

Research Article

Study on the Diversification Trend of Residents' Health Science Information Demand and Dissemination Channels in Chengdu Hi-tech Zone

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Abstract

The purpose of this study is to comprehensively understand the current situation of residents' demand for and satisfaction with health science information in Chengdu Hi-Tech Zone, analyze residents' demand for the content, dissemination channels, and forms of health science information, and provide strategic support for optimizing the dissemination of health education. In order to achieve the goal, Through the questionnaire survey method, 446 valid questionnaires were collected, and descriptive statistical analysis was used to analyze the data in detail and in depth, with a view to discovering the patterns and trends. The study results show that the residents of Chengdu Hi-tech Zone have a high degree of demand for content on healthy lifestyles and health literacy, and the demand for popularization channels is diversified, with WeChat Official Account as the main one. This study proposes targeted strategic recommendations, aiming to further enhance the health literacy level of the residents of Chengdu Hi-Tech Zone by optimizing the content and form of health science information dissemination and broadening the dissemination channels. We firmly believe that only by deeply understanding and meeting the real needs of the residents can we realize the beautiful vision of health for all and contribute our efforts to building a healthy and harmonious social environment.

Keywords

Health Science Popularization, Current Demand, Communication Channels, Diversification

1. Introduction

Health is an inevitable requirement for the promotion of comprehensive human development, a basic condition for economic and social development. Achieving a long and

healthy life for the nation is an important symbol of national wealth and strength and national revitalization, as well as the common aspiration of people of all ethnic groups in the

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country [1]. In 2019, the Healthy China Action (2019-2030) issued by the State Council explicitly proposed the popularization of health knowledge and the need to promote health literacy as a prerequisite for promoting the health of all people [2]. And health popularization work plays an important role in enhancing residents' health literacy and health level. Health education can be defined as a set of pedagogical, participatory practices, that encompasses knowledge that involves different fields of activity and that empowers individuals and communities to develop their capabilities as a result of a praxis based on critical reflection on reality [3]. With the growing demand for health, residents have an open and embracing attitude towards the popularization of various types of health science information, but the access to health science information still exists in the form of mixed information, incomplete information, out-of-context quotes, and incorrect information. China's conventional community health communication is mainly “duck-filling” health education, Medical professionals think they are teaching residents what they need to know, community residents are often in a “passive acceptance” state, and it is difficult to fundamentally improve the high degree of attention to health knowledge, unable to meet the actual health needs. It is difficult to raise the importance of health knowledge fundamentally, and it is impossible to meet the actual health needs. Health communication must not only reach a large number of audiences, but also effectively change the health beliefs and behaviors of these audiences [4]. For this reason, this study aims to analyze the distribution channels and methods of health information for different groups of people in the Chengdu Hi-Tech Zone, to analyze the effect and satisfaction of residents' access to information through multi-channel distribution of information, and to explore efficient distribution channels and methods, so as to provide a new idea and a new mode of distributing health information in the community.

2. Research Objective and Methodology

2.1. Research Subjects

The target population is permanent residents aged 6~75 years old who have been living in the Chengdu Hi-Tech Zone for half a year or more, and a uniformly designed questionnaire was used to survey them. A total of 446 residents were

randomly selected by stratified random sampling method to fill out the questionnaire, including pregnant women, parents of children, patients with chronic diseases, the elderly, and the general population.

2.2. Research Methodology

2.2.1. Questionnaire

This study used a uniformly customized questionnaire, which included the following: general demographic characteristics: gender, age, ethnicity, literacy, occupation, etc. Knowledge of health knowledge: knowledge, participation, and demand for health science information. Health behaviors: smoking, alcohol consumption, dietary habits, physical activity, etc. Health self-assessment: quality of sleep, defecation, digestive symptoms, etc.

2.2.2. Statistical Analysis Method

The survey data were exported from the “Questionnaire Star” applet platform, and the database was set up using Excel, and the data were analyzed using SPSS 25.0 software for descriptive statistics, and the count data were expressed as frequency and percentage (%).

3. Research Results

3.1. Basic Information of the Survey Respondents

A total of 446 questionnaires were recovered in this survey. Among them, 138 (30.9%) were male and 308 (69.1%) were female; ethnic status, mainly Han Chinese, 439 (98.4%); age distribution, 44 (9.9%) were 0-6 years old, 1 (0.2%) was 7-12 years old, 1 (0.2%) was 13-17 years old, 43 (9.6%) were 18-30 years old, 130 (31-45 years old) (29.1%), 80 (17.9%) aged 46-64 years, and 147 (33%) aged 65 years or older; literacy level, 72 (16.1%) in elementary school and below, 68 (15.2%) in junior high school, 69 (15.5%) in senior high school and middle school, 92 (20.6%) in junior high school, 123 (27.6%) in bachelor's degree, and 22 (4.9%) in bachelor's degree or above; The details are shown in Table 1.

