

Research on the Current Situation and Countermeasures of Citizens Health Literacy in Zigong

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ABSTRACT. Health literacy is a comprehensive ability of citizens to understand, obtain and make decisions on basic health information and health services. **Method:** By using the methods of literature review, interview and mathematical statistics, this paper conducts a questionnaire survey on 1000 citizens in four districts and two counties of Zigong. **Result:** (1) the overall health literacy of Zigong citizens is 17.82%. (2) The main influencing factors of health literacy of Zigong citizens are education level, occupation, age and monthly income level. (3) The key intervention groups of Zigong citizens health literacy are the elderly, migrant workers and female citizens. (4) The health intervention of citizens in Zigong should focus on improving the life style related to the occurrence of chronic diseases and improving the skills of safety first aid from the perspective of knowledge, attitude, behavior and skills. **Countermeasures:** (1) We should adhere to the promotion of national health literacy as the center; establish a multi department cooperation, linkage mechanism. (2) We should give full play to the important role of health service providers and promote the rational use of health services by citizens. (3) We should Pay attention to key groups and simplify medical assistance procedures. (4) We should Strengthen health education and publicity, and promote health promotion action.

KEYWORDS: Health literacy; Zigong citizens; development status; influencing factors; measures

1. Introduction

Health literacy has been confirmed by a number of studies as an important factor affecting citizens health level and medical expenses. The overall level of health literacy of citizens in developed countries, developing countries and underdeveloped countries is relatively low. As an important issue in the field of public health, health literacy has been highly valued by governments and scholars all over the world It has become a potential new method and strategy in the field of health education and

health promotion in the new century.

In 1974, American scholar Simon DS first proposed health literacy in his book "regarding health education as social policy"[1]. the concept of health literacy appeared in some health education and government policy papers, and health literacy gradually attracted the attention of governments and researchers around the world. In the 1990s, the U.S. government took improving citizens health literacy as one of the important goals of "Health Pepper 2010". At the same time, it also took improving citizens health literacy as one of the 20 major priorities of health care reform in the United States. In 2005, the sixth world health promotion conference issued the Bangkok Charter for global health promotion in Bangkok, Thailand, which takes the promotion of human health literacy as an important action and goal of health promotion. The World Health Organization(WHO) defines health literacy as "the ability of individuals to acquire, understand and process basic health information and services, and use these information and services to make appropriate health decisions, so as to maintain and promote their own health[2].In 2007, China took improving citizens health literacy as one of the three main points of population quality improvement in "National Population Development Strategy Research Report". In 2008, China's Ministry of Health issued "Chinese citizens Health Literacy - Basic Knowledge and Skills Trial", which is the first government level policy document on comprehensively defining the content of citizens basic health literacy [3]. On the basis of this document, the Ministry of health compiled "Article 66 of Health: Chinese citizens Health Literacy". In 2016, the CPC Central Committee and the State Council formulated the "Healthy China 2030" Planning Outline, which clearly pointed out that the target value of health literacy level of citizens should reach more than 30% by 2030[4].

In 2017, Zigong health and Family Planning Commission, the Publicity Department of the municipal Party committee, the municipal development and Reform Commission, the Municipal Education and Sports Bureau, the Municipal Finance Bureau, the municipal human resources and Social Security Bureau, the Municipal Bureau of culture, radio, film and television, and the Municipal Administration of work safety jointly released the action plan for promoting "The Health Literacy of the Whole People in Zigong (2017-2020)" (hereinafter referred to as the "City Health Literacy Plan") by 2020, the health literacy level of the citizens will be increased to 20%[5]. Therefore, it is of great theoretical and practical value to comprehensively grasp the overall situation of citizens health literacy, deeply analyze the influencing factors of citizens health literacy, and put forward the strategies of improving citizens health literacy in our city, which has important theoretical and practical value for the in-depth implementation of "healthy China 2030" planning outline and the improvement of citizens health literacy level. Based on this, we put forward the research of this topic, in order to grasp the basic situation of citizens health literacy, explore the restricting factors and evaluation index system of citizens health literacy, and put forward intervention measures, so as to provide theoretical reference for improving the health literacy level of citizens in our city.

