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ARTICLE

Survey and Research on Health Information Assistance Needs of Junior Middle School Students in Different Regions of Guangdong Province

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ABSTRACT

Objective: To study the health information assistance needs of junior high school students in 8 different regions of Guangdong Province in a cluster, to understand the current situation of junior high school students' health information assistance needs, and to collect feasibility data for hospitals and schools to jointly promote the healthy development of students. **Methods:** In June 2019, a group of junior high school students from 8 different regions in Guangdong Province [678 students (in 2 towns), 352 students (in 2 counties and prefecture-level cities), and 1098 students (in 4 provincial-level cities)] were selected in a group. A questionnaire survey was conducted by 2128 people, the results of the questionnaire survey were collected, and statistical analysis was performed. **Results:** Of the 2128 junior high school students in 8 different regions, only 52.07% had confidence in their health, and there were no regional differences. Health information for students seeking professional medical assistance includes: 1578 person-times (74.15%) of nutritional diets, 1084 person-times (50.94%) to eliminate tiredness, 1190 person-times (55.92%) to improve sleep quality, 1002 person-times (47.09%) to reduce anxiety, making him happier and stronger 1164 person-times (54.70%). Students in different regions asked for help on how to make their hearts happier and stronger. The results suggest that provincial and county-level students have greater needs than urban students. **Conclusion:** The results of this research show that junior high school students in different regions of Guangdong Province have insufficient awareness of health, and there is a large demand for various health help information, and the focus is on prevention. It is of practical significance to strengthen and meet the health information needs of junior high school students.

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1. Introduction

The junior high school students have just entered the adolescent stage, with obvious changes in their physiology and a big change in their psychology. This is a critical period of physical and mental development[1], the State Council issued the Opinions of the State Council on the Implementation of the Healthy China Initiative in mid-July 2019, and the National Level launched the Healthy China Initiative (2019-2030). This medium and long-term action focuses on current major health issues and influencing factors. Focusing on the two cores of disease prevention and health promotion, we strive to keep the masses from getting sick and less sick. Based on this background, the researchers found through literature review that most of the previous researches focused on the health problems of junior high school students. For example, because health education is formal, the overwhelming majority of students fail to develop a good health concept, fail to pay attention to personal hygiene, do not like sports, partial eclipse, irregular lifestyles and other bad lifestyles leading to physical weakness, obesity or weight loss, high myopia rate, fatigue, etc. and the heavy learning pressure caused the widespread existence of negative emotions such as psychological anxiety, depression, autism and pessimism[2-8]. But little attention has been paid to junior high school students' active health information. A survey of health information help needs of junior high school students in 8 middle schools in different regions of Guangdong Province was conducted to explore the current situation of health information help needs of junior high school students. The specific research is as follows:

2. Objects and Methods

2.1 Survey Objects

In June 2019, a cluster sampling method was used to conduct a questionnaire survey on a total of 2128 junior high school students in 8 different regions of Guangdong Province, including 678 students (in 2 towns), 352 students (in 2 counties and prefecture-level cities), and 1098 students (in 4 provincial-level cities). The survey objects included 1108 females, 1020 males, 914 in the first grade, 854 in the second grade, and 360 in the third grade, aged 12-15 years. Inclusion criteria: junior high school students at school who are studying at normal teaching progress without organic diseases. Exclusion criteria: Students who did not return home from school due to an organic disease. All students and their parents who participated in the questionnaire had informed consent.

2.2 Methods and Tools

2.2.1 Methods

The researcher explains the purpose of the survey and the requirements for completing the questionnaire to the students. The questionnaire must be completed independently by the students and their parents with the informed consent. A total of 2128 questionnaires were distributed, and 2128 valid questionnaires were recovered. The effective recovery rate was 100%.

2.2.2 Research Tools

Health Cognition and Health Needs Questionnaire: Due to the lack of attention paid to junior high school students 'active help health information in the past, the authoritative questionnaire for junior high school students' active help health information cannot be consulted at present, by referring to relevant research literatures [9], designed in accordance with the purpose of this research, this questionnaire has been tested by experts and has good reliability and validity. After consulting the experts of the ethics committee of this unit, this questionnaire does not involve personal privacy and does not require approval for filing. The questionnaire contains: 10 items in three parts: general information, health awareness, and health help information (see attachment).

