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Investigation on Cognition of Cardiovascular and Cerebrovascular Diseases among Residents in Luzhou City

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Abstract: Objective: To investigate the cognitive level and cognitive pathway of cardiovascular and cerebrovascular diseases among residents in Luzhou city, Sichuan Province, and analyze the influencing factors, to provide reference for formulating medical science popularization service policy and promoting the healthy development of medical industry. Methods: Multi-stage stratified sampling method and quota sampling method were used to investigate the cognition level of cardiovascular and cerebrovascular diseases of residents in Luzhou city from three dimensions: knowledge, prevention and diagnosis and treatment. Results: The total score of the knowledge module was 30 points, and the questionnaire score (17.11±3.56) was significantly lower; The total score of prevention section was 28, and the questionnaire score was higher (25.18±2.37). The total score of diagnosis and treatment module was 35, and the questionnaire score (28.05±3.58) was low; Only 22.11% (90 people) "often actively understand" cardiovascular and cerebrovascular diseases, 51.35% (209 people) "occasionally pay attention",26.54%(108 people) "never care"; The main way of understanding is the Internet, news and newspapers and other media; The scores of cardiovascular and cerebrovascular disease knowledge, prevention and treatment were compared among different age groups, working hours and personal monthly income groups, and the differences were statistically significant ($P < 0.01$). Different ages and individual monthly income have no significant effect on cognitive level, while daily working hours have a significant negative effect on cognitive level. Conclusion: The cognition level of cardiovascular and cerebrovascular diseases of residents in Luzhou City is generally low, and the cognition level of caring about cerebrovascular disease knowledge and correct diagnosis and treatment behavior needs to be strengthened, but the prevention of cardiovascular and cerebrovascular diseases should be paid more attention. Internet publicity, including lectures, exhibitions, competitions and other forms, should be carried out for people of different ages and occupations. By making full use of existing medical resources, mobilizing social participation, improving relevant systems and other measures, residents' cognition level and prevention and control ability of cardiovascular and cerebrovascular diseases should be effectively improved.

Keywords: Cardiovascular and Cerebrovascular Diseases; Disease Cognition; Medical Science Popularization.

1. Data and Methods

1.1. General Information

A self-designed questionnaire was used to investigate the residents' age, residence, occupation, working hours, personal monthly income and medical insurance type in Luzhou city, Sichuan Province.

1.2. Objects

A total of 450 urban residents in Longmatan District, Jiangyang District and Naxi District of Luzhou City were selected as the survey objects. Inclusion criteria of survey subjects: (1) resided for three years or more; (2) Domicile is Luzhou City; (3) Volunteer to participate in this survey.

1.3. Survey Method

1.3.1. Survey Content

The content of the questionnaire mainly includes two parts: the basic information of the respondents and the cognition of cardiovascular and cerebrovascular diseases. The cognition of central cerebrovascular diseases includes the cognition level, understanding degree, way and influencing factors.

1.3.2. Methods

This survey adopts multi-stage stratified sampling method and quota sampling. The multi-stage sampling is divided into two stages, and different sampling methods are adopted in different stages: First, the whole system is divided into urban areas and streets/towns; Secondly, the main urban area of Luzhou city consists of three municipal districts: Longmatan District, Jiangyang District and Naxi District, in which streets/towns are selected according to simple random sampling method. Quota sampling: by the end of 2020, the proportion of population in Luzhou municipal districts: Jiangyang District, Longmatan District, 32%, and Naxi District, 28%. The population is 21.2% aged 0 to 17, 21.3% aged 18 to 34, 37.4% aged 35 to 59, and 20.1% aged 60 and above. [5] According to this proportion, the sampling method of quota sampling is used to take samples from the selected streets/towns. The sample size is calculated by the following formula:

$$n = \frac{Nt^2p(1-p)}{\Delta_p^2 N + t^2p(1-p)}$$

Where, n is the pure sample size, N is the number of the population, t is the corresponding critical value under a certain confidence degree, and p is the sample proportion. In

this survey, the resident population of Luzhou City was 4.32 million, and the confidence degree was 95% (t=1.96), the error value △p was 5%, and the probability value P=0.5. Through calculation, the sample size was 385. Considering the effective recovery rate and other factors, 450 questionnaires were issued.

