

PATH CONSTRUCTION OF HEALTH EDUCATION ABOUT FOOD SAFETY FOR COLLEGE STUDENTS

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Abstract

Health education about food safety is an important part of college education, but the reality is not optimistic. Currently, the health education about food safety for college students is just a formality with arbitrary content, which is an embarrassing situation and has an unsatisfying effect. Due to the lack of education laws and regulations, the main subject and responsibilities of health education about food safety for college students are not clear. In addition, due to the allocation of teaching resources, administrators in colleges and universities are unable to pay due attention to the health education about food safety for college students, which leads to the lack of system, pertinence and initiative. Therefore, it is necessary to explore the responsibility mechanism, education mechanism and methods on the basis of defining the content of health education about food safety for college students, so as to form a scientific and effective education model about food safety for college students.

Key words: College students; Health education about food safety; Path construction

Food borne diseases, an increasing public health problem, are responsible for considerable morbidity and mortality globally ^[1]. Numerous studies have shown that the manhandling of food occurs because consumers have inadequate knowledge about food handling practices ^{[2][3]}.

Food safety is an issue that influence health of every member in China. The world has seen a large number of food safety scares recently, such as the outbreak of Escherichia coli in Europe and of Salmonella in the United States. However, these incidents is pale in comparison to the scandals happening in the Chinese mainland. The infamous melamine tainted milk scandal of 2008 is an example. What's more, it was found that vinegar in China was contaminated with antifreeze (reportedly claiming the lives of 11 people). All scandals shows that food safety is a persistent problem in China.

With the frequent occurrence of food safety incidents, it is of particular significance to strengthen health education about food safety. College students are the outstanding representatives of the contemporary youth and are groups with great learning ability, enthusiasm and creativity in the society. Their values and behaviors have great influence on the surrounding society. Therefore, it is of great significance to cultivate the scientific concept of health education about food safety of college students, so as to improve the overall level of food safety and health awareness in contemporary society.

In addition, due to special national conditions at present, college students' health education about food safety is still in the initial stage with imperfect legal system and nonstandard mechanism. Although China has issued the *Outline for Publicity and Education on Food Safety* in 2011, the actual work is still at the spiritual level ^[4]. From the perspective of education and teaching, it is still necessary to explore the establishment of health

education mode and mechanism about food safety for college students in line with the actual needs.

1. AWARENESS AND EDUCATION OF FOOD SAFETY

1.1 Definition of college students' safety awareness

Conceptually speaking, safety awareness is "a kind of cognition of people's safety, which is embodied in the process of labor and life. At the same time, it is the general name of the inner experience and behavior style that are displayed along with this cognition."^[5] Generally speaking, safety awareness refers to a kind of psychology of individuals, which causes individuals to be aware of the elements that threaten their own security from the perspective of cognition and prevention. In a broad sense, college students' awareness of food safety and health refers to the subjective cognition of the existence of food safety and harm in relevant links including food production, circulation and consumption. In a narrow sense, college students' awareness of food safety and health focuses on the field of food consumption, the popular cognition of the factors threatening food safety and health, and the cognition and prevention of the direct and indirect factors threatening their own safety in the daily diet of food products.

1.2 Necessity of college students' health education about food safety

Health education about food safety for college students starts from the education level, carries out the education related to the food safety and health of college students, standardizes the value cognition and behavior guidance of college students on food safety and health, improves the food safety awareness of college students at the individual and group levels through food safety health

education, and corrects the bad behaviors. As an educational level of safety and health education, it can play a very good role in mediating and motivating

college students' subjective value and objective action. It is of great necessity to strengthen the health education about food safety for college students (**Figure1**).

