



Nutrition Labeling as an Instrument for Improvement of Dietary Habits: Pre-Research among Czech Medical Students

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Dear Editor-in-Chief

Food labels should inform consumers how to make the right choices about food. Food labeling is also important to reach the high level of consumer health protection and to fulfill the rights of consumers to be informed. The “best before” and “use by” dates are important not only for the food safety, but also for the food waste reduction (1). In the Czech Republic, provision of nutrition information in pre-packed food these days is topical, because the legislation has been changed. Since Dec 13, 2016 producers have had to present nutrition declaration on the food labels (2).

This pre-research was focused on whether students of Faculty of Medicine of Masaryk University (study fields General nurse and General medicine) read nutrition declaration and how they perceive it. It took place in a transitory period of this regulation and at the beginning of the period of mandatory nutrient declaration. Altogether 262 valid questionnaires were collected. The average age of the respondents was 22.3. The survey included 87 males and 175 females. The information from students was investigated by the questionnaire. Data collecting was realized in the period Nov 2015 – May 2017. The collected data was processed by using the program Epiinfo v.6. Hypotheses were tested by the Pearson’s chi-square and

Fisher’s exact test. A P -value of <0.05 was considered statistically significant. Faculty of Medicine, Masaryk University approved the study ethically. The main results showed that labeling was considered important by 95% ($n=249$) of the students. The most mentioned types of nutrition information among the students of the Medical faculty were: energy 54% ($n=143$), carbohydrates 20% ($n=52$), protein 16% ($n=41$), fat 8% ($n=20$), fiber 1% ($n=4$) and sodium 1% ($n=2$). Among students from the USA the most often used nutrition information was fat, energy, energy from fat and the serving size. On the other hand, the least used information amongst the students from the USA was dietary fiber, iron and vitamin A (3). In an Australian research among college students, it was found out that 67% ($n=438$) of students focused on the energy (4). No significant ($P=0.26$) differences were found in the frequency of reading nutrition information between males and females. There were also no significant ($P=0.68$) differences between nutrition label use between the genders. Not significant ($P=0.46$) association was found between nutrition label use and body mass index. Most of the respondents understood the differences between use by date and best before labeling. But less than a half of asked students



knew the marks of quality, nutrition and health claims and the basic label information.

The interesting finding in the American study was that one third of the questioned students believe that labels are not accurate, two thirds consider nutrition claims not truthful and half of the respondents believe health claims are not truthful (3). The students of Medical faculty of Masaryk University read health and nutrition claims rarely. It is possible that the lack of information about the nutrition and health claims can cause distrust to this type of labels. Three questions were focused on the knowledge of marks of quality. But only in one question on the Regional food there were significant differences ($P=0.031$) between genders. Men were more successful. There were no significant differences between the knowledge about health and nutrition claims between the genders. Four questions were aimed at understanding nutrition information. Only in one question, which was focused on the portions in the package, there were significant differences ($P=0.036$) between genders. Men were more successful again.

This pre-research serves as a basis for the further interventional program focused on the nutrition labeling in different age groups. The result of this investigation indicates that it is important to concentrate on the knowledge, understanding and interpretation of nutrition information on food labels. In this group of the Faculty of Medicine students, there were similar knowledge inadequacies (mainly in the nutrition and health claims and the marks of quality). But the group of respondents of Faculty of Medicine was specific, i.e. much greater knowledge in this field is expected from medical students. In the project FLABEL, which took place in the years 2008-2012, it was found out that the main barrier protecting the positive effect of nutrition labels on the consumers' choice was motivation (5). Due to the interventional program the motivation of people can be improved.

The further interventional program will focus on the secondary school students, elderly people and on people suffering from a particular disease. The comprehension of labels should belong to nutrition literacy of every consumer.

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Conflict of interest

The authors declare that there is no conflict of interest.

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