2.2.3 Statistical Analysis

The statistical software “Questionnaire Star” was used for data entry, and SPSS 22.0 software was used for analysis. The counting data was expressed as frequency and percentage. The health needs of students at different levels of schools in various regions took the initiative to ask for help in multiple groups and between groups. $P < 0.05$, considered statistically significant.

3. Results and Analysis

Table 1. Do you think you are healthy? [Single choice]

Options	Total Cases / percent N=2128/100%	Provincial cities N=1098/100%	County-level cities N=352/100%	Towns N=678/100%
A Health	1108/52.07%	592/53.92%	180/51.14%	336/49.56%
B Healthier	720/33.83%	390/ 35.52%	122/34.66%	208/30.68%
C Fair	250/11.75%	100/ 9.11%	40/11.36%	110/16.22%
D Unclear	50/2.35%	16/ 1.46%	10/2.84%	24/3.54%

Table 1 shows that only 22.07% of the 2,128 junior high school students are confident in their health. Different regions show that: 53.92% for provincial cities,

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51.14% for prefecture-level cities and 49.56% for cities and towns. According to statistics, X2 = 1.77, p = 0.41, the difference is not statistically significant; considering that their health status is only that of ordinary students, the highest is in urban areas (16.22%), followed by county-level cities (11.36%), and the lowest is provincial cities (9.11%). However, the statistical results showed that X2 = 2.26, P = 0.32, and the difference was not statistically significant. It can be seen that the students in various regions have comparable self-confidence indexes for their health.

Table 2. Do you agree that health is a prerequisite for us to better work, study, live and realize the value of life in the future? [Single choice]

Options	Total Cases / percent N=2128/100%	Provincial cities N=1098/100%	County-level cities N=352/100%	Towns N=678/100%
A Very agree	1726/81.11%	948/86.34%	268/76.14%	510/75.22%
B Agree	384/18.05%	140/12.75%	78/22.16%	166/24.48%
C Disagree	18/0.85%	10/0.91%	6/1.70%	2/0.29%

Table 2 shows that 81.11% of students realize that health is the prerequisite for us to better work, study, live and realize the value of life in the future; there are differences in the recognition that health is the prerequisite for us to better work, study, live and realize the value of life in the future. The provincial level is 86.34%, the county level is 76.14%, and the town is 75.22%. Chi-square test was performed in three groups, X2 = 20.3, P = 0.00, and the pairwise comparison. The results of the comparison between provincial students and students at county, prefecture, and town levels showed that X2 = 10.5, P = 0.001, X2 = 17.62, and P = 0.00. The differences were statistically significant, and the comparison results of county level and town were X2 = 0.53, P = 0.82, and the difference was not statistically significant. Prompt provincial students have the highest awareness of health as the prerequisite for us to better work, study, live and realize the value of life in the future.

Table 3 shows that the content of 2128 junior high school students who wish to receive professional medical assistance includes: nutritional diet, elimination of tiredness, and improvement of sleep quality with more than 50% of the demand; reduce anxiety by nearly 50%; however, the junior high school students in various regions asked for nutrition and diet, asked for help to eliminate tiredness, asked for help to improve sleep quality, and asked for help to reduce anxiety. The results were compared between groups. The results were: $X^2 = 4.85$, P = 0.09, $X^2 = 3.31$, P = 0.19, $X^2 = 0.40$, P = 0.82, $X^2 = 1.30$, P = 0.52, the results are not statistically different, suggesting that the demand in this area is similar.

There are differences in how to ask for help to make your heart happier and stronger. The results are $X^2 = 28.59$, P = 0.00, the results were statistically different, and the comparison was made pair by pair. The comparison results at the provincial, county, city and town levels were $X^2 = 2.88$, P = 0.09, $X^2 = 28.60$, P = 0.00, the comparison results between county and city level and town are $X^2 = 5.81$ and P = 0.02, suggesting that provincial, county and city level students have greater needs than urban students in terms of how to ask for help to make their hearts happier and stronger. In the last "Other" open-ended question, the proportion of urban students is the highest (20.94%), and the provincial level is low (6.38%). The assistance needs are as follows:

① How to regulate the body to make the memory of the mind better and better?