The method of questionnaire survey was adopted. There are 26 items in the questionnaire, which mainly includes 3 modules. Apart from the basic information of the respondents, 17 items can be divided into the modules of "knowledge", "prevention" and "diagnosis and treatment" of cardiovascular and cerebrovascular diseases. The full score of the three modules is 93. There are 4 items in the "knowledge" part of central cerebrovascular diseases, with a full score of 30 points. The higher the score, the higher the cognition level of basic knowledge of cardiovascular and cerebrovascular diseases. Entries in the "prevention" and "diagnosis and treatment" plates of cardiovascular and cerebrovascular diseases, full marks are 28 points and 35 points respectively, using LikerT5-level scoring method, "the current medical insurance reimbursement ratio can not effectively alleviate the treatment cost of cardiovascular and cerebrovascular diseases", "symptoms are alleviated after taking medicine according to the doctor's advice, you can reduce the amount of medicine by yourself, or even stop taking medicine", "Do not need to carry out relevant medical examination can predict whether suffering from cardiovascular and cerebrovascular diseases", "cardiovascular and cerebrovascular diseases are high incidence of the elderly, young people do not need to deliberately prevent", "generally choose to go to the hospital for relevant examinations after the physical discomfort", for the reverse score. For the other items, 1, 2, 3, 4 and 5 points were assigned to strongly disagree, disagree, neutral, agree and strongly agree, respectively. The higher the score, the higher the cognitive level of cardiovascular and cerebrovascular disease prevention and treatment.

1.3.3. Investigation Process

In 2022, 5 streets/towns will be randomly selected in Longmatan District, Jiangyang District and Naxi District, Luzhou City. Longmatan District: Hongxing Street, Anning Street, Luohan Street, Jiangbei Town and Chang 'an Town; Jiangyang District: Dashping Street, Lantian Street, Huayang Street, Fangshan Town, Shangma Town; Naxi District: Dongsheng Street, Tianxian Town, Longche town, Huguo town, and then distributed questionnaires in the community according to the quota principle. Among them, Longmatan District issued 162 questionnaires, Jiangyang District issued 185 questionnaires, Naxi district issued 103 questionnaires, a total of 450 questionnaires.

1.3.4. Statistical Methods

SPSS 23.0 statistical software was used for data processing. Measurement data were expressed as mean ± standard deviation ((x±s), and variance test was adopted. Counting data is expressed as frequency or percentage (%). $P < 0.05$ was considered statistically significant.

2. Results

2.1. Basic Information

A total of 450 questionnaires were issued and 407 valid questionnaires were recovered, with an effective rate of 90.0%. Of these, 232 (57%) were male and 175 (43%) were female. Age: 81 (19.9%) were 17 years old or below, 101 (24.82%) were 18 to 34 years old, 75 (18.43%) were 35 to 44 years old, 77 (18.92%) were 45 to 59 years old, and 73 (17.94%) were ≥60 years old. Occupations: 99 students (24.32%), 68 government officials and enterprise managers (16.71%), 138 workers in shopping malls and logistics or related workers (33.91%), 27 workers in agriculture, forestry, animal husbandry and fishing (6.63%), 75 workers who could not be classified by occupation (18.43%); Individual monthly income: 192 people (47.17%) with 3,000 yuan or less, 86 people (21.13%) with 3,000 yuan to 5,000 yuan, 72 people (17.69%) with 5,000 yuan to 8,000 yuan, 33 people (8.11%) with 8,000 yuan to 15,000 yuan, and 24 people (5.9%) with 15,000 yuan or more.

2.2. Analysis of Citizens' Cognition Level of Cardiovascular and Cerebrovascular Diseases

2.2.1. Knowledge and Cognition of Cardiovascular and Cerebrovascular Diseases

The average score of "cardiovascular and cerebrovascular cognition Status questionnaire" was (70.35±7.08), and the total score was (93). The central cerebral vascular disease knowledge plate full score (30), score (17.11±3.56) points, cognitive level is low. The awareness rate of cerebral embolism (34.64%) and rheumatic heart disease (32.68%) was relatively low in the category of cardiovascular and cerebrovascular diseases. In case of symptoms of suspected cardiovascular and cerebrovascular diseases for the first time (full score of 5), the score of taking correct measures is only (3.25±1.21) points, as shown in Table 1.

Table 1. Answers to knowledge about cardiovascular and cerebrovascular diseases

item	n	Score situation
Cardiovascular and cerebrovascular diseases category	407	4.54±1.74
Pre-disease symptoms	407	4.16±1.67
First symptom measure	407	3.25±1.21
Re-symptom measures	407	4.51±1.02

2.2.2. Cognitive Level of Cardiovascular and Cerebrovascular Disease Prevention

Cardiovascular and cerebrovascular disease prevention score (25.18±2.37) points, full score (28) points, the cognitive level of this plate is high. Among the 407 respondents, 107 (26.30%) chose neutral on the item "the usefulness of conducting disease education activities", 281 (69.00%) chose "agree", but no one chose "strongly agree". For specific answers, see Table 2.