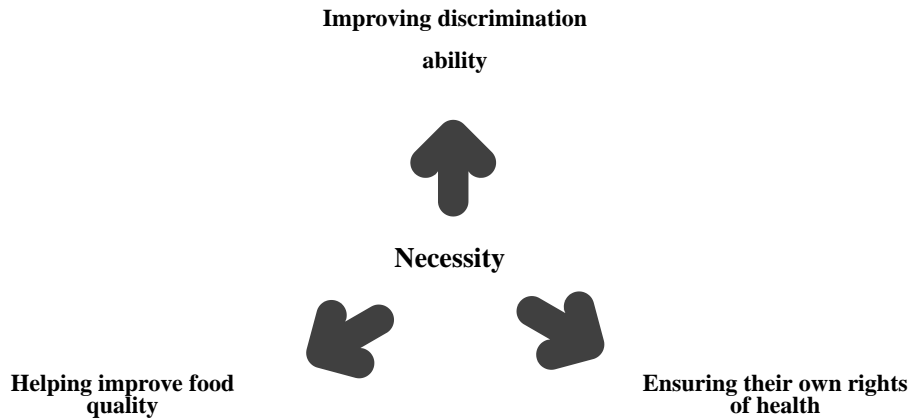


Figure1 Necessity of college students' health education about food safety

1.2.1 Improving discrimination ability

College students' health education about food safety focuses on improving their scientific understanding of food safety and health, so as to correctly guide their own behavior. Through food safety education, students can be taught about the shape, characteristics, nutritional parameters and the hazards of some additives. Students can learn about courses about food safety and health. On the one hand, they can improve their ability to identify the hazards and risks of some food. On the other hand, they can regulate their eating habits, which can effectively improve the safety of college students as a whole in the process of food purchase and consumption.

1.2.2 Helping improve food quality

The market plays a fundamental role in resource allocation. Some food enterprises blindly pursue profits, cut corners on production, and replace inferior products with good ones, which lead to many food safety incidents that endanger people's health. On the one hand, it is because of the lack of self-discipline and social responsibility awareness of some enterprises; On the

other hand, it is also related to the lack of food safety knowledge of consumers. The development of food safety education can effectively improve the level of college students' cognition of food safety knowledge, promote college students' ability to distinguish fake inferior products, and enhance the awareness of food safety and health prevention at the social level through the circle culture communication. Because students' awareness of food safety is not strong, they are always accustomed to take-out food, which is always unhealthy and dirty. Most of the takeaway stores are not qualified. Some takeaway stores around Shaanxi University of Science & Technology were once visited and investigated (**Table 1**). The results show that there exist a large number of unqualified restaurants around college students. Therefore, the promotion of food safety and health awareness may make counterfeiting of poor food and related enterprises lose market space, which is obviously a great deterrent for purifying food environment and improving food quality.

Table 1 The investigation results of takeaway stores around Shaanxi University of Science & Technology

Investigation Indicators	Display Situation	Proportion
Business license	Have license and display	50%
	Not publicized, unclear	50%
Health certificate of catering staff	Have	52.6%
	Haven't	23.7%
	Not publicized, unclear	23.7%
Work clothes, hats and masks for catering staff	Don't wear	18.4%
	Private operation	76.6%
	Cooks wear masks and gloves	5.0%
Basic disinfection measures	No disinfection equipment	47.4%
	Complete disinfection equipment	28.9%
	Incomplete or nonstandard use of disinfection equipment	23.7%

1.2.3 Ensuring their own rights of health

Through the health education about food safety, we should not only make college students master the skills of achieving food safety and health, but also let them fully realize the hazards of unhealthy food. In addition, they should be taught to protect their own rights and interests when their own health is endangered. The education of legal knowledge such as *Food Safety Law of the People’s Republic of China* and *Consumer Protection Law* should be implemented to enhance college students’ legal awareness of food safety and health and provide effective measures for them to protect their legitimate rights and interests.

EDUCATION ABOUT FOOD SAFETY FOR COLLEGE STUDENTS

At present, China’s health education about food safety is still in its infancy. As for college students’ food safety and health education, there are still some problems, such as weak foundation and imperfect system, which are shown as follows:

2.1 Influencing factors of health education about food safety for college students

In the health education about food safety for college students, there exist some influencing factors which can contribute to good results of the education. Those influencing factors include subject, school, society and family. (Figure.2)

2. CURRENT SITUATION OF HEALTH

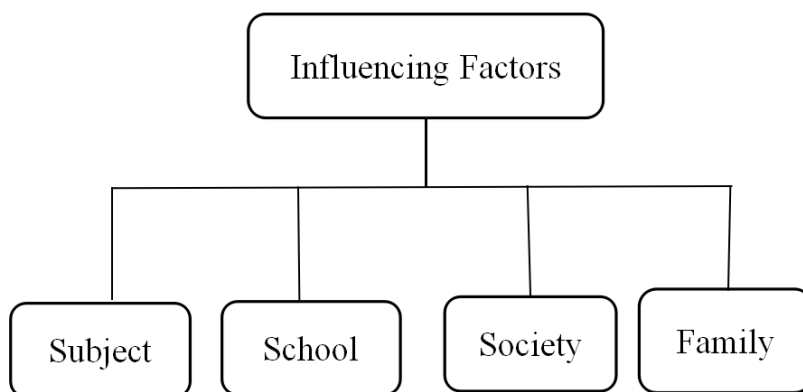


Figure 2 Influencing factors of health education about food safety for college students