2. Research Object and Research Method

2.1 Research object

Taking 1000 citizens aged 15 to 69 years old in Zigong as the research object, this paper investigates the three dimensions of citizens health knowledge and attitude, health behavior and health skills, and tries to make a comprehensive evaluation on the health literacy level of Zigong citizens.

2.2 Research method

2.2.1 Literature method

According to the research topic, search domestic and foreign literature. Through the library of Chengdu Institute of physical education, CNKI, web of science, Wanfang Data knowledge service platform and master's doctoral thesis database, we can find out about "health" at home and abroad Literature, health literacy, health literacy evaluation and other aspects of literature, and related to the subject of this study and analysis, induction, carding, provide theoretical basis and research ideas for research, at the same time, through understanding the research status of the above fields, form a macro grasp of the problem.

2.2.2 Questionnaire survey method

This project designs "Zigong citizens health literacy monitoring questionnaire", a total of 66 questions, including judgment questions, single choice questions, double-choice questions and material situation questions. From September 2018 to December 2019, a total of 1000 questionnaires were distributed in Zigong and towns, and 995 questionnaires were collected. There were 987 valid questionnaires and the effective rate was 98.7%. According to urban-rural stratification, cities and counties are selected by completely random sampling. One district in each city is randomly selected as urban survey monitoring point, and the selected counties are selected as rural survey monitoring points. All the members who lived in the neighborhood committee of each village were randomly selected from each village, and all the members who lived in the neighborhood committee of each village were randomly selected as the subjects.

2.2.3 Mathematical statistics

By sorting out the collected questionnaire data, using Excel software to process the data, get the relevant data of Zigong citizens health literacy, and finally transform it into the form of chart for specific analysis.

3. Research Results and Analysis

3.1 Analysis of population characteristics of citizens health literacy in Zigong

Table 1 Distribution table of population characteristics of health literacy survey objects of Zigong citizens (n = 987)

Classification features		Number of people surveyed	Percentage
Region	City	543	55.02
	Countryside	444	44.98
Gender	Male	486	49.24
	Female	501	50.76
Age (years)	15-	121	12.26
	25-	214	21.68
	35-	276	27.96
	45-	206	20.87
	55-	138	13.98
	65-69	32	3.24
Education degree	Low educational level	55	5.57
	Primary school	96	9.23
	Junior middle school	285	28.88
	Senior high school / vocational School / technical secondary school	321	32.52
	College or above	230	23.30
Nation	Han nationality	959	97.16
	Ethnic minority	28	2.84
Marriages	Unmarried	165	16.72
	Married	737	74.67
	Divorce	62	6.28
	Widowed	23	2.33
Family population	1-	424	42.96
	4-	531	53.79
	≥8	32	3.24
Average monthly income (yuan)	< 500	109	
	500-	186	18.84
	1000-	301	30.50
	2000-	232	23.50
	≥5000	57	5.77
	unclear	102	10.33
Profession	Person in charge of the unit	28	2.84
	Artisan	146	14.79
	worker	258	26.14
	Student	71	7.20
	waiter	218	22.90
	peasant	148	14.99
	other	118	11.96
Total		987	100.00

In this survey, there are 543 urban population, 444 rural population and 1.22:1 urban-rural population. In terms of gender composition, there were 486 males and 501 females, and the ratio of male to female was 0.97:1. In terms of age composition, the average age was 40.23 years old. The age was divided into six groups, among which 35-44 years old group was the most, accounting for 27.96, followed by 25-34 years old group, accounting for 21.68%, and the least was 65-69 years old group, only 3.24%. In terms of education level, junior high school and senior high school accounted for 61.4% of the total. 23.3% of them had college degree or above. In terms of ethnic composition, 959 Cases were Han nationality, accounting for 97.16% of the total population. In terms of marital status, the majority of respondents were married (74.67%), followed by unmarried (16.72%). In terms of family size, the number of families with 4-7 persons is the largest, accounting for 53.79%; the number of families with 1-3 persons is 424, accounting for 42.96%; the number of families with more than 8 persons is only 32 cases. In terms of family monthly income, the average monthly income of a family is mainly 1000-1999 yuan, accounting for 30.50%, 23.50% of which is 2000-4999 yuan, and 5.77% of which is more than 5000 yuan. In terms of occupation composition, the majority of the respondents were production personnel and service personnel, accounting for 21.64% and 22.90% respectively, migrant workers and students accounted for 14.99%, while the proportion of unit leaders was the least, only 2.84%.