Table 2. Cardiovascular and cerebrovascular disease prevention responses [n (%)]

item	Strongly disagree	disagree	neutral	agree	Couldn't agree more
The usefulness of disease education activities	0(0.0)	19(4.7)	107(26.3)	281(69.0)	0(0.0)
Scientific exercise can effectively prevent cardiovascular and cerebrovascular diseases	0(0.0)	2(0.5)	22(5.4)	100(24.6)	283(69.5)
Paying attention to relevant knowledge can help disease prevention and control	0(0.0)	2(0.5)	19(4.7)	112(27.5)	274(67.3)
Willing to participate in cardiovascular disease knowledge education activities	5(1.2)	17(4.2)	37(9.1)	80(19.7)	268(65.8)
Be willing to have an annual physical	0(0.0)	8(2.0)	14(3.4)	78(19.2)	307(75.4)
High incidence of the elderly, young people do not need to deliberately prevent	181(44.5)	157(38.6)	38(9.3)	18(4.4)	13(3.2)

2.2.3. Cognitive Level of Diagnosis and Treatment of Cardiovascular and Cerebrovascular Diseases

Cardiovascular and cerebrovascular disease diagnosis and treatment plate score (28.05±3.58) points, full score (35) points. Low cognitive level. 106 respondents (26.00%) chose "agree" and "strongly agree" to the item "whether cardiovascular and cerebrovascular diseases can be predicted without physical examination"; 201 respondents (49.40%) chose "agree" from "go to the hospital for a check-up after feeling ill", and 73 respondents (17.90%) chose "strongly agree". The answers to each item are shown in Table 3.

Table 3. Responses to diagnosis and treatment of cardiovascular and cerebrovascular diseases [n (%)]

item	Strongly disagree	disagree	neutral	agree	Couldn't agree more
High blood pressure in the elderly requires prompt treatment	0(0.0)	1(0.2)	6(1.5)	38(9.3)	362(88.9)
Cardiovascular and cerebrovascular diseases should be treated according to doctor's advice	1(0.2)	1(0.2)	13(3.2)	112(27.5)	280(68.8)
Psychological counseling is necessary for cardiovascular and cerebrovascular diseases	2(0.5)	7(1.7)	24(5.9)	164(40.3)	210(51.6)
The choice of therapeutic drugs should follow the doctor's advice	1(0.2)	2(0.5)	23(5.7)	127(31.2)	254(62.4)
After the symptoms are alleviated, you can reduce the amount of medication or stop taking it	122(30.0)	136(33.4)	47(11.5)	59(14.5)	43(10.6)
Cardiovascular and cerebrovascular diseases can be predicted without a physical examination	116(28.5)	122(30.0)	63(15.5)	86(21.1)	20(4.9)
Go to the hospital for a check-up after feeling unwell	47(11.5)	28(6.9)	58(14.3)	201(49.4)	73(17.9)

2.3. Analysis of Understanding Degree and Approach

Among the respondents, 209 people paid attention to the knowledge of cardiovascular and cerebrovascular diseases occasionally, accounting for 51.35%, and never cared about 26.54%; Among the items of understanding channels, the Internet, news, newspapers and other media are the main channels, followed by the Internet (85.26%), news, newspapers and other media (80.1%), hospitals and community publicity (66.34%), as shown in Table 4.

Table 4. Cognition degree and ways of cardiovascular and cerebrovascular diseases

item	content	Number of people	Percentage (%)
Understanding degree	Always know	90	22.11
	Occasional attention	209	51.35
	Never care	108	26.54
Understanding approach	Hospital and community advocacy	270	66.34
	Internet	347	85.26
	News and newspapers and other media	326	80.10
	Inform relatives and friends	179	43.98
	broadcast	63	15.48
	Other ways	57	14.00

2.4. Analysis of Influencing Factors of Cognition Level of Cardiovascular and Cerebrovascular Diseases in Luzhou Citizens

2.4.1. Comparison of Cognition of Different Demographic Characteristics

There was no significant difference in cardiovascular and cerebrovascular disease knowledge, prevention, diagnosis and treatment scores among different genders and places of residence (P > 0.05). There were statistically significant differences in cardiovascular and cerebrovascular disease knowledge, prevention and diagnosis and treatment scores among different ages, working hours and personal monthly income (P < 0.05, see Table 5).