2.1.1 The factor of subject: food safety health awareness and knowledge reserve

In the health education about food safety of college students, college students are the most pivotal subject. In fact, during the food safety health education, students need not only knowledge reserve, individual subjective initiative, learning and understanding ability, but also the exclusion ability to bad things. All these aspects will affect the effect of college students in learning food safety. Among them, individual value judgment ability and behavior self-control ability are very important. It is very important to make scientific and effective behaviors according to the knowledge of food safety and health. As we all know, scientific and correct food additives in food processing can effectively improve food quality. However, what is the scientific and correct and what are the categories of food additives allowed by law requires college students to learn more about food additives.

2.1.2 The factor of school: knowledge establishment of health education about food safety

As the teaching institution of knowledge and concept, colleges and universities play an important role in cultivating food safety concept of college students in the process of content setting, curriculum setting and educational concept setting of health education about food safety. On the one hand, whether colleges and universities have set up courses related to food safety education in the daily teaching of college students directly affects the cultivation of college students’ concept of food safety to some extent. On the other hand, setting up related courses is the way and method of health education about food safety in colleges and

universities, which also affects the level of food safety education of college students. In practice, whether it’s professional education or popular education, three-dimensional education or education only by counselors, all affect the quality of health education about food safety for college students.

2.1.3 The factor of society: cultural atmosphere of health education about food safety

The public education environment has a certain impact on college students’ health education about food safety. As a part of society, college students’ culture of food safety and food health affects their personality and psychology of food safety and health. In practice, the general cognition and routine practice of college students’ food safety and health education are directly related to their understanding of food safety and health. In addition, the attitude of food producers, sellers and regulators to food safety in society, and the state’s legislation on behaviors endangering food safety all affect college students’ understanding of food safety and health at a certain level. In addition, the first celebration of the United Nations World Food Safety Day, to be marked globally on 7 June, aims to strengthen efforts to ensure that the food is safe, which have good effect on the cultural atmosphere of food safety in the whole world.

2.1.4 The factor of family: inter-generational inheritance of knowledge and ideas of health education about food safety

“Family education refers to the influence of parents on their children’s education in the process of family interaction, which is also the most important part of the

whole education process”^[6]. In the growth of children, parents are both enlightenment teachers and personal tutors. Family plays an irreplaceable role in the development of children’s concepts and behaviors of food safety and health. First, the family acts as a tutor. In their children’s life, parents will teach their children to be hygienic, pay attention to food safety, and pay attention to healthy diet. In the long-term process of imperceptible influence, they promote their children’s own recognition about food safety and health. Second, the family has the power of being a role model. In the growth of children, parents are the object of children’s worship. Parents are habitually regarded as the role model of children’s own learning. Parents’ cognitive level of food safety and health must be transferred to their children’s behavior concept.

2.2 Problems of health education about food safety for college students

2.2.1 Insufficient education system

At present, compared with the United States and other developed countries, China’s food safety education level is in its infancy. Food safety education in the United States is a national education, which carries out comprehensive education of food safety concept and knowledge from all aspects of life. In contrast, China’s food safety education is relatively thin, lack of real-time and accuracy, which also has a concentrated performance in college students’ food safety and health education. Currently, there is a long-term shortage in the health education about food safety of college students, which leads to two extreme situations. On the one hand, it is believed that such activities are dispensable, and students must already have some fundamental understanding about it. Even if they do not understand, they have the ability of self-study. Therefore, a *laissez-faire* attitude is adopted in terms of health education about food safety in colleges and universities. On the other hand, although some educational activities have been carried out, most of them are temporary activities and lack of long-term nature. Moreover, most of the activities are based on the special background of sudden security events, which is not well-prepared.

2.2.2 Weak educational pertinence

Food safety and health education is a systematic work involving production, consumption and supervision, including food safety knowledge, health concept, legal norms, risk prevention and behavior judgment and other links. In the health education about food safety for college students, it must be considered comprehensively and designed from all links as a whole. In practice, due to the lack of education system, colleges and universities are also lack of pertinence in the food safety education for college students. Firstly, the content of education is formalized and fragmented. In the development of education activities, the setting of education themes is lack of organic, and the activities are carried out at will, showing the problem of fragmentation. Secondly, the allocation of teachers and resources during the education process is relatively random. Whether it is the allocation teachers or the allocation of resources for educational activities, there exists a problem of randomness. Most of the teachers are teachers of other disciplines who are part-time or temporary. The daily activities are often

sponsored by some communities, and their professionalism is inevitable to be imagined.

