

# **A PRELIMINARY STUDY ON MEDICAL STUDENTS CARRYING OUT HEALTH SCIENCE EDUCATION PRACTICE ACTIVITIES IN PRIMARY AND SECONDARY SCHOOLS**

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**Abstract:** This study takes the health science popularization activities in primary and secondary schools carried out by the Medical Science Popularization Association of Shaoyang University as an example. SWOT analysis method is used to study the model of health science popularization practice activities for medical students, and objectively analyze the advantages and disadvantages of this model. potential, opportunities and risks, and put forward some suggestions in order to carry out health science education activities in primary and secondary schools for medical students in colleges and universities.

**Keywords:** Medical schools; Primary and secondary schools; Health science education; Medical Science Popularization Association

## **1 HOW MEDICAL STUDENTS CARRY OUT HEALTH SCIENCE POPULARIZATION ACTIVITIES IN PRIMARY AND SECONDARY SCHOOLS**

National health science literacy is one of the indicators to measure the popularization of science in a country to benefit the people. To improve national health literacy, we need to Small grab. At present, China's compulsory education has not done enough in terms of health science popularization. Health science popularization bases in various places are open to primary and secondary schools. There are still not many health-themed social practice activities carried out by students. Select primary and secondary school students as health science popularization targets to promote learning It is of great practical significance for students to establish a correct concept of health and develop good hygiene habits to improve the national health science literacy; At this time, medical students can practice theories and improve their abilities in health science popularization activities, which can also achieve the purpose of cultivating talents. This article is based on The health science popularization carried out by the Medical Science Popularization Association of Shaoyang University was taken into Shaoyang Huashi Primary School as an example to analyze the health science popularization carried out by medical students. The advantages and disadvantages of educational activities provide reference for further carrying out activities to popularize science and benefit the people.

### **1.1 Selection and Training of Outstanding Science Popularization Teachers**

Health science popularization teachers themselves are a key factor in the success of science popularization activities, and their selection and training process should be comprehensive. Science popularization teachers must first be interested, and the establishment of medical science popularization associations in colleges and universities is based on this. Our school's Medical Science Popularization Association relies on the school's provincial science popularization base and makes full use of specimens and science popularization materials in the science popularization base. Through regular science popularization courses, it carries out health science popularization surveys and other related topics, and holds learning sharing sessions, health science popularization knowledge competitions, The science popularization teacher competition organizes activities such as watching excellent science popularization videos, and invites professional teachers to guide medical students. While expanding medical students' extracurricular knowledge, it selects and cultivates a group of outstanding science popularization talents, laying the foundation for the smooth progress of science popularization practice activities. a solid foundation.

### **1.2 Conduct Sufficient Research to Determine the Theme of Health Science Popularization Activities**

The Medical Science Popularization Association is the main body of science popularization activities. The association adopts a self-association method to actively cooperate with primary and secondary schools in the region. Get in touch and conduct a questionnaire survey to understand the prominent local school health issues, risk factors, and key concerns of primary and secondary school students. etc, combined with the " Core Information and Interpretation of Chinese Adolescent Health Education" issued by the China Health Education Center (2018 Version) " The nine core messages proposed in the book (including lifestyle, eye care, weight health, tuberculosis prevention, safety precautions, Reproductive health, drug hazards, tobacco hazards, and mental health (nine aspects), establish annual health science popularization activities in primary and secondary schools theme.

### **1.3 Formulate Science Popularization Work Plan and Refine Science Popularization Content**

A strict science popularization work plan is the guarantee for the smooth implementation of the activity. The Medical Science Popularization Association comprehensively analyzes factors such as the science popularization needs and understanding level of primary and secondary school students, the difficulty of carrying out activities, etc, formulates a science popularization work plan, including activity framework and process, safety and security measures, etc, and produces targeted science popularization materials, promotional materials, and professional instructors have repeatedly polished the lessons to refine the content of science popularization activities. Such as Shaoyang Huashi Village Primary School 99 The students in the class were interested in growth, development and health care, so they made targeted 4 A set of popular science education courseware with the topics: Food trip Digestive tract, bone and bone growth and development, Skin and care methods, windows to the soul: Eyes. Taking into account students' level of understanding, we abandoned complex professional knowledge and transformed it into easy-to-understand language. We also infiltrated medical humanistic ideas into the health science education content and promoted the concept of respecting medicine and valuing education. Promote the formation of awareness of harmonious doctor-patient relationships such as blood donation, body and organ donation.