3.2 Analysis on health literacy of citizens in Zigong

3.2.1 General score of health literacy of citizens in Zigong

The health literacy of Zigong citizens is divided into three dimensions: basic knowledge and concept, healthy lifestyle and behavior, and basic. According to the national health literacy scoring standard, the scores of four dimensions, namely health attitude literacy, knowledge literacy, behavior literacy and skill literacy, are calculated. Finally, the total score of health literacy is obtained by adding the scores of the four dimensions.

Table 2 Basic situation of health literacy level of citizens in Zigong (%)

Classification features	Health literacy	Basic knowledge and ideas	Healthy lifestyle and behavior	Health skills	
China(2019)	19.17	34.31	19.48	21.43	
Zigong(2019)	17.82	31.69	17.32	19.83	
Region	City	25.38	20.24	21.54	24.79
	Countryside	11.36	12.45	8.92	12.46
Gender	Male	17.01	15.45	17.07	19.69
	Female	18.62	16.23	17.56	19.97
Nation	Han nationality	24.15	39.35	29.12	20.56
	Ethnic minority	15.89	13.91	8.66	19.22

The survey results show that by the end of 2019, the health literacy of Zigong citizens was 17.82%, which was 3.31% higher than that of 14.51% in 2018. In the three dimensions of health literacy, citizens basic health knowledge literacy was 31.69%, healthy lifestyle and behavior was 17.32%, and basic health skills literacy was 19.83%. Compared with the national health literacy level in 2019, the health literacy score of Zigong citizens in 2019 was 1.35 percentage points less, basic health knowledge and concept was 2.62 percentage points less, health behavior and lifestyle were 2.14 percentage points less, and basic health skills were 1.6 percentage points less. According to the survey results, there is still a certain gap between the overall goal of "City Health Literacy Plan" and 20% of the city citizens health literacy level by 2020, and great efforts should be made to strengthen health promotion intervention.

3.2.2 Area

From the overall situation, Zigong urban and rural citizens in health concept, safety and first aid, disease prevention and medical knowledge, the score of disease prevention and basic medical literacy of citizens in different regions is low, especially the score of chronic disease prevention is low, which indicates that the prevention of chronic diseases is the aspect that citizens lack, and it is urgent to strengthen the related health knowledge of citizens. Among the six districts and counties in Zigong, Ziliujing, Gongjing and Da'an are relatively better, which may be related to the better development of education, economy, transportation and culture in Ziliujing, Da'an and Gongjing. According to the results of the survey and statistics, there is still a certain gap between the citizens health literacy in different regions and the overall goals of 2020 proposed in the "city health literacy plan", namely, 40% of scientific health literacy, 25% of infectious disease prevention, 20% of chronic disease prevention and 15% of basic medical literacy.

Table 3 comparison of health literacy scores of citizens in different area of Zigong (%)

	Scientific concept of health	Safety and first aid	Prevention of infectious diseases	Prevention of chronic diseases	Basic medical treatment
Ziliujing	36.31	34.56	22.23	9.56	12.84
Gongjingt	34.23	32.16	20.31	5.72	11.17
Da'an	35.51	33.46	21.92	7.63	12.52
Yantan	34.16	33.31	22.17	5.84	11.83
Fushun	34.82	33.37	22.38	6.39	11.23
Rongxian	33.36	33.88	21.41	5.73	10.37