Table 5. Comparison of cardiovascular and cerebrovascular disease knowledge, prevention, diagnosis and treatment scores of different demographic characteristics ($\bar{x} \pm s$)

item		n	knowledge	F	P	prevent	F	P	Diagnosis and treatment	F	P
age	Under 17 years old	81	15.43±3.34	34.504	0.000	27.15±1.67	46.614	0.000	30.52±2.73	84.679	0.000
	18-34 years old	101	19.20±4.01			25.06±2.31			26.19±3.25		
	35-44 years old	75	14.57±2.28			22.91±1.98			24.88±2.02		
	45-59 years old	77	17.19±2.78			25.03±1.82			27.90±1.87		
	Over 60 years old	73	18.63±2.27			25.70±1.91			31.34±2.92		
Working hours	0 hours	119	17.53±3.18	4.704	0.001	26.41±2.12	14.842	0.000	30.95±2.98	39.629	0.000
	Within 3 hours	20	16.85±2.64			23.90±1.97			27.10±2.97		
	3-8 hours	161	16.32±2.94			24.84±2.22			27.24±3.19		
	8-12 hours	92	18.15±4.75			24.78±2.39			26.36±2.99		
	> 12 hours	15	16.33±3.48			23.40±2.44			25.60±2.61		
Personal monthly income	< 3000 yuan	192	16.91±3.46	4.169	0.003	25.91±2.37	10.485	0.000	29.85±3.41	32.195	0.000
	3000 to 5000 yuan	86	16.97±2.75			24.37±2.06			26.91±3.24		
	5000-8000 yuan	72	16.82±3.16			24.56±1.99			25.76±2.12		
	8000-15000 yuan	33	17.30±4.61			24.27±2.39			25.88±3.24		
	> 15000 yuan	24	19.92±5.28			25.46±2.75			27.71±2.93		

2.4.2. Multiple Linear Regression Analysis of Cognitive Influencing Factors

The items with statistical significance in one-way ANOVA were taken as independent variables, and the total scores of cardiovascular and cerebrovascular disease knowledge, prevention and diagnosis and treatment were taken as dependent variables. Multiple linear regression analysis was conducted. The results showed that the regression coefficients of age and personal monthly income were all greater than 0.05, which meant that they would not have a significant impact on cognitive level. It means that there is a significant negative impact on cognitive level, as shown in Table 6.

Table 6. Multiple linear regression analysis of factors related to knowledge, prevention and treatment of cardiovascular and cerebrovascular diseases (n=407)

Independent variable	β	Standard error	β'	t	p
constant	75.520	1.109	-	68.084	0.000
age	0.110	0.238	0.022	0.461	0.645
Daily working hours	-2.557	0.375	-0.440	-6.817	0.000
Personal monthly income	0.654	0.369	0.113	1.770	0.078

Note: r2=0.140, adjusted r2=0.134; F=21.918, p=0.000. The model passed the F test, and the model construction was meaningful.

3. Discussion

3.1. The Cognition Level of Cardiovascular and Cerebrovascular Diseases of Luzhou Citizens is Generally Low and Incomplete

Urban residents in Luzhou city need to strengthen their knowledge of cardiovascular and cerebrovascular diseases and correct diagnosis and treatment behavior, but pay more attention to the prevention of cardiovascular and cerebrovascular diseases. The results showed that the Internet was the main channel for people to understand cardiovascular and cerebrovascular diseases, accounting for 85.26%; Only 22.11% of the respondents chose to actively learn about cardiovascular and cerebrovascular diseases in daily life, while 26.54% chose to never care about them. It can be seen that most citizens have a low level of knowledge about cardiovascular and cerebrovascular diseases. For cardiovascular and cerebrovascular diseases, people's enthusiasm is not high, which indirectly leads to the lack of prevention awareness for cardiovascular and cerebrovascular diseases, increasing the incidence of cardiovascular and cerebrovascular diseases. However, 66.34% of the respondents believed that carrying out cardiovascular and cerebrovascular disease prevention and control publicity activities was very helpful to obtain relevant knowledge, and the cognition level of cardiovascular and cerebrovascular disease prevention was higher in the "cardiovascular and cerebrovascular cognition Status Questionnaire" (25.18±2.37 points), indicating that Luzhou citizens pay more attention to the prevention and control of cardiovascular and cerebrovascular diseases. This has a good effect on the prevention of cardiovascular and cerebrovascular diseases. The cognition level of the diagnosis and treatment of

