

Strategies for Improving Diet Education for Children Under the Background of Building a Healthy China

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Abstract: Diet education can expand children's life experience, cultivate good living habits, and develop their character, contributing to the construction of a healthy China. Developing diet education helps children improve their health awareness and enables them to form healthy eating behaviors and lifestyles, laying the foundation for their healthy growth and lifelong development. It is not just about disseminating nutrition knowledge but also involves the integration of health education, labor education, and family education through practical experiences. This study analyzes the importance of promoting diet education for children and proposes four promotion strategies that draw on families, schools, relevant departments, and social groups, as well as pilot projects. The application of these strategies will help enhance the effectiveness of diet education and enable children to form healthy eating habits and develop the basic ability to maintain their health.

Keywords: Healthy China; Diet education; Children; Promotion strategies

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1. Introduction

Diet education refers to all aspects of education about diet, eating, nutrition, food culture, and other related areas. It is not only about spreading nutrition knowledge, but also a practice to cultivate values, aesthetic awareness, and mental health. Promoting diet education in childhood is particularly important to help children form good dietary habits and contribute to their physical and psychological health over their entire lives.

Currently, with the excessive intake of nutrition and calories, the rate of overweight and obesity among children in China has been increasing at an accelerated pace^[1]. Meanwhile, retarded growth due to malnutrition has also been observed among children in primary schools^[2]. Dental problems caused by excessive intake of sugar and poor oral hygiene habits are also becoming increasingly common problems. Moreover, some children exhibit unhealthy dietary habits such as refusing regular diet and enjoying junk food and soft drinks.

To tackle these problems, central authorities in China have put forward the Healthy China Initiative and pledged to strengthen health education and management among the public. The Outline of the Healthy China 2030 Plan emphasizes that it is necessary to establish a comprehensive and well-functioning system for promoting diet education among primary and secondary schools to achieve the goal of improving the overall health of the population^[3]. Diet education has a rich content that includes nutrition and food combination, health preservation, food safety, knowledge related to food additives, the impact of pesticide and veterinary drug residues on health, microbiological contamination, dietary culture, and so on^[4]. In this paper, we analyzed the importance of diet education for children and presented practical strategies to improve it from families, schools, relevant departments, and social groups, as well as conducting pilot projects, aiming to provide a sound reference for future studies in this area.

2. Importance of diet education for children

Children are the hope and future of our nation. Diet education for children is an effective means to improve children's dietary behaviors, nutritional status, and health literacy. It is also the key to implementing the Healthy China Initiative.

2.1. Promoting the comprehensive development of children

Diet education can be an educational approach to support the holistic development of children in terms of morality, intelligence, physical fitness, aesthetics, and labor skills. The popularization of diet education can not only help children gain knowledge about the nutritional composition of food but also understand the relationship between diet and health. Through the permeation of correct worldview, outlook on life, and values into diet education, children can obtain spiritual nourishment and enhance their health awareness, laying the foundation for their healthy growth and lifelong development. For example, the belief that a healthy diet can bring benefits to both physical and mental health can serve as the driving force to help children correct bad eating behaviors, which may ultimately help promote balanced nutrition and alleviate health issues such as obesity and malnutrition.

In addition, diet education can allow children to develop a positive relationship with food. Through harvesting and processing raw materials into food, children's good character can be shaped and their appreciation for food and respect for life can be cultivated.

2.2. Facilitating the inheritance and development of Chinese food culture

The dining table of Chinese people has witnessed thousands of years of dietary reforms and cultural changes. Chinese food culture is an excellent resource for diet education that encompasses dietary theories, customs, culinary history, banquet culture, tea culture, wine culture, and health preservation^[5]. The *Huangdi Neijing (Inner Canon of the Yellow Emperor)* compiled over 2,200 years ago stated that disease will arise from the stomach and intestines without a regular diet. Traditional Chinese Medicine emphasizes that one should have a balanced diet instead of a biased one. It advises people to avoid indulging excessively, as overindulgence can harm the body and lead to illness; and do not completely abandon the food one dislikes, as abandoning it will disrupt the balance of internal organs.

Diet education can help children understand and appreciate the historical origins of traditional food culture and enhance their sense of identity and belonging in Chinese culture. Promoting diet education for children will ultimately help them foster a greater appreciation of traditional dietary customs and Chinese food culture.

3. Strategies to improve diet education for children

In order to improve the overall health of children, diet education should be promoted in a collaborative, comprehensive, and sustainable manner that includes various sectors such as governments, schools, businesses, non-profit organizations, and the public. The ways to promote diet education include regular diet, participation in farming, breeding, and cooking, table manners, and cultivating health awareness.

