The Curriculum of Health and Nutrition Education in Czech Republic
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ABSTRACT
The average one-year health expenditure per capita in the European member states has doubled in the last 15 years. Prevention is less expensive than treatment, and changes in diet and lifestyle remain the most effective way to reduce the financial health care costs. However, European health systems are primarily treatment systems, not preventive systems.

Improper diet and lack of physical activity are the most critical factors contributing to the overweight and obesity pandemic. Along with heavy alcohol consumption and smoking, these four factors contribute the most to the development of chronic non-communicable diseases. These diseases kill more than 36 million people worldwide annually, with more than 9,000,000 deaths occurring before the sixtieth year of life.

In 2008, The Czech Republic government responded to the deteriorating financial health care situation by installing fees for medical services. In 2004, the Czech Republic Government utilized preventive services by introducing the new educational field of Health Education to the public school curriculum for pre-school, primary, and secondary education. The fundamental role of the Health Education Curriculum is performed through primary education (the only required stage of education for all Czech students). Nutrition Education is a necessary tool in shaping lifelong positive behaviors of students, leading to actively promoting and maintaining health. Nutrition Education is delivered through the Expected Outcomes and Prescribed Curriculum, which are mandatory for the implementation in Czech schools. Czech educators gained the freedom as well as responsibility to determine how to meet the prescribed curriculum.

KEYWORDS
Curriculum, Health Education, Nutrition Education, Health, Czech Republic

BACKGROUND
Health and healthy lifestyle are an essential constituent part of quality life and successful living. Healthy diet and proper eating habits are critical for healthy lifestyle and status of health in all aspects - physical, mental and social components.

The rapid rise of health-care expenditures has been recorded (WHO, 2013) in the European Region during the recent decades. The average medical cost per European inhabitant (Figure 1) increased from 1054.5 USD (in 1996) to 2373.4 USD (2011). This acceleration predicts strong economic utilization across the European Region, especially in countries with the largest increase of the expenses on medical care, such as Denmark, Belgium or Romania. Financial cost of health care in the Czech Republic per capita falls within the European average (Figure 2).

Improper diet and lack of physical activity are the main contributors to unhealthy lifestyle of current society and the most critical factors contributing to the overweight and obesity pandemic. According to an estimate (WHO, 2013) 72.3% of men and 60.3% of women in Czech Republic aged 20 years and older are overweight or obese and 30.5% of boys and 26.5% of girls in Czech Republic younger than 20 years are obese (are greater than or equal to a Body Mass Index ≥ 30).

Up to 80% of heart disease, stroke, Diabetes Mellitus of second type and 40% of cancers could be avoided if risk factors of common lifestyle such as unhealthy diet
were eliminated. Good nutrition is essential for survival, physical growth, mental development, performance, productivity, health and well-being across the entire life-span: from the earliest stages of fetal development, at birth, and through infancy, childhood, adolescence and on to adulthood (WHO, 2013).

Figure 1: Acceleration of increasing total health expenditure of gross domestic product per capita of selected European countries in 2011 (Source: WHO / Europe, European HFA Database, July 2013)

Figure 2: Percentage of total health expenditure of gross domestic product per capita of European countries for 2011 (Source: WHO / Europe, European HFA Database, July 2013)
METHODS

This study’s primary focus is to analyze The Framework Educational Programs for primary education (FEP PE) in Czech Republic focusing on Nutrition Education. FEP PE is a key tool for health educators in class preparation and realization of Health Education and Nutrition Education. Czech educators became independent to comply the prescribed curriculum for all lectures, but as they gained freedom, they became more responsible for the design of lectures that would meet the prescribed curriculum.

PROFILE AND ANALYSE OF FRAMEWORK EDUCATIONAL PROGRAMS

According to WHO, Health Education is any combination of learning experiences designed to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes. The quality of education and training is a matter of national importance in each country. Quality assurance is a collective responsibility of the academic community, health systems, regulatory authorities and governments of every nation (WHO, 2013).

The educational content of primary education in Czech Republic is divided into nine educational areas. Each educational area is made up of either one major educational field, or of more interlinked educational disciplines. One of these areas - Human and health area consists of a branch of Health Education and a branch of Physical Education.

Nutrition Education is an important issue of Health Education. The field of nutrition is also implemented in the educational areas of Human and his/her World, Human and Nature, Human and World of Work and Human and Society beside Human and Health area. Nutrition Education is being delivered through the Expected Outcomes and Prescribed Curriculum. Expected Outcomes are a crucial part of the educational content. It sets the mandatory standards, which are supposed to be met by all pupils during their education. The prescribed Curriculum presents topics, which should be used as an instrument to achieve the expected outcomes. Teachers are obliged to incorporate the suggested topics in the education process to meet the Expected Outcomes.