cardiovascular and cerebrovascular diseases is low, and the awareness rate of "syncope", "left back pain, left arm pain" and other symptoms is only 31.2% and 28.5%, nearly half of the respondents said that they would choose to observe and make a decision after the first symptom such as heart palpitations and chest pain. When such symptoms recurred, 25% of respondents still did not seek medical attention immediately. This reflects the public's lack of self-health management and lack of attention and understanding of the early symptoms of cardiovascular and cerebrovascular diseases, resulting in missing the best treatment time, which is also an important factor affecting the diagnosis and treatment of cardiovascular and cerebrovascular diseases.

Smoking, drinking, staying up late and other bad habits are the main causes of cardiovascular disease. At the same time, due to the relationship of work, constant social intercourse, eating, drinking, smoking, drinking, extreme lack of exercise, fast pace of life and high work pressure lead to long-term lack of sleep, poor mood, irregular diet and overeating, which are also important factors causing cardiovascular diseases [6]. In the study, 45.95% of the respondents had irregular eating habits in the "habits commonly done in daily life", and those who drank alcohol and lacked exercise reached 44.72% and 38.82% respectively. Luzhou, as a "wine city", has a strong wine culture and objective factors that can induce cardiovascular and cerebrovascular diseases. Under such an environment, it is very important to improve the cognition level of cardiovascular and cerebrovascular diseases of Luzhou citizens and correct traditional concepts for the diagnosis and treatment of cardiovascular and cerebrovascular diseases.

3.2. The Cognition Level of Cardiovascular and Cerebrovascular Diseases of Urban Residents in Luzhou was Affected by Different Factors

The results showed that the cognitive scores of cardiovascular and cerebrovascular diseases were statistically significant in different ages, working hours and personal monthly income. People aged 18-34 years old in Luzhou City have a relatively high cognitive level of cardiovascular and cerebrovascular diseases, which is related to the diversification of cognitive channels of cardiovascular and cerebrovascular diseases and more attention to their own health. As young people in the new era, most of them have received systematic education, pay more attention to their own health, and have a certain understanding of the pre-symptoms of some diseases. Therefore, citizens at the younger age will have a higher cognition level of cardiovascular and cerebrovascular diseases. The cognitive level of cardiovascular and cerebrovascular diseases of Luzhou citizens over the age of 60 ranks the second. Elderly residents have a greater risk of disease. In addition, many elderly people have other basic diseases of old age, so they pay more attention to the protection of cardiovascular and cerebrovascular diseases, and their cognitive level of cardiovascular and cerebrovascular diseases is also high. In addition, Luzhou residents who work 8-12 hours have a relatively high cognitive level of cardiovascular and cerebrovascular diseases. The high work load makes these residents more worried about whether they suffer from cardiovascular and cerebrovascular diseases, pay more attention to their health, and have more active cognition and prevention of cardiovascular and cerebrovascular diseases. The cognitive level of Luzhou citizens whose monthly personal income is more than 15000 yuan is higher. Generally speaking, patients with higher income level are mostly highly educated and have a certain accumulation of cardiovascular and cerebrovascular disease knowledge.

3.3. Strengthen the Awareness and Popularization of Cardiovascular and Cerebrovascular Diseases in the Region

Luzhou City is rich in medical resources. It ranks first in the number of medical institutions in southern Sichuan, and is the third medical and health city in Southwest China except Chengdu-Chongqing. There are 4,549 medical and health institutions of various types, including 7 level-III general hospitals [7]. Luzhou City has 3 national chronic disease comprehensive prevention and control demonstration zones (Longmatan District, Lu County and Hejiang County) and 2 provincial chronic disease comprehensive prevention and control demonstration zones (Jiangyang District and Naxi District). Through the chronic disease prevention and control center to adopt diversified forms of popular science, strengthen the understanding of the knowledge of cardiovascular and cerebrovascular diseases of the people in the region, enhance the degree of attention. For people of different ages and occupations to carry out Internet publicity, a variety of forms of science popularization. For young people, adopt video elements and propaganda content that meet the aesthetic of the young generation, for older groups, it is appropriate to use easy-to-understand, less professional terms, in line with the public video. For groups with high risk factors of bad lifestyle, attention should be focused on and science popularization should be focused. Government agencies organize medical institutions to carry out free diagnosis of cardiovascular diseases, test blood pressure, and help citizens pay attention to their physical conditions. Organize medical science popularization activities into schools, nursing homes and communities, make full use of existing medical resources, and conduct science popularization training for grass-roots staff, so as to facilitate science popularization activities to go deep into the grassroots. At the same time, it can cooperate with pharmaceutical enterprises to actively introduce the participation of social forces, so that enterprises can enhance their corporate image in the publicity activities of cardiovascular and cerebrovascular diseases and special physical examination, free diagnosis, community education and other activities, understand the market demand, and improve the soft power of corporate brands.