Table 1. General demographic characteristics of survey respondents (N=446).

Project	Classification	Number of People	%
	Male	138	30.9
	Female	308	69.1
Age	0-6 years old	44	9.9

Project	Classification	Number of People	%
Age	7-12 years old	1	0.2
	13-17 years old	1	0.2
	18-30 years old	43	9.6
	31-45 years old	130	29.1
	46-64 years old	80	17.9
	Above 65 years old	147	33.0
Ethnicity	Han	439	98.4
	Minority	7	1.6
Height (cm)	≤139.9	29	6.5
	140-149.9	21	4.7
	150-159.9	163	36.5
	160-169.9	177	39.7
	≥170	56	12.6
Weight (kg)	≤49.9	70	15.7
	50-59.9	154	34.5
	60-69.9	134	30.0
	≥70	88	19.7
Educational level	Elementary school and below	72	16.1
	Junior high school	68	15.2
	High school and junior college	69	15.5
	College	92	20.6
	Undergraduate	123	27.6
	Beyond Undergraduate	22	4.9
Annual per capita disposable household income	Less than 30,000 (excluding 30000)	115	25.8
	30000-50000 (excluding 50000)	139	31.2
	50000 and above	192	43.0

3.2. Demand Analysis of Health Popularization Information Content

The results of this survey show that in terms of the participation and demand for health science information content of the residents of Chengdu Hi-tech Zone, the participation and demand for healthy lifestyle science content is the highest, 119 people (26.6%), followed by disease prevention, disease treatment, nutrition and diet, health care for the elderly, vaccination, and gynecological health care in order of priority. See Table 2.

Table 2. Involvement and demand for health science information content among residents of the HZ [persons (%)].

Classification	Number of people (N)	Percentage (%)
Disease Prevention	102	22.9
Disease Treatment	82	18.4
Nutritional Diet	63	14.1
Healthy Lifestyle	119	26.7

Classification	Number of people (N)	Percentage (%)
Gynecological Health	11	2.5
Elderly Health	46	10.3
Vaccination	23	5.2
Total	446	100

3.3. Demand Analysis of Health Popularization Information Dissemination Channels

High-tech zone residents have the highest knowledge of health lectures as a communication channel, 324 people (72.65%), and their knowledge of newspapers as a popular science communication channel is the lowest, 47 people

(10.54%). In terms of the participation of Hi-tech Zone residents in health popularization information channels, the number of people receiving health popularization information through the WeChat Official Account channel was the highest with 268 people (60.09%), and the number of people using the newspaper as a channel to receive health popularization information was the lowest with 0 people (0%). In terms of the degree of demand for health popularization information dissemination channels among the residents of the Hi-tech Zone, the demand for WeChat Official Account as a dissemination channel was the highest, with 230 people (51.57%), followed by health lectures, WeChat video number or Jitterbug video number, live broadcasts of health popularization information, TV broadcasts, outpatient consultations, home promotion by medical staff, leaflets or brochures, cell phone text messages, health publicity animations, community bulletin boards or notices, bulletin boards of primary health care organizations, and newspapers. See Table 3.

Table 3. Knowledge, participation, and demand program of residents in the Chengdu Hi-Tech Zone for health science information dissemination channels [Number (%)].

Popularization Channels	Knowledge	Participation	Demand
Health Talk	324 (72.65)	226 (50.67)	214 (47.98)
WeChat Public	322 (72.20)	268 (60.09)	230 (51.57)
TV Broadcast	104 (23.32)	60 (13.45)	75 (16.82)
Health Science Popularization Live Broadcast	199 (44.62)	114 (25.56)	109 (24.44)
WeChat Video number/Tik Tok Vedio number	186 (41.70)	109 (24.44)	122 (27.35)
Household promotion by medical staff	200 (44.84)	73 (16.37)	74 (16.59)
Leaflets or brochures	215 (48.21)	74 (16.59)	61 (13.68)
Cell phone text message	166 (37.22)	52 (11.66)	54 (12.11)
Outpatient Consultation	196 (43.95)	76 (17.04)	75 (16.82)
Health promotion animation	139 (31.17)	23 (5.16)	38 (8.52)
Primary health care organizations' bulletin boards	147 (32.96)	15 (3.36)	24 (5.38)
Community bulletin boards or notices	180 (40.36)	31 (6.95)	26 (5.83)
Newspaper	47 (10.54)	0 (0)	5 (1.12)

3.4. Residents' Knowledge of, Satisfaction with, and Credibility in Participating in Health Science Popularization Activities

The results of the survey show that 87.44% of the people know that the government provides basic public health ser-

vices to the residents free of charge, and 79.82% of the people know what the national basic public health services are; for the health popularization information received so far, 42.15% of the residents say they are very satisfied, and 50% say they are satisfied; 34.08% of the residents think that the health popularization information is very credible and 62.56% of the residents considered the health popularization information credible.