#### **1.4 Regularly Carry out Health Science Popularization and Practical Activities**

In view of the different needs of primary and secondary school students for health knowledge at different stages of their growth, the Medical Science Popularization Association regularly selects outstanding students Show science popularization teachers go to campus and carry out various campus science popularization activities such as science popularization lectures and science popularization movies. At the same time, use me Taking advantage of the school's provincial science popularization base, we invite primary and secondary school students to enter the university campus and combine health science popularization education and science popularization base teaching with The combination of computer and machine not only greatly broadens the learning horizons of primary and secondary school students and stimulates their thirst for knowledge, but also sets a good example for primary and secondary school students. It plays an important role in establishing independent health awareness, facing up to the physiological changes in adolescence, and eliminating or reducing risk factors that affect physical and mental health. necessary role.

#### **1.5 Summary and Promotion of Science Popularization Results**

The Medical Science Popularization Association regularly analyzes and summarizes the research reports and results of science popularization activities, and uses news reports, science popularization It is displayed externally in the form of WeChat tweets and papers, providing reference for other groups to carry out health science popularization activities in primary and secondary schools, and expanding It has a great social impact and attracts social resources to pay attention to health science education in primary and secondary schools.

## **2 MEDICAL STUDENTS CARRY OUT HEALTH SCIENCE POPULARIZATION IN PRIMARY AND SECONDARY SCHOOLS SWOT ANALYZE**

20th Century In the early 1980s, Weirick, a professor of international management and behavioral sciences at the University of San Francisco, proposed SWOT analyze Method, also known as situation analysis method, can more objectively analyze and study the competitive advantages of the analyzed object (strength), disadvantages (weakness), opportunity (opportunity) and risk. \_ Now adopted SWOT analysis method to carry out health care for medical students in our school Konkop carries out analysis on the activities of primary and secondary schools and objectively demonstrates their advantages and disadvantages, opportunities and risks.

### **2.1 Advantages of Medical Students in Carrying out Health Science Popularization in Primary and Secondary Schools**

#### ***2.1.1 There are sufficient venues for science popularization activities, and the science popularization base has complete hardware facilities.***

center owned by our school. The museum is not only a science popularization base in Shaoyang City, but also It is a science and technology popularization base in Hunan Province. There are a large number of human specimens in the exhibition hall, which are divided into general specimen exhibition room and fault specimen exhibition room. The exhibition room, pathological specimen exhibition room and animal and plant specimen exhibition room can provide opportunities for primary and secondary schools to carry out extracurricular related health science popularization activities. Provide venue support.

#### ***2.1.2 The Medical Science Popularization Association provides sufficient human resources for science popularization teachers***

Shaoyang University's current medical students With more than 10,000 people, teachers and students have the medical theoretical foundation to carry out science popularization activities. Medical science Association in 2018 Year 4 Established in March, guided by teachers with rich experience in science popularization work, and has recruited a total of members More than 500 people, these Become a human resource guarantee for popular science teachers to enter the campus.

#### ***2.1.3 kinds of social service practice activities have trained the skills of science teachers***

The Science Popularization Association carries out several science and technology activity weeks every year, opens science popularization bases to the public, and arranges science popularization teachers to participate in Viewers receive easy-to-understand health science explanations, answer questions, and popularize science. Every year, we also carry out the "Three Down Under" campaign in rural areas. "Township" social practice activities, carrying out scientific eye use, prevention of common diseases in children, how to use masks and thermometers, and correct vaccinations Popularization of medical knowledge on the healthy growth of rural children. Long-term health science popularization practice has accumulated rich experience for the Science Popularization Association. The experience has honed the skills of science popularization teachers.