3.4. Improve the Cardiovascular and Cerebrovascular Disease Management Database According to Key Populations

Cardiovascular and cerebrovascular diseases are the first of the four major chronic diseases in Luzhou. Taking hypertension, a typical cardiovascular and cerebrovascular disease, as an example, the prevalence rate of hypertension is on the rise with the increase of age. According to the research, there are obvious differences in the knowledge, prevention and diagnosis and treatment of cardiovascular and cerebrovascular diseases in different ages. The prevalence of hypertension was 24.69% in men (standardized rate of "0.92%") and 24.35% in women (standardized rate of 12.93%)[8]. Only 355,000 people are under the management of hypertension in Luzhou City. According to the 2020 annual

work summary of Luzhou Center for Disease Control and Prevention, 32,071 cases of cardiovascular and cerebrovascular diseases were reported, with a reported incidence of 741.69/100,000 [9]. Therefore, improving the cardiovascular and cerebrovascular disease management database is of great significance for preventing and controlling the incidence of cardiovascular and cerebrovascular diseases and carrying out targeted popularization of cardiovascular and cerebrovascular diseases. The database construction should be based on the principle of dynamic and whole-process tracking to understand the disease outcome, which is more conducive to disease treatment. At the same time, the cardiovascular and cerebrovascular disease management database should first ensure information security, conduct data analysis through big data, ensure decision-making optimization, adjust cardiovascular and cerebrovascular disease prevention measures according to the actual situation, and improve the level of cardiovascular and cerebrovascular disease management.

3.5. Build a Psychological Counseling System

With people's higher requirements for health, mental health plays a very important role in the treatment of diseases, and psychological counseling can promote the awareness of cardiovascular and cerebrovascular diseases. This study shows that in the selection of the item "whether to receive relevant psychological assistance treatment", the vast majority of the respondents have not received psychological assistance treatment, and only 10% of the respondents said that they had received psychological assistance treatment. In the survey of "the degree of recognition that psychological assistance is helpful", more than 90% of the respondents agreed that psychological assistance is helpful in the prevention and treatment of cardiovascular and cerebrovascular diseases. It can be seen that most people can realize the benefits of psychological assistance therapy, but few people have actually received psychological assistance therapy. The modern medical model is gradually transformed into the bio-psycho-social medical model, and the improvement of the auxiliary prevention and treatment system of psychological counseling meets the requirements of medical development. For the patients with cardiovascular and cerebrovascular diseases who come to hospital for treatment, humanistic care should be increased, and medical psychosomatic auxiliary treatment should be provided according to the patients' conditions to help them recover as soon as possible. In view of the neurosis caused by young people facing high life pressure, psychological intervention should be carried out in time to adjust their sub-health status in time to prevent substantive changes in physiological organs. The auxiliary prevention and treatment system of psychological counseling should be integrated and coordinated with science popularization and database construction, and the related knowledge plate of psychological prevention and treatment should be added to the science popularization activities, and the management and interventional treatment of psychological state should be introduced into the database management.

4. Conclusion

The cognitive level of cardiovascular and cerebrovascular diseases of residents in Luzhou City was explored from three dimensions of "knowledge", "prevention" and "diagnosis and treatment", and the factors affecting the cognitive level were analyzed based on multiple linear regression combined with demographic characteristics. The cognition level of cardiovascular and cerebrovascular diseases of residents in Luzhou urban area is generally low, and the knowledge of cardiovascular and cerebrovascular diseases and the cognition of correct diagnosis and treatment behavior need to be strengthened. According to different demographic characteristics, mixed publicity measures should be taken to distinguish groups of different ages and occupations, including lectures, exhibitions, contests and other popular science publicity. By making full use of existing medical resources, mobilizing social forces to participate in the improvement of relevant systems and other measures, the residents' cognition level and prevention and control ability of cardiovascular and cerebrovascular diseases are effectively improved.

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