4. Discussion

4.1. Aspects of Health Popularization Information Content

Residents' participation and demand for healthy lifestyles are the highest, which may be related to the wider coverage of healthy lifestyles and the vigorous publicity of the National Healthy Lifestyles Action, which prompts residents to have more opportunities to know and participate in health science popularization. Healthy lifestyles are closely related to everyone's life, emphasizing that everyone is the first person responsible for his or her own health, which suggests that the selection of future popular science content should be based on the residents' age, literacy level, occupational category and other factors to select different popular science information content [5].

4.2. Aspects of Health Science Popularization Channels

Social media is defined as activities, practices, and behaviors among communities of users who gather online to share information, knowledge, and opinions using conversational media [6]. Survey respondents have the highest combined awareness, participation, and demand for WeChat Official Account communication channels, which may be related to the fact that WeChat, as a national social application, has a huge user base, that covers almost all age groups and social classes, which makes WeChat Official Account extremely widespread, and people can easily come into contact with the content of health science popularization when they swipe WeChat daily, which creates a high awareness rate. Second, the public number is rich in interactive forms, and users can express their views through messages, likes, and shares, as well as participate in online lectures and Q&A activities, which greatly enhances the degree of participation. In addition, the content of the public number is personalized, and users can pay attention to public numbers in specific health fields according to their own needs, such as those who are concerned about health can pay attention to the Chinese medicine health category, and those who have chronic diseases can pay attention to the corresponding disease management category, which meets the diversified needs of different groups of people, and makes the degree of demand soaring. Residents of Chengdu Hi-tech Zone have demand for both traditional and new media channels, which requires us to provide diversified communication channels and make full use of the advantages of various communication channels to further expand the coverage of the population.

4.3. Residents' Understanding, Satisfaction and Credibility of Participating in Health Science Programs

The results of the survey showed that 79.82% of the res-

idents were aware of the national basic public health service program and 20.18% were not. 87.44% of residents know that the government provides basic public health services to residents free of charge, and 12.56% do not know. The national basic public health service program has been implemented for 15 years, and 20.18% of the residents still do not know about this program, which suggests that the publicity work of the jurisdiction is not in place, and that the channels and forms of publicity should be further enriched to vigorously publicize the national basic public health program, so that more people can benefit from the national basic public health services and achieve the goal of health for all. Residents' satisfaction with health education science information in the jurisdiction was 92.15%, and should be targeted to provide science information content, enrich channels, and innovate forms according to the results of this study to further expand the participation and satisfaction of residents' health science activities [5]. 34.08% of the residents thought that health popularization information was very credible, and 62.56% of the residents thought that health popularization information was credible. According to one study, more than half of the health information started to be disseminated on the Internet without being reviewed by professionals or doctors [7]. If it is not regulated, it is very easy to cause the rapid spread of popular science rumors, which seriously affects public health and social order [8]. This will also affect the credibility of the residents of popular science information. Only when public healthcare institutions have certain professional abilities, can they publish high-quality and reliable health science information, thus increasing the recognition and acceptance of science information by the audience [9]. However, only 43.72% of the residents will often adjust their lifestyles or behaviors according to the health information they receive, and only 44.39% will often share useful health information with their friends and relatives. This indicates that the current health communication effect of community health popularization content, channel and form is mainly that residents know the health information, produce health belief identity and change their own attitudes, but it still has not reached the highest level of health communication behavior [10]. This may be because the content of the existing popularization of science and technology does not fully meet the expectations of the residents on the theme, form, continuity, interactivity, and the lack of behavioral change guidance. Therefore, in the future, relevant subjects should further optimize the quality and interactivity of popular science content, improve the communication skills of popular science workers, and enhance public trust and satisfaction.

5. Conclusion

In this study, the questionnaire survey method was used to comprehensively understand the current situation and satisfaction of the residents' demand for health science information

in the Chengdu Hi-Tech Zone. The results of this study show that residents have a high demand for content on healthy lifestyles and health literacy, and a diversified demand for science popularization channels, with WeChat being the main channel. Due to the multi-level and diversified nature of the population, according to the “demand theory” in the process of mass communication, the demand characteristics of the audience should be fully considered in the process of accurate health communication [11]. In the future, we should take the needs of the target population as the starting point, provide accurate information content, enrich communication channels, innovate the form of popularization of science, and strive to improve the level of health literacy of residents and achieve the goal of health literacy. Enhance the level of residents' health literacy and realize the goal of health for all.

Abbreviations

HZ Hi-Tech Zone

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Conflicts of Interest

The authors declare no conflicts of interest.

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