② How to manage your body in daily life?

③ How to get acne?

④ It is recommended that schools hold more publicity on students' physical and mental health.

⑤ How can I get out of the bad state quickly?

⑥ How to protect your eyes in a stressful study life?

⑦ Hand hygiene knowledge.

Table 3. If you have frontline clinical staff coming to your school regularly, which of the following health issues would you most like to ask for help? [Single choice]

Options	Total Cases / percent N=2128/100%	Provincial cities N=1098/100%	County-level cities N=352/100%	Towns N=678/100%
A. What kind of nutrition match will make me healthier and not overweight or thin?	1578/74.15%	810/73.77%	248/70.45%	520/76.70%
B. How can I feel less tired?	1084/50.94%	584/53.19%	160/45.45%	340/50.15%
C. How can I improve my sleep quality?	1190/55.92%	624/56.83%	192/54.55%	374/55.16%
D. Is there any way I can be so anxious and helpless that I am always depressed?	1002/47.09%	524/47.72%	152/43.18%	326/48.08%
E. Is there any way to make my heart happier and stronger?	1164/54.70%	678/61.75%	192/54.55%	294/43.36%
F. Others	258/12.12%	70/6.38%	46/13.07%	142/20.94%

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Table 4. Are you happy to share your health knowledge with your family and friends around you? [Single choice]

Options	Total Cases / percent N=2128/100%	Provincial cities N=1098/100%	County-level cities N=352/100%	Towns N=678/100%
A Yes, glad to	1910/89.76%	1014/92.35%	296/84.09%	600/88.50%
B Not very glad	194/9.12%	76/6.92%	46/13.07%	72/10.62%
C Unhappy	24/1.13%	8/0.73%	10/2.84%	6/0.88%

Table 4 shows that the vast majority of 2,128 junior high school students are happy to announce their health knowledge to family and friends around. Provincial cities have the largest number of students, up to 92.35%, and cities and counties at prefecture-level cities are also above 84%. The comparison of the three groups was $X^2 = 10.75$ and $P = 0.01$, and the differences were statistically significant. The comparison results of provincial cities with prefecture-level cities and towns were $X^2 = 10.42$, $P = 0.00$, $X^2 = 3.76$, $P = 0.05$, and the comparison results between prefecture-level and township students showed that $X^2 = 1.99$ and $P = 0.16$. It is suggested that satisfying the need for health information for junior high school students will not only benefit the healthy development of junior high school students, but also help radiate more relatives through the preaching of junior high school students.

4. Discussion

"Healthy China" is a major strategic deployment of the Central Committee of the Communist Party of China for the promotion of the health of all citizens. Talent is the greatest productive force for social development. The healthy growth of young people is directly related to the physical fitness of all future citizens. This research starts from paying attention to the need for junior high school students to actively seek health information in order to provide targeted health assistance measures for relevant departments at higher levels and to provide feasible data for junior high school students' healthy development.

The results of this research show that, although more than 70% of students can correctly understand the meaning of health, 47.93% of them are not confident about their health. Of the 2128 junior high school students, 6276 people issued their medical help for a number of health problems that bothered them, and it is hoped to get professional guidance from front-line medical workers in order to solve their health problems in a timely manner. In their help information, the most involved is the development of physical and mental health. This is in line with previous research by Sun et al.[10-18] on junior high school students due to the early onset of youth, the unequal awareness of health knowledge, and the school, family, and personal factors caused by health problems such as physical stress, psychological anxiety, depression. The study by Zhang Yan et al.[19] showed that factors such as obsessive-compulsive, somatization, depression, and anxiety have a higher correlation with total sleep quality scores. Studies by Chen Jieyu, Qiu Yuming, et al.[20,21] further showed that lack of adequate sleep, poor sleep quality, sleep deprivation, and the incidence of subhealth are closely related. According to Zhao Runshuan, Ma Ning and other[22-29] researches on different occupations such as college teachers, company employees, government officials, college students, medical staff and other groups, it found that the prevalence of subhealthy people is 46-82.4% From the health help information questionnaire, we found that sub-health problems such as fatigue, poor sleep, psychological anxiety, and depression also existed in junior high school students, with an average prevalence of 55.67%.