3.2.3 Age

Rough the statistical analysis of the survey data, it can be seen that the overall level of health literacy of citizens of all ages in our city is not high. Among them, the highest level of health literacy is 20.89 at the age of 26-35, which reaches the overall goal of 20% in "City Health Literacy Plan" in 2020, followed by the health level of 15-25 years old and 36-45 years old, and the lowest in 46-55 years old. In terms of basic knowledge and concept, healthy lifestyle and behavior, and health skills of three dimensions of health literacy, the overall trend is that the literacy level decreases with age, while the level of health literacy decreases with age. Young people have relatively strong learning ability, network health information acquisition ability, and ability to accept new things. 56-65 years old have relatively low scores in basic health knowledge and concept, healthy lifestyle and behavior, and health skills, which is closely related to the old thinking and weak ability to accept new things.

Table 4 Comparison of health literacy scores of citizens of different ages in Zigong (%)

Age	Health literacy	Basic knowledge and ideas	Healthy lifestyle and behavior	Health skills
15-25	17.65	22.19	18.22	20.03
26-35	20.89	25.95	20.71	23.25
36-45	17.91	22.56	18.15	21.32
46-55	12.92	19.67	15.25	19.88
56-65	13.58	13.53	10.23	16.84

3.2.4 Education degree

Theory is the guide of practice, and the correct concept of health is the direction of forming healthy behavior. People with high education level have stronger ability to understand information than those with low education level. Through the survey and statistics, it can be found that all the respondents with different educational background master certain health knowledge, health behavior and health skills. In general, the higher the education level of citizens, the higher the level of health literacy, the higher the cultural process. The lower the degree, the lower the level of health literacy. citizens with college education or above have higher literacy level in basic health knowledge and concept (38.20%), healthy lifestyle and behavior (33.61%) and health skills (45.32%), while those with low education level have a low level of health cognition, behavior and skills. Therefore, health education and health skills should be strengthened.

Table 5 Comparison table of health literacy of citizens in different education of Zigong (%)

Education degree	Health literacy	Basic knowledge and ideas	Healthy lifestyle and behavior	Health skills
Low educational level	2.29	9.89	4.30	5.6
Primary school	4.61	10.71	5.89	9.82
Junior middle school	13.77	18.74	7.32	16.44
Senior high school / vocational School / technical secondary school	20.95	34.82	16.73	27.73
College or above	52.58	38.20	33.61	45.32

3.2.5 Profession

Through the statistical analysis of the survey data, it can be seen that there is a big difference in the level of health factors among citizens of different occupations. The level of health literacy of medical staff is the highest (67.93%), followed by teachers (43.76%), followed by other institutions and civil servants, and the lowest level of health literacy of farmers (10.32%). Medical staff, teachers and civil servants have a good command of basic health knowledge. Among the basic skills, the accuracy rate of farmers is the lowest, only 6.89%. The occupation is closely related to the working and living environment, and the occupation also reflects the education level to a certain extent. The citizens such as volunteers, teachers, personnel of public institutions and civil servants are relatively more educated, and they have more opportunities to receive health education and access to health information, while farmers are relatively less.

Table 6 Basic situation of health literacy level of profession in Zigong (%)

Profession	Health literacy	Basic knowledge and ideas	Healthy lifestyle and behavior	Health skills
Person in charge of the unit	22.08	35.45	17.39	18.73
Artisan	10.32	22.66	8.63	6.89
worker	17.86	32.98	18.09	18.53
Student	43.76	40.32	28.66	25.87
waiter	67.93	78.68	40.51	78.68
peasant	27.27	36.22	22.32	20.33
other	33.72	28.88	15.46	21.54
Person in charge of the unit	15.25	22.12	13.98	20.98
Artisan	13.43	20.08	13.32	16.69

3.3 Main influencing factors of health literacy of Zigong citizens

3.3.1 Cognitive factors

The close combination of ideas and practical actions, the cognitive level of things directly affects people's action efficiency. Most citizens in Zigong are unfamiliar with the word health literacy, blindly following the trend in thinking and understanding, and following the crowd psychology is common. The majority of citizens have outdated health ideas and one-sided understanding of basic health knowledge. For example, the number of people who have wrong understanding of the mode of hepatitis B infection is up to 638 people, only 427 people knew about OTC prescription drug labels. More than 2 / 3 of the citizens believed that breast milk was more nutritious than formula milk powder, and more than 60% of them were not in critical condition and would not seek medical treatment. In addition, some similar medical knowledge will be confused. For example, emergency call 120 and health hotline 12320, signs of prescription drugs and over-the-counter drugs.