#### ***2.1.4 The results are conducive to the popularization and promotion of science***

Medical schools carry out public health science popularization projects and have their own capabilities and advantages to popularize and promote their research results. Guang is also a social service [1]. By summarizing the rich and diverse science popularization activities with local characteristics, we can create excellent Excellent popular science materials, popular science articles and promotional materials, and then publish and promote them, which can promote health science education for other industries and fields. Education provides reference.

## **2.2 Disadvantages of Medical Students Carrying out Health Science Popularization in Primary and Secondary Schools**

### ***2.2.1 Social resources available for activities are limited.***

Health science education has a long way to go, and it is difficult to complete the task of health science popularization solely by relying on student organizations in medical schools. Head The funding and technology for former college medical students to carry out health science popularization activities in primary and secondary schools mainly come from schools and the Medical Science Popularization Association. Animal resources are limited. To improve public health science literacy, we must actively seek the participation of government, medical, educational, business and other institutions in political Provide policy, financial, technical and other support and expand social resources.

### ***2.2.2 In the context of exam-oriented education, the status and time of popular science education are difficult to guarantee***

Due to the long-term influence of exam-oriented education, primary and secondary school teachers believe that popular science education is a foil to teaching and a hobby activity, thereby ignoring the subtle education in daily teaching [2]. The school prefers to allow a small number of students to participate in science popularization activities, because He believes that science popularization activities will inevitably take up a lot of time for teachers and students, and will cause the school's overall test scores to drop [3]. because Therefore, although the country has repeatedly emphasized the need to strengthen quality education, due to the lack of health science teaching content in primary and secondary schools, it is inconsistent with medical schools. The awareness of cooperation is not strong, and due to the pressure of further education, the support of schools, parents and students for science popularization work is still not high, and science popularization activities Dong has always been in a passive position. At present, the teaching tasks of compulsory education are heavy and the time for science popularization activities is very limited. Therefore, science popularization activities In terms of time arrangement, we must not only avoid the normal class hours of primary and secondary schools, but also avoid the use of venues by college students to study. time.

### ***2.2.3 The professional quality and level of science popularization teachers need to be improved***

Medical student science teachers are a new force in promoting science education. However, due to limited theoretical knowledge and insufficient clinical experience, When the activities were carried out, they were still in the stage of learning and carrying out, and their professional quality and science popularization level were relatively limited.

## **2.3 Opportunities for Medical Students to Carry Out Health Science Popularization in Primary and Secondary Schools**

### ***2.3.1 The country pays more and more attention to health science popularization***

already 2006 In the "National Medium and Long-term Science and Technology Development Plan (2006-2020)" formulated in 2006, "innovation culture" is treated as a separate topic, which is unprecedented in previous national science and technology development plans. Since then, the "Outline of the National Science Literacy Action Plan (2006-2010-2020)" and "Notice on Tax Policy Issues Encouraging the Development of Science Popularization" were issued "Several Opinions on Strengthening the Construction of National Science Popularization Capacity" and others all show that China's science popularization undertaking is moving in the direction of "government guidance, social participation, and diversified investment", and a situation of great development and collaboration of science popularization in the new century is taking shape [4], health science popularization is also receiving more and more attention.

### ***2.3.2 In the information age, health science popularization has ushered in development opportunities***

The 21st century is the information age. More and more educational institutions, science and technology activity centers, and popular science education bases are keeping up with the development of the times. Information media platforms have been built one after another, and WeChat public accounts, Weibo, etc. have gradually become important means of health science education. For example, our school The WeChat public platform "Shao Yuan Anatomy" built and the digital science and technology museum built based on the provincial science popularization base have realized the

exhibition The library is informatized and uses easy-to-understand pictures and texts to popularize medical and health knowledge. Popular science subjects can learn about health science education without leaving home education content, effectively giving full play to the base's science popularization advantages, while also reducing the cost of health science education and reducing student travel safety. risk. Therefore, information technology means make health science popularization more convenient, more comprehensive, and more accurate. " Internet + " Health science popularization of the times " Easier to promote [5].

