

CURRENT INSIGHT INTO THE NUTRITION EDUCATION AT THE CZECH GRAMMAR SCHOOLS

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Abstract

There is a need for improving nutritional lifestyles for children and adolescents in order to strengthen their health, increase the quality of life of the next generation and decrease the health costs and prevalence of obesity and other health-related problems. In 2007 the Health Education was implemented in to the curriculum of youth between the ages of 3 to 19, to straighten the health of Czech students. At present, the issue of health and proper nutrition is an essential part of primary and secondary education. Currently, there is no required standardized curriculum for Nutrition Education in Czech Republic.

Main research objective of this study was to analyze and to evaluate the current phase of implementation of Nutrition Education within compulsory (lower secondary) education in the Czech grammar schools. Survey results identify besides the most common taught content of Nutrition Education, how is Nutrition Education curricula being delivered to the Czech students.

The results of this study could be an initiative for Nutrition Education curriculum revision and the results provide the background information for designing of Nutrition Education Program and its implication to Czech grammar schools.

Keywords

Health Promotion, Healthy Eating, Nutrition Education, Lower Secondary Education, Czech Republic.

1 BACKGROUND

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. According to WHO (2014) these diseases kill more than 36 million people worldwide annually, with more than 9,000,000 deaths occurring before the

sixtieth year of life. The average one-year health expenditure per capita in Europe has, in the last 15 years, more than doubled. The rapid rise of health-care expenditures predicts strong economic utilization across the European Region and State economics of all Member States. Prevention is less expensive than treatment, and prevention in terms of changes in diet and lifestyle remain the most effective way to permanently reduce the financial costs of health care. Successful health promotion of each country requires the participation of all

sectors of society and the common responsibility of all departments, such as the Ministry of finance, agriculture, health and education.

Nutrition and dietary habits are a dynamic phenomenon that flexibly responds to the changing society, are affected by family lifestyle and are daily influenced by the school environment. Primary and secondary education mediated by grammar schools helps families shape students' personalities and strengthen positive nutrition habits. Grammar schools provide an ideal environment for disseminating yearly nutrition education, which has the potential to positively influence child health. A lack of knowledge in good nutrition can lead to childhood obesity, which is considered to have reached a pandemic status. Not only evidence of an increase in childhood obesity provides a reason for changes to be made nationally and locally.

Earlier in 2004, the Czech Republic Government utilized health promotion by legislating the new educational field of "Health Education" to **the Czech Curriculum Standards (CCS)** for pre-school, primary, and secondary education. Health education has been mandatorily taught since 2008 in all grammar schools in the Czech Republic. Implementation of Health Education, promoting proper nutrition is representing a very new field of schooling compared to the long tradition in the Western nations. Prescribed curriculum of the CCS presents **nutritional topics** such as among others: nutrition and health-the principles of healthy eating, the influence of environment and diet to health or eating disorders. These topics are expected to be taught to achieve the prescribed **expected outcomes** of secondary education such as among others: student's understanding the

relationship between the diet, eating habits and the development of lifestyle induced diseases or applying healthy eating habits as much as possible (the CCS for grammar school, 2007). These outcomes are supposed to be met by all students during their primary education. Czech educators are given the freedom in the manner of implementation of education as well as responsibility to determine how to meet the prescribed curriculum. The nutrition education curriculum specifies that each educator must meet the requirements (the nutritional topics and the expected outcomes), but does not provide sufficient educational materials, which would help teachers who are inexperienced in nutrition to implement the right tools to reach the goals of the CCS. Nutrition education curriculum for grammar schools in the Czech Republic needs specific curriculum suggestions for educators regarding what to teach and how to teach it in order to comply with meeting the CCS.

To be able to help educators to fulfill prescribed curriculum and to provide a suitable Nutritional Educational Program for Czech grammar schools and any curriculum change suggestion it is crucial and necessary to analyze a current state of Nutrition Education within the compulsory schooling.

2 RESEARCH METHODS

Main research objective of this study was to analyze and evaluate the current phase of implementation (in school year 2015/2016) of Nutrition Education within the compulsory (lower secondary) schooling in the Czech grammar schools. Headmasters of 387 different Czech

grammar schools were asked to address Health Educators or Nutrition Educators to fill in the on-line *Teacher Questionnaire about Nutrition Education Implementation* (Koptíková, 2014). Male and female teachers of the total number of 362 participated in the study by filling up the questionnaire. The number of 249 questionnaires (69%) were excluded for incomplete answers or inapplicable data input (respondents were often primary education teachers, not secondary education educators). For research purposes were processed 113 questionnaires (31.22% of the total amount of received questionnaires) of 102 women and 11 men nutrition educators from various Czech grammar schools in the average of 45.3 years old and 21.5 years in the education practice.

3 RESULTS

The results show that Nutrition Education is being taught the most frequently by educators who specialize to Health Education (49.56% of respondents), Biology (14.16% of respondents), Family Education (5.31% of respondents), Natural Sciences (5.31% of respondents), Physical Education (5.31% of respondents) or other than listed field of education (25.66%).

The curriculum of Nutrition Education is most often implemented into the Health Education classes (noted by 38.94% of asked teachers), Biology classes (in 36.29% of subjects), to the Family Education, Physical Education or Civic Education (in total of 15.92%) or into different than listed classes (8.85%).

The majority educators (76.99%) use for Nutrition Education any educational tools. The most widely used educational

tools in Nutrition classes are videos, food containers and real food samples.

Major the part (82.3% educators) search information for lesson preparation online using the Internet. Approximately half of teachers (51.33%) reported the Internet as their most frequently used information source for their Nutrition class preparation. More than one third (36.28%) of teachers most often draw information in the nutritional literature and the rest of respondents (12.39%) use commercial magazines as a source of information often.

