Research on the Model of Combining Medical Care and Elderly Care for the Aged from the Perspective of "Internet+"

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Keywords: Population aging; combination of medical care and elderly care; comparative study.

Abstract: Purpose: Through research, it is imminent to implement the model of combining medical care and elderly care under the vision of "Internet +". The diagnosis and treatment of diseases, health management and education, and daily monitoring of chronic diseases need further research. Under the current situation of weakening of family care, insufficient support of elderly care institutions and the current situation, with medical treatment as the main body, family, community, and institution for the support of elderly care, a model of combining medical care and elderly care under the vision of "Internet +" will be constructed. Methods: The research adopts literature search method, questionnaire survey method, case interview method and comparative research method. Conclusion: Through the experimental group and the control group under the "Internet +" vision of the medical care integrated elderly care model implementation tracking the experimental group and the control group retested the elderly care service status survey, the subjects significantly reduced blood pressure, blood sugar, and blood lipids, which is beneficial With scientific understanding and statistics of patients' diseases, the subjects' overall satisfaction has been significantly improved.

1. Introduction

As of 2010, the number of elderly people over 60 in my country has reached nearly 178 million, accounting for 13.26% of the total population [1]. By 2014, people over 65 years old accounted for 10.1% of the total population, and the old-age dependency ratio had reached 13.76%[2]. The elderly population is rising rapidly. At the same time, due to the widespread implementation of family planning, the formation of the "four two one" family model with only one child has affected the industrial structure and social relations [3]. According to the data of the National Health Development Research Center of the National Health Commission: 220 million in 2015, 250 million in 2020, 360 million in 2030 (accounting for 25%, an average annual increase of more than 9.3 million), more than 400 million people in 2020, surpassing France, The current population of Germany, Italy, Japan and the United Kingdom are combined. In 2020, there are 30.67 million people over 80 years old. The World Bank’s "Implementing Effective Prevention and Control Strategies to Contain the Epidemic of Chronic Diseases in China" pointed out that if effective prevention and control strategies are not implemented, the number of Chinese people over the age of 40 suffering from cardiovascular disease, chronic obstructive pulmonary disease, diabetes and lung cancer will be in the future 20 years may increase to 2-3 times the current. Moreover, most elderly care institutions mainly provide simple living care services, with few medical services. For example, about 40% of elderly care institutions in Beijing have neither built-in clinics nor cooperate with surrounding medical institutions [4]. Therefore, the implementation of the "Internet +" model of combining medical care and nursing is imminent, and the diagnosis and treatment of diseases, health management and education, and daily monitoring of chronic diseases need further research. Under the current situation of weakening of family care, insufficient support of elderly care institutions, and the current situation, with medical treatment as the main body, family, community, and institution support for the elderly, a model of combining medical care and care for the elderly under the "Internet +" vision will be constructed.

The home care model and related supporting systems in the United States, the United Kingdom,

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Canada and Australia have also developed relatively mature. Beginning in the 1990s, developed countries such as Europe and the United States have actively adopted information technology to integrate resources in existing medical systems [5]. Some countries in Europe and the United States have entered an aging society in the 1980s, and they discourage the establishment of elderly care institutions, mostly focusing on home care[6]. On January 28, 2009, the U.S. industry and commerce sleeve collar held a round table meeting. IBM CEO Peng Shengming proposed a large health system for medical care, nursing, rehabilitation, and elderly care, including patient-centered hospital diagnosis and treatment service systems and The intelligence of the management system; the information standardization and interconnection of the regional medical service system centered on the residents' electronic health records; the elder care service intelligent system that focuses on the integration of "medicine" and "nourishment" for home care and institutional care[7].

2. Research method

In the research, we strictly abide by the principles and procedures in the research process, randomly select elderly people (people aged 60 and over) in different urban communities in Xi'an as the research objects, and establish electronic health records and chronic diseases (including hypertension, diabetes, coronary heart disease, brain disease). Service files for stroke, malignant tumor, chronic obstructive pulmonary disease, etc.). Screening was performed according to the inclusion and removal criteria, and after screening, the two groups were matched according to the ratio of age, gender and other factors. 120 elderly people were randomly selected as the survey subjects, 60 of them were provided with "Internet +" medical sharing services, and the other 60 were the control group. Make statistics on the physical conditions, needs and suggestions of the elderly in the elderly care service industry, and conduct single-factor analysis and multi-factor analysis on the factors affecting their health and satisfaction; conduct statistical analysis of the existing service types and items in the elderly care service industry, and The influencing factors are analyzed; the control group and the intervention group are compared and studied.