### ***2.3.3 The awareness of social services in colleges and universities is gradually increasing***

the Higher Education Law states that institutions of higher learning should undertake the functions of cultivating talents, scientific research and social services. able. Nowadays, more and more medical educators realize the importance of health science education. College students " go to the countryside three times " and rural areas Volunteer teams such as teaching support and elderly care services are also growing. College students are growing their talents in social practice activities and providing social services. With the increasing awareness and sense of responsibility, medical students continue to research and explore health science popularization methods suitable for China's national conditions.

## **2.4 Risks of Medical Students Carrying out Health Science Popularization in Primary and Secondary Schools**

### ***2.4.1 The safety and security system for practical activities is not perfect enough***

Health science popularization practice activities for primary and secondary school students lack a complete safety plan, and science popularization bases in colleges and universities are limited to those facing nearby areas. Primary and secondary schools are open, and health science popularization activities can only be carried out in some nearby primary and secondary schools, which greatly limits the health Coverage of Conscience activities.

### ***2.4.2 Medical student science popularization team is at risk of brain drain***

The content of health science popularization education is professional and scientific, which inevitably requires health science popularization teachers and their instructors to Have high medical professional knowledge and scientific work management capabilities. Science popularization teams with mature associations and instructor training often face the risk of brain drain due to changes in university student associations and graduation. Therefore, to build a stable science popularization team and maintain lasting work motivation, more incentive mechanisms still need to be explored.

## **3 SUGGESTIONS FOR MEDICAL STUDENTS TO CARRY OUT HEALTH SCIENCE POPULARIZATION ACTIVITIES**

### **3.1 Building a Sustainable Science Popularization Team is the Foundation of Health Science Popularization Activities**

Health science popularization is an important part of public health education. With the development of China's social economy, people's awareness of health The demand for knowledge is increasing day by day, and medical students in colleges and universities have become an important force in health science popularization [6]. Medical universities have With rich teaching experience and complete science popularization facilities, they should regard health science popularization as their own responsibility, pay attention to the construction of science popularization bases, and allocate special projects funds, formulate incentive mechanisms, encourage more teachers to participate in health science popularization activities, and explore standardized science popularization talent training programs and measures to reduce brain drain, build a sustainable health science popularization team, and integrate health science popularization into university social services plan.

### **3.2 Establishing Sustainable Cooperative Relationships between Medical Universities and Primary and Secondary Schools has Become the Key to the Sustainable Development of Health Science Popularization**

Most primary and secondary school teachers and students' parents regard further education as their only goal and hold a neutral or opposed attitude toward health science popularization. This is because In primary and secondary schools, science popularization education is not included in the school's teaching work, which creates a conflict between traditional teaching and health science popularization education. fact To carry out health science popularization education is not to let traditional teaching " make way " for health science popularization, but to organically combine the two to improve Comprehensive quality of primary and secondary school students. Therefore, primary and secondary schools and local medical colleges and universities should jointly attach importance to health science popularization and establish a sustainable cooperative This is the key to the sustainable development of health science education.

### **3.3 Only by Making Full Use of Social Resources and Improving the Science Popularization Education System Can We Achieve the Great Development of Health Science Popularization**

To promote the process of science popularization and healthy China, a complete health science popularization education system is needed. Health and education administrative departments at all levels should implement the National Health Literacy Promotion Action Plan (2014-2020 Year), standardize and reduce science popularization work risk management, establish and improve the science popularization work guarantee system, and make extensive use of the public welfare organizations of various professional associations, societies, localities, and universities. With the

technical, financial and other resources of the group, we have carried out various forms of scientific medicine, health and wellness, rehabilitation and health care, etc. A series of health science popularization publicity and education activities [7] are carried out to achieve great development of health science popularization. In this process, medical student science popularization organizations should focus on Actively integrate into the national science popularization education system, strengthen their own professional quality, combine learning with application, seek cooperation and development, and participate in health science popularization activities. Achieve a true win-win situation in action.

## **COMPETING INTERESTS**

The authors have no relevant financial or non-financial interests to disclose.

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