3.1. Strengthening diet education in the families

The dietary habits as well as attitudes and values towards diet among family members can all have an impact on children's eating behaviors. It is undeniable that parents play important roles in helping minors develop good dietary habits and behavior patterns by ensuring they have a balanced diet, engage in proper physical activities, and get sufficient sleep.

However, due to the increased life pace and pressure, people's regularity in diet has decreased. Instead, imbalanced nutrient intake has become increasingly common. Many people are experiencing a suboptimal health status, which poses risks for the development of chronic diseases and influences children's eating behaviors as well. Consequently, children now tend to prefer fried foods, processed snacks, sweets, French fries, and skipping breakfast. Therefore, it is advisable for parents to help children prevent malnutrition and overweight by cultivating good eating habits, avoiding picky eating and overeating, and rejecting excessive drinking and eating.

Parents should also understand the special nutrition needs of children. Although grains such as rice, noodles, and potatoes can be a main source of carbohydrates, the intake of minerals from dairy products and seafood in children's daily diet should not be overlooked. In addition, parents are expected to be aware that the digestion ability of children is relatively weaker than that of adults. It is necessary to spend more time preparing children's meals by chopping vegetables into small pieces, processing lean meat into minced meat, and reducing the addition of various condiments and seasonings.

For young children, making food by hand is not only a valuable experience but also a life skill. Parents can take traditional Chinese festivals as an opportunity to organize cooking activities for children. For example, during the Lantern Festival, parents may prepare glutinous rice dough and encourage children to roll it into tangyuan. During the Mid-Autumn Festival, parents and children can make colorful dough, prepare various fillings, and make stuffed mooncakes. Through the process of preparation and cooking, children can gain a deeper understanding of the culinary culture and develop a gratitude for the harvest season.

Etiquette begins with meals; appropriate table manners are an important manifestation of good family education and social civilization. Children's dining etiquette and eating habits rely on parents' demonstration and guidance. Children are expected to sit straight, place their feet properly, and lean towards the table when eating. After finishing their meals, children are expected to return their own bowls and spoons to the kitchen, rinse their mouths, and wipe their lips to form good hygiene habits. Meanwhile, parents should not turn a blind eye to children's improper eating habits such as swallowing and wasting food. Good eating habits for young children are gradually formed through repeated daily routines and cannot be accomplished overnight.

3.2. Promoting diet education at schools

School canteens are an integral part of school life. Young children often have low resistance to junk food and cannot control how much they eat when they encounter their favorite foods. To help cultivate good eating habits and achieve a balanced intake of fruits, vegetables, and meat, diet education at schools is highly needed and can be conducted in the following ways.

Firstly, to enhance teachers' and students' interest in diet education, schools can organize various activities

including speech contests, dumpling making, and vegetable planting. Children's learning of diet education can be effectively achieved through firsthand experience, games, and daily activities. This is the practice of learning through doing and playing. For example, in the vegetable planting activity, children learn to prepare the soil, create holes for the seeds, place the seeds at the appropriate depth, and cover them with soil. They also take turns watering and weeding the plants. Under careful management, various vegetables in the school garden may flourish. After harvesting and enjoying the joy of reaping, students take the vegetables home and try to cook a signature dish for their families using the vegetables they have grown by themselves. During the process, children not only harvest vegetables but also gain valuable experiences, patience, and wisdom. The school garden becomes a field of experience for shaping children's character and values. The growth process of vegetables teaches students that the growth of things requires a suitable environment and external assistance. They learn about the difficulties involved in food production and develop a greater sense of cherishing food. The joy and sense of accomplishment are beyond words. Diet education activities based on the cultivation, production, and enjoyment of food also help children understand the close relationship between life, nature, and society.

Secondly, the development of good eating habits cannot be separated from labor. Diet education and labor education have similar objectives which are to cultivate children's good values and achieve the development of their personalities through practical activities. A series of detailed publicity plans for diet education can be developed in combination with "Lei Feng Memorial Day" and "Labor Day." Meanwhile, diet education courses can be set up to popularize knowledge of diet and nutrition, help students reduce dependence on a single diet, and learn how to mix high-protein and fiber-rich foods with fresh vegetables and fruits. During the courses, picture books can be applied to instruct diet education. The teaching of diet education can be enriched by the vivid colors, exquisite composition, and interesting story plots of picture books. For example, teachers can draw on picture books to enable children to understand their digestive system, learn healthy eating habits, and help them gradually develop good dietary habits. Medical experts can be invited to give lectures on diet education, so that teachers and students can better understand the prevention of chronic diseases such as obesity, hypertension, and anemia. In addition, diet education can be conducted in a targeted manner by establishing a record database on children's health status. Regular open days can be organized to allow parents and students the opportunity to visit the school canteen and ensure that the school maintains high hygiene standards.