Examination-oriented education in China has caused schools, teachers, parents, and students to focus on the study of books, ignoring the healthy development of body and mind. Furthermore, because the medical knowledge of the teachers in the school is far inferior to that of medical staff in professional colleges, which results in a lack of students' health knowledge, many students develop bad lifestyles, causing health problems to become increasingly prominent. The research results show that the junior high school students of provincial middle schools have the highest awareness rate of health importance, reaching 86.34%. How to make the junior high school students in the golden period of physical and mental development grow up healthily is a major public welfare issue facing the whole society, especially in front of medical workers. And it was found in the research that nearly 90% of the students are willing to spread the health knowledge they have learned to their families and the surrounding people, so the students will not only receive health instructors, but also the disseminators of health information.

5. Conclusion

For junior high school students who have just entered adolescence, physical and mental development is very important. If they can get professional medical assistance in time for health problems that they actively seek help, it will be of great benefit to their overall development. It is recommended that relevant departments formulate a

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practical and effective long-term mechanism, encourage hospitals and schools to cooperate, timely discover and analyze health help information from students in a timely manner, and formulate measures to effectively solve the physical and mental health problems of students. Medical workers with the latest authoritative expertise are expected to become the most powerful leader of the health promotion movement, and to make their due contribution to the implementation of the national "Healthy China" policy and to reduce the overall medical expenses of the entire population. There are certain deficiencies in this research: in this research, the questionnaires were mostly juveniles. The answers to the questions depended on the subjectivity of the subjects. The results of the research may be biased.

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Appendix

Questionnaire on health cognition and health needs of junior high school students

Dear classmate:

Hello there! In order to complete the subject of the survey of junior high school students' health cognition and health needs, a junior high school student's health cognition and health needs survey was conducted. This questionnaire is of great significance to the research of this topic. The questionnaire is conducted anonymously and has no impact on you and the school. The questionnaire has no standards for the correctness of the respondents. It is only used for scientific research. If you and your parents agree Please fill in truthfully, thank you for your cooperation!

I. Basic Information

1. Your gender is [multiple choice question]

A male

B female

2. You currently live in [fill in the blanks]

_____

3. The school where you are studying is [Multiple Choice Questions]

A provincial city

B prefecture-level city

C county cities

D Town

4. Your class is: [Multiple choice questions]

A junior

B second day

C third grade

5. Do you think it is necessary to ask front-line professional medical staff from the hospital to explain health knowledge for you? [Multiple choice questions]

A badly needed

B needs

C is not required

D doesn't matter

6. Are you willing to tell your health knowledge to your family and friends around you [Single-choice question]

A yes, glad

B is not happy

C is not happy

Health cognition:

1. Your understanding of the word "health": [Multiple choice questions]

A health means good health and no disease

B health means not fat or thin, strong body

C Health is not just free of illness, but a healthy state of

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physical, mental, and social adaptation

D health is to run fast, jump high, and go far

E health is to eat well and sleep well

2. Do you think you are healthy? [Multiple choice questions]

A health

B is healthier

C in general

D is unclear

3. Do you agree that health is a prerequisite for us to work, study, live and realize the value of life in the future? [Multiple choice questions]

A very agree

B agree

E disagree

Third, the medical information you currently need to ask for help:

If there are clinical front-line medical staff coming to your school regularly, which of the following professional assistance do you most want to get? (Multiple choice questions)

A. What kind of nutrition combination makes me healthier and not overweight or thin

B. How can I feel less tired?

C. How can I improve my sleep quality?

D. Is there any way to make my heart less anxious and helpless so that I am always depressed?

E. Is there any way to make my heart happier and stronger?

F. Other (please write it down)

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