alone lacked care and needed more systematic and professional elderly care services provided by the community, while the elderly with more children had less support pressure and could withstand higher quality consumption.

③ Social factors. The analysis results of social factors show that the affordability of the elderly for community home-based care will significantly affect the demand for Internet + community home-based care services. The elderly have no ability to make money. Most of their economic sources come from their children. The lower the cost of Internet + community home-based care services, the more attractive it will be to them. At the same time, through the publicity of the community and the description of other elderly people, the elderly who have not enjoyed the elderly care services provided by the society will look forward to the Internet + community home-based elderly care services, and the expectation of the elderly will be in direct proportion to the publicity of the community.

④ Pension mentality factors. Among the elderly care mentality factors, the variable "have you heard of the Internet + community home-based elderly care service" significantly affects the needs of the elderly. The more the elderly understand this new elderly care model, the higher their expectations will be, which requires the society to strengthen the publicity of this elderly care model. At the same time, although the variable "can skillfully operate smart devices" cannot have a statistical impact, it reflects that most elderly people are very unfamiliar with smart products, which may make it difficult for the elderly to accept the new pension model of Internet + community home care services.

4. Policy Recommendations

4.1. Government Level

At this stage, China's pension service is still a government led pension service, so whether the government's leading role in pension service is correctly played will directly affect the development of China's pension service in the future. In order to strengthen the leading role of the government in elderly care services and promote the development of community home-based elderly care in China, it is necessary for all sectors of society to systematically consider the ways to strengthen the role of the government as the leader of elderly care. (1) We will accelerate the reform of pension service management institutions and improve policies, regulations and systems for pension services. (2) We will further reform the pension system and improve the top-level design of the pension service system. (3) We will improve the community home-based elderly care service network and a new elderly care service system that combines medical care and elderly care. (4) We will strengthen the construction of talent teams for elderly care services and vigorously develop the elderly care service industry.

4.2. Social Level

(1) Gradually develop the elderly community. (2) Community institutions should be professional and service-oriented. (3) Fully respect and inherit the traditional filial piety of the Chinese nation, and lay the foundation for the elderly care of family children. (4) Implement

differentiated management for the elderly care service industry. (5) Strengthen the publicity and guidance of voluntary service for the elderly.

4.3. Family Level

(1) Family participation. Increase publicity and advocacy efforts, guide the elderly and families to actively participate in the construction and service of home care beds, give full play to the role of family caregivers, and jointly improve the functions and levels of home care, so as to meet the wishes and needs of the elderly.

(2) Change ideas. For a long time, the elders' dependence, dependence and expectation on children's support may be justified. For the only child parents of contemporary people with only one child, one of the major security content of their pension is to change this idea. The parents of the only child should consciously take the initiative from "relying on their children" to "relying on themselves" ideologically, and actively change from "relying on heaven" to "independent pension" in practice. The essence of this "independent pension" is to make the elderly reduce their expectations of their children subjectively. For most only child parents, the change of pension concept may be the key link to solve the pension problem. Parents should establish the concept and consciousness of "independent pension", which can provide beneficial help for parents (especially the parents of only child) to provide for the elderly to a certain extent. In addition to the existing policies and measures to solve the problems of the elderly in their old age, the transformation of the ideas of elderly parents and quasi elderly parents is also a very important task. It is necessary to gradually realize the transformation from "supporting the elderly by children" to "supporting the elderly by themselves", "supporting the elderly at home", "feeding the elderly back" and "supporting the elderly by themselves" through reverse education and publicity. A variety of ways of providing for the elderly, such as "elderly care for the elderly" and "community home care", have developed together.

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