3. Results

Table1 Investigation on the status quo of elderly care services

factors		The experimental group (%)	The control group (%)	factors		The experimental group (%)	The control group (%)
gender	male	28 (47)	31 (52)		50 kg and under	5 (8)	5 (8)
	female	32 (53)	29 (48)		51-60 kg	12(20)	15(25)
age	60-75	39(65)	37(62)	weight	61-70 kg	25(42)	27(45)
	76-90	21(35)	23(38)		71-80 kg	12(20)	8(14)
medical history	High blood pressure, heart disease	24(40)	25(42)		81kg and above	6(10)	5(8)
	diabetes	21(35)	17(28)	Systolic blood pressure	90mmHg and under	10(17)	12(20)
	stroke	7(12)	5(8)		91-130mmHg	29(48)	24(40)
	A malignant tumor	1(2)	1(2)		131mmHg and above	21(35)	24(40)
	Chronic obstructive pulmonary disease	2(3)	1(2)	Fasting plasma glucose	⩽ 6.9mmol/L	41(68)	38(63)
	no	5(8)	11(18)		⩾	19(32)	22(37)

					7.0mmol/L		
A family history of	yes	22(37)	26(43)	**Blood fat**	⩽ 1.6mmol/L	28(47)	30(50)
	no	38(63)	34(57)		⩾ 1.7mmol/L	32(53)	30(50)

Table2 Medical service sharing needs survey

factors		The experimental group(%)	The control group(%)	factors		The experimental group(%)	The control group(%)
The requiredTo theProvide for the agedservice	Life care	6(10)	4(7)	**levelservice**	The psychological consultation	8(14)	10(16)
	Health care	34(57)	37(61)		Legal aid	0(0)	0(0)
	Emergency rescue	3(5)	0(0)		Don't need	5(8)	4(7)
	Psychological care	5(8)	6(10)	**Each star Period after The club Area clothing The serviceThe number of**	Every day	3(5)	1(2)
	Live entertainment	12(20)	13(22)		More than 3 times	12(20)	15(24)
communityexistingProvide for the agedThe optimalservice type	Life care	16(27)	17(28)		1 to 2 times	35(58)	31(52)
	Health care	1(2)	3(5)		There is no	10(17)	13(22)
	Emergency rescue	14(23)	12(20)		The day hosting	3(5)	5(8)
	Psychological care	3(5)	3(5)	**Your orders,**	Night take care	5(8)	4(7)
	Live entertainment	26(43)	25(42)	**Before enjoy Affected by the Provide for the agedservice**	Real-time regulation	12(20)	9(15)
	Accompanied by a doctor	0(0)	0(0)		At the end of housekeeping	8(13)	5(8)
In the medicalCure to protectHealth needsTo theservice	Home medical care	4(7)	5(8)		no	32(54)	37(62)
	Rehabilitation exercise	22(37)	26(44)		The day hosting	5(8)	3(5)
	Health advice	29(48)	24(40)	**You leanTo theProvide for the agedway**	Night take care	16(27)	17(29)
	Don't need	5(8)	5(8)		Real-time regulation	3(5)	5(8)
On a spiritual	Chat permitt	29(48)	27(45)		At the end of housekeeping	22(37)	24(40)
	Recreational activities	18(30)	19(32)		no	14(23)	11(18)