2.2.3 Lack of initiative in education

Different from other subjects, health education about food safety is always in an awkward situation, which is free from the edge of being dispensable. Therefore, it is obvious that college students’ subjective initiative in health education about food safety is not so strong, which has a certain relationship with the current public environment of social governance. At present, since the implementation of the *Food Safety Law of the People’s Republic of China*, China has adopted the supervision mode of “segmented supervision first, supplemented by variety supervision”^[7] in the food safety supervision, which is easy to cause the defects of supervision blank and kicking the ball^[8]. This leads to an excuse for colleges and universities to ignore the health education about food safety for college students. On the other hand, although our country has entered the stage of popular education, but the traditional concept of elite education still exists in real life, which also affects the establishment of university teaching and food safety education to a certain extent. As college students are faced with the practical problem of employment, how to allocate resources and whether it is necessary to pour resources into health education about food safety in professional discipline education and other nonprofessional discipline education are also issues which are considered by some college administrators. This concept will inevitably affect the actual development of health education about food safety for college students.

2.2.4 Single educational channel

Currently, the Internet and television are the primary ways for the public to acquire food safety knowledge, followed by radio, newspapers and magazines, and finally the food safety knowledge manual, brochure, etc.^[9] From the path of information acquisition, the acquisition of such knowledge is from the outside to the inside, which belongs to the process of individual self-study. However, it is sad that the vast majority of college students’ acquisition of food safety and health knowledge is also self-learning. But public elective courses, bulletin boards, theme activities, class lectures and other forms are included in the daily food safety education. In practice, public elective courses usually meet the needs of credit and their own system is not enough; the contents of bulletin boards are generally intercepted, which are derived from daily newspapers or the Internet, and the contents must be fragment. In addition, the opening of theme activities and class lectures are all temporary arrangements, so it is difficult to guarantee the results and effects.

2.2.5 Lack of legal support for education

At present, most of the laws of health education about food safety for college students are substantive laws, and the specific procedural laws are extremely lacking. Only *Consumer Protection Law* and *Food Safety Law of the People’s Republic of China* are related laws about food safety. And special laws on food safety education at the citizen level have not yet been formulated. Therefore, the legislation of health education about food safety for college students is even more remote. In addition, The

Consumer Protection Law stipulates that “consumers have the right to acquire knowledge about the protection of consumers’ rights and interests”^[10]. There is no specific education department, and there is no provision for the mechanism and method of exact education. Therefore, such general legal provisions are difficult to form legal constraints for the implementation of health education about food safety in colleges and universities.

3. PATH CHOICE OF HEALTH EDUCATION ABOUT FOOD SAFETY FOR COLLEGE STUDENTS

Health education about food safety for college students must be based on the reality of college students’ education and teaching, fully respect the law of education, keep on the main direction of professional discipline education, and stick to the cultivation of scientific values of food safety and health, and establish a set of education mode that not only conforms to the present, but also can be developed in the long run.

3.1 Content of health education about food safety for college students

3.1.1 Popular knowledge of food safety and health

Food safety and health education should carry out publicity and education on its purpose, method, necessity and situation. In practice, we should carry out knowledge popularization from the perspective of science popularization. In addition, we should focus on the situation of food safety, the necessity of learning common sense of food safety and health, the way of knowledge acquisition, relevant policies and legislation to carry out popular science education. It can be seen that the popular science education of food safety and health of college students is mainly a kind of general education, which solves the general problems of awareness cultivation and necessity cognition of food safety and health of college students.

3.1.2 Professional knowledge of food safety and health

How to identify food safety and health risks and how to effectively prevent and avoid them are the necessary topics to be solved in health education about food safety for college students. First, what are the risks of food safety and health? It is necessary to teach the distribution of food safety and health risks as well as the links prone to food safety and health problems to college students. And in this process, it is necessary to systematically explain all links from food production to consumption from the perspective of food science, so that students can master the basic knowledge of each food link “from production to consumption”, i.e. production, sales, disinfection, innocuity, meeting the nutritional requirements, not causing any acute, chronic or potential harm to human health. Second, what are the sources of food safety and health risks? What are the common risks of food safety and health? We should give professional lectures on food additives, food shelf life, food pollutants, food nutrients and harmful ingredients of expired food. Third, how to prevent food safety and health risks? In daily diet, how to establish good health habits, how to establish a scientific diet structure, how to identify food quality, what is QS mark, how to observe and judge the

shelf life of food are all the necessary links of health education about food safety for college students.