Thirdly, to alleviate parents' concerns about food safety and nutrition, the school canteen can hire students' parents as chefs. These parents are responsible for cooking, washing vegetables, and maintaining hygiene. They also place more emphasis on the combination and balance of nutritional elements such as protein, vitamins, calcium, iron, and zinc, ensuring the quality of children's meals. Moreover, as long as there is no wastage, additional servings are provided free of charge. Parents as food practitioners are also required to participate in relevant training in a timely manner to strengthen canteen construction, improve services, and provide strong guarantees for children's physical health.

3.3. Coordination of relevant departments and social groups to promote diet education

To strengthen diet education in terms of ensuring food safety, providing nutritional guidance, and popularizing dining culture, all relevant departments and social groups are needed, including the education bureau, the market supervision bureau, schools, parents, third-party testing agencies, training agencies, and scientific institutions.

In the information era, a monitoring system that collects information on raw materials, food practitioners and suppliers, rapid testing, dining environment, disinfection, and sterilization should be established. The

system is suggested to be available as a mobile phone application and shared with the education bureau, market supervision bureau, schools, parents, and students to allow the inspection of food safety at any time. Meanwhile, all essential data and items are expected to be exported as electronic documents and analyzed in a real-time manner to provide dietary and nutritional guidance. In addition, in the era of self-media, even small incidents of food safety can be spread on the internet rapidly, leading to a powerful negative social atmosphere^[6]. Through the monitoring system, the truth can be quickly and timely disclosed, allowing the facts to speak for themselves and avoiding panic caused by negative social media exposure.

To ensure food safety from the source to children, the quality and safety of farming, breeding, primary production, processing and packaging, storage and transportation, and distribution ought to be monitored by the market supervision bureau. Moreover, it should be encouraged that third-party testing agencies are included to evaluate food safety together with the market supervision bureau.

Meanwhile, to ensure rapid testing of retained samples, equipment and practices for detecting common bacteria such as *Escherichia coli*, *Salmonella*, *Staphylococcus aureus*, *Listeria*, and *Pseudomonas aeruginosa* should be timely developed by scientific institutions. Food safety policies and regulations need to be well-interpreted and propagated by training agencies. Besides, weekly inspection of food safety and daily testing is needed to strengthen the responsibility of operators, promote social supervision, and ultimately guarantee the healthy growth of children.

3.4. Pilot project-based diet education

To promote the comprehensive development of diet education among the public, it is advisable to conduct pilot projects in a small region initially and then expand the experience and consensus to a large population. The purpose of the pilot project is to explore the implementation path of diet education and provide replicable practices for the large-scale promotion of diet education. Just as small victories will eventually lead to great success, conducting a successful pilot project can provide effective solutions for promoting the overall work.

For example, the Nutrition and Food Safety Institute of the Chinese Center for Disease Control and Prevention collaborates with local governments and education bureaus to create pilot projects for diet education in schools. By initially focusing on pilot schools and gradually expanding to all primary schools in a region, the collaboration systems conduct teacher training, establish diet education curricula, create school gardens for diet education, and guide research on diet education. Meanwhile, they also publish textbooks and popular science books on diet education, organize public discussions to explore the specific implementation paths of diet education, and collaborate with food production companies, such as dairy product manufacturers, to implement diet education in schools.

Analysis of collected data from conducting pilot projects shows that students' knowledge of diet has increased and their attitude towards diet has changed a great deal. They have shown an increased preference for nutrition instead of flavor, and there has been a decrease in picky eating habits. When purchasing food, students pay more attention to food labels and the nutritional content. In addition, they also actively provide recommendations to their families regarding the types of food consumed every day from a health perspective.

4. Conclusion

In the process of further advancing the Healthy China Initiative, diet education should undoubtedly be strengthened to help children establish correct dietary concepts from an early age and cultivate the habits of balanced nutrition and reasonable diets, making them masters of their own healthy lives. In order to strive for the goal of promoting the healthy growth of children, it is advisable to bring together various forces and

establish a collaborative model for diet education that engages families, schools, and society.

In this study, we summarized four practical strategies to promote diet education for children involving the participation of families, schools, relevant departments, and social groups, and pilot projects. Implementing these strategies will contribute to the improvement of diet education, empower children to cultivate healthy eating habits, and acquire fundamental skills in maintaining their personal well-being.

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Disclosure statement

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