The vast majority of respondents (90.3%) who teach Nutrition Education would appreciate the opportunity of providing *The Nutrition Education Program for Czech Grammar Schools* based on Czech students' needs and fitting to Czech curriculum standards. These educators would be willing to teach Nutrition Education at their school using the NEP. Other 11 (9.7%) respondents don't feel any need of using NEP for having enough of education materials and tools.

4 RESULTS: WHAT UNHEALTHY FOOD DO STUDENTS CURRENTLY EAT?

The most registered nutrient lacking foods eaten by Czech students are salty snacks. The vast majority of teachers (71.68%) reported that their students consume salty junk food (i.e. potato chips and salty sticks) most frequently. The majority (62.83%) of educators see that Czech students drink sweet soda drinks (i.e. Coca-Cola, ice teas, and fruit juice drinks) on a daily basis. Almost a half of asked teachers (43.36%) noted within their list of unhealthy food eaten by

students that their students eat sweets such as cookies, candies and chocolate bars frequently. Significant part of respondents (37.16%) sees their students drinking energy drinks very often. Group of teachers (15.04%) noticed often consumption of fast-food products such as hot dog, French fries, hamburger, or

baguette. Educators also see their students eating sweet bakery (noticed by 10.61% of teachers) or sausages (5.30%). Small percentage (2.65%) of all respondents don't know what junk food their students eat and only 2.65% of asked teachers said that their students don't eat any unhealthy food.

Table 1 Unhealthy food at Czech grammar schools noted by teachers

<i>The most registered poor-nutrient food eaten by Czech students:</i>	The number of teachers who reported their students eat stated poor nutrient food often (from total of 113)	
	Absolute frequency	Relative frequency
Salty snacks	81	71.68%
Sweet soda drinks	71	62.83%
Sweets	49	43.36%
Energy drinks	42	37.16%
Fast-food products	17	15.04%
Sweet pastries	12	10.61%
Sausages	6	5.30%
Healthy food items	3	2.65%
„I don't know“	3	2.65%

5 THE MOST FREQUENTLY OCCURRING COMMENTS OF RESPONDENTS:

- Students eat and drink the junk food and unhealthy drinks named above every day.
- Majority of students don't bring any food from home.
- Even though the school cafeteria does not offer unhealthy snacks, students bring junk food from home.
- Parents are being asked by teachers

to not provide and/or buy junk food and non- nutritious snacks for their children.

6 SUMMARY OF THE MOST COMMON TAUGHT CONTENT OF NUTRITION EDUCATION CLASSES

Each of the respondents listed the most frequently lectured topics related to nutrition at their grammar school. Out of the

113 teachers asked, there were multiple same responses. The study concludes that there are a total of 42 different nutrition topics that are most frequently lectured at Czech grammar schools (a total of 368 teachers responses'). More than half (54.08%) of all teachers' answers fall under the 7 most common taught nutrition topics. The most widely taught topic related to nutrition at the Czech grammar schools is *Creating a Personal Meal plan* (noted in 10.33% of all listed answers) and the subject of *Food Selection - Healthy and Unhealthy Food* (noted in 10.33% of all listed answers). Ten percent (9.24%) of all

listed answers fall under the topic of *Healthy Eating Principles* and 7.34% fall under *Proper Nutrition Composition*. Slightly less (6.79%) of all listed answers represent the topic of *Proper Meal Timing*, while 5.43% represent *Health Nutrition in general* and 4.62% represents *Proper Nutritional Habits*. The rest of the 35 listed topics are considered to be the most frequently taught at the Czech grammar schools in 45.92% altogether. These topics include for example: *Eating Disorders* (4.07%), *Cooking* (4.34%) or *Food Advertising and Marketing* (0.54%).

Table 2 The most commonly cited topics of nutrition content of education in elementary schools

<i>The most often currently taught curriculum of Nutrition Education classes (from the total number of 42 different listed topics):</i>	The amount of noted answers correlated with listed topic	
Concrete answers – the Nutrition Education Curriculum topics	Absolute frequency	Relative frequency
<i>Creating a Personal Meal plan</i>	38 x	10,33 %
<i>Food Selection - Healthy and Unhealthy Food</i>	38 x	10,33 %
<i>Healthy Eating Principles</i>	34 x	9,24 %
<i>Proper Nutrition Composition</i>	27 x	7,34 %
<i>Proper Meal Timing</i>	25 x	6,79 %
<i>Health Nutrition in general</i>	20 x	5,43 %
<i>Proper Nutritional Habits</i>	17 x	4,62 %
The rest of the 35 listed topics altogether	169 x	45,92 %
The total number of responses	368	100 %

7 CONCLUSIONS

Czech educational system is lacking educational programs, especially in the field of Health and Nutrition Education. Providing thorough instructional

educational nutrition curriculum to educators and all ancillary materials will ultimately make Nutrition Education Program in the Czech Republic one of the most superior program nationally. The Czech Republic education system is being

overwhelmed by theory and lacks implementation to practice. Application of Nutrition Education Program Czech Republic (NEP CZE) based on results of this study, current needs of students, educators, and school system would enable to provide the curriculum and numerous “hands-on” activities to Czech students while having fun and improving the potential for knowledge retention. NEP would help to fulfill prescribed subject matter of curriculum properly, broaden nutrition education by incorporating missing topics to nutrition education, and promote proper diet effectively. From these experiences, a more effective education system would evolve that would shape the personalities and attitudes of students in the desired direction.

8 REFERENCES

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