3.1.3 Legal knowledge of food safety and health

Now, it is equally important to know what laws are in place on food safety and health, what legal rights and interests citizens enjoy in food safety and health, and how to safeguard their rights and interests in case of damage to their rights and interests. On the one hand, we should do a good job in law popularization, impart relevant legal knowledge in current food safety education, so that these legal knowledge can be fully used in daily life and work of college students. On the other hand, it is necessary to cultivate college students’ legal awareness, publicize the relevant rights and obligations of consumers to enjoy healthy food, and solve the problem of safeguarding rights in case of infringement of rights and interests.

3.2 Path construction of health education about food safety for college students

3.2.1 Strengthen subject’s initiative consciousness of health education about food safety

The internal cause is the decisive factor of the development of things. For the health education about food safety for college students, if the subject’s initiative consciousness is not good, the result is doomed to be in vain even though the external education mechanism and method are good enough. Therefore, we must put the awareness education of food safety and health in the first place, fully stimulate college students’ role as the subject, and strengthen their initiative in health education about food safety. In the process of teaching the basic knowledge of food safety and health, it is necessary for college students to fully understand its necessity. The key is to let them master the healthy concept of food safety, develop correct behavior habits, and finally become a college student with excellent professional knowledge and comprehensive quality in health education about food safety.

3.2.2 Strengthen the responsibility mechanism of health education about food safety in colleges and universities

The practitioners of college students’ health education about food safety must be colleges and universities. The competent department of education and the administrators of colleges and universities should establish the subject consciousness, clarify the orientation of colleges and universities in the education of food safety and health, and take the education of food safety and health as the main component of college students’ education. At present, although the responsibility of the education subject is relatively vague in many food safety publicity work and related provisions of college students’ health education about food safety, it is undeniable that the cultivation of college students’ safety prevention and safety awareness, including food safety and health awareness, is the responsibility of college education. We should strengthen the system construction, improve the responsibilities of university management and teaching departments in the food safety education for college students, especially do a good job in the prevention of all kinds of emergency events, increase the assessment work, and practically make the food safety and health education for college students have rules as well as regulations to follow.

3.2.3 Improve the education mechanism of health education about food safety for college students

Health education about food safety for college students is an essential part of college education. Based on the current education mode, we should establish and improve the education mechanism of food safety and health in colleges and universities. On the one hand, we should attach importance to the long-term and systematic health education about food safety for college students, and provide scientific and reasonable allocation of teaching resources and teachers. On the other hand, we should explore a multi-dimensional pattern of health education about food safety for college students, set up the course content scientifically and do well in the course education, open up the main body and situation of activities and do well in the activity education, base on the study of basic knowledge, implement the combination of knowledge and practice, and do well in the practice education.

3.2.4 Innovative channels and methods of health education about food safety for college students

College students' food safety and health education channels should be diversified and life oriented, directly integrated into their daily study and life, and the methods should be interesting. In terms of educational channels, we should rely on the campuses of colleges and universities, respect the reality of the small society of colleges and universities, draw materials from the daily life of college students, and integrate them into the campus management, discipline management, community management, class management, dormitory management and other links. In terms of methods, first, the columns and special topics should be planned on a regular basis through the establishment of campus food safety and health intranet; second, campus bulletin board and publicity posters can be used; third, campus salon, debate contest and safety case warning lecture can also be implemented.

3.2.5 Explore the legislative support of health education about food safety for college students

To strengthen the special legislation of health education about food safety for citizens, the education department explores the establishment of policies for health education about food safety for college students, so as to make the health education about food safety for college students have laws and regulations to follow, clear the main subject and responsibilities of education, standardize the education management, and ensure the standardization and normalization of health education about food safety for college students.

4. CONCLUSION

Currently, food safety education is in its infancy in our country. The reality determines that health education about food safety for college students must be a

long-term practice. In order to achieve the goal of health education about food safety for college students, it is necessary to innovate in system construction, mechanism construction, channels and methods. It is significant for college administrators to abandon the existing bad habits and balance the existing teaching strength and resources. Most importantly, as a kind of nonprofessional education, the health education about food safety for colleges should focus on consciousness training and behavior guidance.

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