3.3.2 Economy factors

Economy is the fundamental source of development and the root support for ensuring and improving people's livelihood. In terms of the GDP ranking of Sichuan cities in 2018, Zigong ranked No. 11, ranking at the middle level, accounting for only 1 / 11 of its total GDP compared with Chengdu, which ranked first. In the survey, the majority of people with an annual income of about 1000, while the total family population is more than 3, and the most of them are suffering from chronic diseases. Medical expenses are high, income is low, and the medical burden is heavy every time they go to a doctor. Therefore, it can be seen from the data that there are not many people who have the correct concept of medical treatment. Most of them will choose to deal with the disease according to their own experience, so as to reduce the medical burden.

3.3.3 Insufficient publicity

Zigong citizens health literacy for health literacy publicity, is still limited to books, advertising, and in special related places, such knowledge publicity is gathered, a good health atmosphere has not been well created, so it is difficult to attract people's attention, each township, Village Housing Committee also has no professional staff to carry out publicity guidance. From the survey, we can know that the health literacy level of the elderly is low, and the elderly are the main population suffering from chronic diseases. Without the guidance of correct health concept, the probability of suffering from chronic diseases will be increased.

3.3.4 Poor Healthy atmosphere

Most of the time, people choose because of conformity, and conformity doesn't do much harm in the short term. Therefore, in our study, we can find that although many people have correct health concept, they still have wrong health behavior. For example, health products can not replace drugs, but still buy health care products as a good medicine to strengthen the body, or know that the information of an advertisement is not credible, but it is also feasible because of the recommendation of friends.

3.3.5 The effect of health education course is very little

It is a common view that a long illness makes a good doctor, including some people with high education background. Although the opening rate of health education courses in Zigong has reached 100% by 2016, there is still a lack of specialized courses in major, middle and primary schools. During the transition period between examination oriented education and quality education, there is a big difference between the actual attendance rate and the opening rate of health education curriculum.

4. Ways to improve health literacy of Zigong citizens

4.1 Multi departments work together to establish linkage mechanism

Adhere to the people's health as the center, and take the promotion of citizens health literacy as a major and important matter of government work. We should continue to strengthen the overall coordination of health education and health promotion, establish a linkage mechanism for citizens health literacy promotion, and continue to carry out citizens health literacy promotion action. According to the "Healthy China 2030" Planning Outline, the "Healthy Sichuan 2030" Planning Outline, Sichuan Province National Health Literacy Promotion Action Plan (2017-2020) and Zigong National Health Literacy Promotion Action Plan (2017-2020) Based on the actual situation of our city, a linkage mechanism for promoting the health literacy of the whole people, which is led by the municipal health and Family Planning Commission and participated by the Propaganda Department of the municipal Party committee, the municipal development and Reform Commission, the Municipal Bureau of education and sports, the Municipal Bureau of finance, the Municipal Bureau of human resources and social security, the Municipal Bureau of culture, broadcasting and broadcasting, and the Municipal Administration of work safety, Health promotion should be included in the relevant work policies of the whole city. The improvement of citizens health literacy should be taken as the priority, and the combination of Chinese and Western medicine should be adhered to. Health education, health knowledge dissemination and health promotion should be strengthened. We should strengthen the overall planning of urban and rural areas, and carry out health promotion work according to local

characteristics, so as to promote the simultaneous improvement of health literacy level and social civilization progress of Zigong.