Table3 Satisfaction survey of elderly care service

satisfaction	The experimental group	The control group	The experimental group	The control group	The experimental group	The control group
	$\bar{X}\pm s$		score<3 （%）		score⩾3 （%）	
Meals served	3.84±0.71	3.85±0.58	21（35）	20（33）	39（65）	40（67）
Wash clothes	2.99±0.63	2.98±0.62	33（55）	34（57）	27（45）	26（43）
Get a haircut and	2.96±0.59	2.97±0.53	38（63）	35（58）	22（37）	25（42）

trim your nails					
Provide health guidance and medication	2.91±0.62	2.94±0.77	49（82）	43（72）	11（18）	17（28）
Temperature, blood pressure and other indicators were detected	2.98±0.73	2.95±0.66	37（62）	41（68）	23（38）	19（32）
Rehabilitation training	2.94±0.75	2.95±0.62	41（68）	39（65）	19（32）	21（35）
Mental health	2.94±0.63	2.95±0.70	44（73）	42（70）	16（27）	18（30）
Degree of service humanization	2.98±0.48	2.98±0.99	39（65）	36（60）	21（35）	24（40）
The quality of life	2.97±0.44	2.97±0.77	38（63）	36（60）	22（37）	24（40）
Satisfaction degree of pension mode	2.96±0.59	2.95±0.48	44（73）	41（68）	16（27）	19（32）
Physical condition satisfaction	2.99±0.62	2.95±0.74	38（63）	41（68）	22（37）	19（32）

Table4 An investigation on the status quo of the implementation of the "Internet +" model of combining medical care with old-age care to track and re-test the old-age service

factors		The experimental group(%)	The control group(%)	factors		The experimental group(%)	The control group(%)
gender	male	28(47)	31(52)	**weight**	50 kg and under	5(8)	4(7)
	female	32(53)	29(48)		51-60 kg	8(13)	15(25)
age	60-75	39(65)	37(62)		61-70 kg	35(58)	24(40)
	76-90	21(35)	23(38)		71-80 kg	8(14)	10(17)
medical history	High blood pressure, heart disease	24(40)	25(42)		81kg and above	4(7)	7(11)
	diabetes	21(35)	17(28)	**Systolic blood pressure**	90mmHg and under	13(22)	9(15)
	stroke	7(12)	5(8)		91-130mmHg	36(60)	20(33)
	A malignant tumor	1(2)	1(2)		131mmHg and above	11(18)	35(58)
	Chronic obstructive pulmonary disease	2(3)	1(2)	**Fasting plasma glucose**	⩽6.9mmol/L	45(75)	38(63)
	no	5(8)	11(18)		⩾7.0mmol/L	15(25)	25(42)
A family history of	yes	22(37)	26(43)	**Blood fat**	⩽1.6mmol/L	39(65)	26(43)
	no	38(63)	34(57)		⩾1.7mmol/L	21(35)	34(57)

Table5 The "Internet +" model of combining medical care with old-age care was implemented to carry out tracking re-test of old-age service satisfaction survey paired T-test

Satisfaction survey of elderly care service	t	p
The experimental group pension service satisfaction score (< 3) **Experimental group cranial endowment service satisfaction score < (3)**	4.069	0.002
The control group pension service satisfaction score (< 3) **Control group cranial endowment service satisfaction score < (3)**	1.243	0.242
Elderly care service satisfaction in the experimental group (score ≥3) **Retest the satisfaction of the elderly care service in the experimental group (score ≥3)**	-4.069	0.002
Elderly care service satisfaction in the control group (score ≥3) **The control group retested the satisfaction of the elderly care service (score ≥3)**	-1.243	0.242