RESULTS: SUMMARY OF NUTRITION EDUCATION CURRICULUM FOR CZECH ELEMENTARY SCHOOLS

Table 1: The Curriculum and Expected Outcomes of educational areas for Nutrition Education (Framework Educational Programs for Primary Education (FEP), 2007)

<table>
<thead>
<tr>
<th>The Educational area</th>
<th>Curriculum links</th>
<th>Expected outcomes</th>
</tr>
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<tbody>
<tr>
<td>HUMAN AND HIS/HER WORLD</td>
<td>health care, healthy nutrition - daily routines, fluid intake, exercise regime, healthy diet</td>
<td>student: - applies essential skills and habits related to health promotion and prevention</td>
</tr>
<tr>
<td></td>
<td>plants, mushrooms and animals - signs of life, needs of life and manifestations of</td>
<td></td>
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</tbody>
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| **HUMAN AND HIS/HER WORLD OF WORK** | **selection, shopping and storage of food**  
**simple table setting, regulations of table manners**  
**basic kitchen equipment** - history and purpose of individual kitchen equipment  
**vegetables** - seeds, seedlings, cultivars, growing conditions and principles of cultivation; cultivation of selected vegetables  
**medicinal plants, spices** - the cultivation of selected plants, plants and human health, healthy impact of plants, poisoning plants, using plants as drugs; allergies  
**kitchen** - basic equipment, maintaining cleanliness, cooking safety and hygiene  
**foods** – food selection, shopping, food storage, food groups, putting together a menu  
**food preparation** - preparation of cold dishes, basic cooking methods, basic procedures in the preparation of food and beverages  
**table setting and dining** - simple table setting, table service and manners at the table, festive family dining, decorative elements and flowers on the table | **student:**  
- is able to set up a table  
- behaves appropriately during dining  
- prepares simple meals in accordance with the principles of healthy nutrition  
- is familiar with basic kitchen equipment  
- prepares a simple meal independently on parents  
- respects the rules of proper table manners and behavior  
- maintains clean surface for cooking, maintains safety food preparation, is able to provide first aid in case of accidents in the kitchen  
- prepares simple meals in accordance with the principles of healthy diet  
- uses basic kitchen equipment and is able to work safely with basic appliances  
- is able to prepare simple meals in accordance with the principles of healthy nutrition  
- respects the basic principles of dining, of social behavior and of table service in the company  
- follows the principles of hygiene and safety work  
- is able to provide first aid for injuries in the kitchen |
| HUMAN AND NATURE | natural substances – sources of proteins, examples of the role of protein, as well as fats, carbohydrates and vitamins in the human body  
origin of life, evolution of life, diversity of life and significance of life - nutrition, growth, reproduction, life development, opinions on the origin of life  
water - distilled, drinkable, waste water; production of drinking water, water purity  
mushrooms - basic characteristics, positive and negative effects on human and alive organisms  
mushrooms - structure, occurrence in nature, importance, principles of mushroom packing, consumption of mushroom and first aid in case of mushroom poisoning  
anatomy and physiology of human body - structure and function of individual human body parts, organs, organ systems (skeleton, musculature, circulatory, respiratory, digestive, urinary, reproductive and nervous systems), higher nervous activity, mental health | student:  
- provides examples of sources of proteins, fats, carbohydrates and vitamins  
- is able to recognize different types of water and gives examples of it’s use and occurrence  
- recognizes the Czech best-known edible and poisonous mushrooms and is able to compare them  
- is able to identify the location of individual body organs and is able to explain its function, structure as well as organ systems  
- is able to explain the relation between individual organ systems |
| --- | --- |
| HUMAN AND HEALTH | nutrition and health - the principles of healthy eating, the influence of environment and diet on health, eating disorders  
lifestyle diseases - health risk factors, prevention and treatment  
holistic understanding of human in health and disease - health components and their interactions, basic human needs and their hierarchy (Maslow's theory) | student:  
- understands the relationship between the diet and eating habits and the development of lifestyle diseases and applies healthy eating habits as much as possible |
| HUMAN AND SOCIETY | new Europe political organization and the role of U.S.A. in the world – the formation of Czechoslovakia, its economic and political development, social and national problems | student:  
- explains the importance of agriculture for humans, as well as animal husbandry and processing of metals |
CONCLUSIONS
The Czech Educators’ autonomy in lesson designing and implementation has increased, which also implies significant demand for responsibility for the students’ education. The Nutrition Education Curriculum undertakes each educator to meet the requirements, but lacks to provide sufficient educational materials, which would help to implement the right tools to reach goals of education. Nutritional Educational curriculum for grammar schools in Czech Republic calls for specific suggestions of what to teach and how to teach. It would help to fulfill prescribed subject matter of curriculum properly, broaden Nutrition Education by incorporating of missing topics and promote proper diet effectively.

References