4.2 Give full play to the important role of health service providers

The promotion of national health literacy is not only a problem for the public and patients, but also an important issue for the government's public health service. In view of the asymmetric information and status of doctors and patients, as well as the difficulty, complexity, familiarity and interest of citizens in reading health-related knowledge, materials, will affect the level of citizens health literacy, and the awareness of health literacy will be generated. The ability of processing health information is relatively poor. Therefore, we should start from the municipal health and family planning service providers, play an important role in the promotion of citizens health literacy, take the treatment of patients with low health literacy as an important work in the clinical field, perform their important responsibilities of health literacy promotion, and mobilize their work enthusiasm, which is conducive to improving the communication effect between doctors and patients and improving patient compliance significance. At the same time, it is necessary to carry out health education into the campus, health promotion at the grassroots level, and health promotion for poverty alleviation, especially the health literacy education and promotion for rural citizens and citizens in poor areas. We should help to achieve smooth and fair health information.

4.3 Focus on key groups and simplify medical assistance procedures

The data from 2002 to 2017 show that the aging phenomenon in China is gradually aggravating, and the elderly are the main population suffering from chronic diseases. Zigong is no exception. It is estimated that by the end of the 13th five year plan, the population aged 60 in our city will exceed 750000, accounting for more than 23%. The tasks of medical and health care and pension services are more onerous, and there is a great demand for rehabilitation care. Therefore, to improve the health literacy level of citizens in our city, we need to adopt different intervention methods according to different groups, and lock in the key groups - low health literacy groups, such as the elderly, citizens with low education level, divorced or widowed people, unemployed people, low-income groups, and carry out targeted and gradual specific intervention for these high-risk groups. Taking the opportunity of our city as a pilot city of medical and nursing services, we should generally lay out medical and health services and elderly care services, establish a sound urban-rural medical and nursing integration system, improve the system of medical and nursing integration, fully rely on the community, qualified elderly care institutions and various information service platforms, organically connect the basic medical and health institutions with the elderly service institutions, and improve the elderly care services and medical and health services, Improve the health literacy level of the elderly.

4.4 We should take action to promote health education

Education is an important way and means to change cognition. Improving the basic health knowledge and concept of the majority of citizens is the cornerstone of mastering basic health skills and forming healthy lifestyle and behavior. In the process of recommending the national strategy of healthy China, we should continue to strengthen the health publicity of citizen education, especially for the people with low health literacy, such as strengthening the health communication for the elderly and people with low education level. Health education courses should be opened in all kinds of schools at all levels. Health literacy knowledge competitions and skills competitions with rich contents and forms should be carried out in all kinds of institutions, enterprises and institutions. News reports related to health literacy should be strengthened in major news media to create a good social atmosphere of health literacy in an all-round way. Take a variety of health promotion measures, effectively recommend health action, vigorously mobilize and encourage the majority of citizens to participate in fitness activities according to the time and place, exercise for an hour every day, improve the quality of health life and life of citizens through physical exercise, reduce the pain and improve the level of health literacy.

5. Conclusion

The results showed that the overall health literacy of Zigong citizens was 17.82, the basic health knowledge literacy was 31.69%, the healthy lifestyle and behavior literacy was 17.32%, and the basic health skill literacy was 19.83. The overall level of health literacy of citizens in Zigong is 1.35 percentage points lower than that of national citizens, which is 2.68 percentage points lower than the overall goal of 2020 of "municipal health literacy plan". The main influencing factors of health literacy of Zigong citizens are education level, occupation, age and monthly income level. The key intervention groups of Zigong citizens health literacy are the elderly, migrant workers and female citizens. The health intervention of citizens in Zigong should focus on improving the life style related to the occurrence of chronic diseases and improving the skills of safety first aid from the perspective of knowledge, attitude, behavior and skills. We should adhere to the national health literacy as the center, multi department cooperation, establish Zigong national health literacy work linkage mechanism. We should give full play to the important role of health service providers and promote the rational use of health services by citizens. The key intervention groups of Zigong citizens health literacy are the elderly, migrant workers and female citizens. We should take action to promote health education.

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