4. Result analysis

It can be concluded from the survey data on the shared needs of medical services that the elderly care services currently needed by the test patients are mainly concentrated in real-time medical care, and the demand for life care, life entertainment and psychological care is relatively low. The current medical and health care services provided by the test patients of the project are too single, and the medical institution level mainly focuses on medication guidance, and the hospital's detection of body temperature, blood pressure, blood sugar and other indicators. For the elderly, most of them stay in old-age care and diet. my country's medical care and pensions are not fully integrated, and medical care is mainly in medical institutions at all levels, resulting in insufficient supply of medical assistance. The existing best service types for the elderly in the community show that the elderly's life and entertainment, emergency assistance and life care are relatively complete. With the improvement of community living conditions, community facilities are relatively sound, community hospitals are complete, and general services are relatively complete, such as life care. Recreational facilities with community life. In terms of services required for medical care, rehabilitation exercises and health consultation account for more than 50%. From the data, it can be seen that some elderly people are relatively lonely and their physical condition is not good. Therefore, the need for more care and love at the spiritual level has become a reality. An important part of today's disease treatment. Daily health monitoring, implementation of blood glucose monitoring, treatment of chronic complications, rehabilitation and first aid measures, psychological counseling, patient diet and nutrition, etc. to provide patients with all-round guidance from time to time has become the main elderly care services needed by the elderly. Professional old-age tracking services are needed to enable oneself and family members to know their physical condition in time, as small as blood pressure, blood sugar, and blood lipids, to achieve professional medical assistance, and to update and monitor data from time to time. Through the study of the "Internet +" medical care integration model, combined with telephone interviews, comprehensive real-time monitoring of diseases of the elderly is carried out. It greatly alleviates the problems of patients' difficulty in seeing a doctor and the unbalanced distribution of medical resources. At the same time, the use of telephone interviews to conduct psychological counseling and physical condition monitoring for the elderly greatly prevented the aggravation of the elderly's diseases, the induction of complications, and the imbalance of the mental state.

Analysis of the survey of satisfaction with elderly care services The data from the survey on satisfaction with elderly care services shows that elderly people change clothes, have haircuts and trim nails, provide health guidance and medication, temperature, blood pressure and other indicators, rehabilitation training, mental health, and service humanity. Dissatisfaction with many aspects, such as the degree of socialization, quality of life, satisfaction with old-age care methods, and satisfaction with physical condition. Satisfaction with community medical technology, community hospital treatment effect, and community health education preaching is relatively low, and the number of people with a satisfaction score of <3 is more than half. The "Internet +" medical care integration model has become an indispensable part of the medical model, and has played a significant role in the triage of a large number of patients. It is convenient for the elderly to track their physical condition, daily health care, and check. However, due to the limited medical level and medical resources, community medical technology and treatment effects may not be satisfactory, and further development and planning are needed.

The experimental group and the control group carried out the "Internet +" medical care combined elderly care model to track the experimental group and the control group to retest the elderly care service status survey, the measurement results can show that the experimental group uses smart medical equipment, the subjects have obvious blood pressure and blood sugar , Blood lipids have been reduced. The "Internet +" medical care integration model establishes electronic health records for the elderly, which is conducive to scientific understanding and statistics of patients' diseases, thereby affecting the treatment of diseases. After the implementation and tracking of smart medical care, it also provides patients with scientific and reasonable daily health care methods and changes the patients' lifestyles. At the same time, it implements constant monitoring to enable patients to

understand their own disease status and better prevent and care for patients. Monitoring the situation from time to time is also conducive to early detection of complications, early resolution of minor problems, resolution of unintelligible problem data, and solution of unsolvable problems with related medical structures and other interlocking treatment systems. It greatly facilitates the medical treatment of the sick elderly, and achieves the triage of disease treatment. As a result of good living habits, the patient's living condition has improved, and the mental health will gradually become healthy, entering a state of a virtuous circle.

It can be concluded from the survey data of the retested medical service sharing demand that the elderly care services currently required by the experimental group of patients have been changed to mainly focus on life and entertainment, and other aspects have been improved. The existing optimal service types for the elderly in the community show that medical care and psychological care have been greatly improved. The medical care services required by the elderly in the experimental group are also reduced. Under the protection of real-time monitoring of the "Internet +" medical care integration model, the demand for medical care services is also gradually reduced, which greatly reduces the occupation of medical resources. The mental needs of the elderly in the experimental group have gradually decreased. The elderly are relatively lonely and in poor physical condition. The real-time tracking of the "Internet +" medical-care integration model has also become an important part of treatment in the spiritual level. Psychological comfort and protection is also an important psychological counseling treatment in the tracking mode. The elderly need attention, need to accompany, and need to be given in real time. Therefore, the service required at the spiritual level is reflected in the richer requirements for chatting to relieve boredom and cultural and entertainment activities. At the same time, telephone interviews conducted psychological counseling and physical condition monitoring for the elderly, which greatly prevented the aggravation of elderly diseases, the induction of complications, and the imbalance of mental state.

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