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Assessment of Food Safety by Lithuanian Consumers

Summary

Introduction: In Lithuania, there is an insufficient attention to public education and to creating attitudes towards the quality of the consumed food.

The aim: To find out how Lithuanian consumers assess food safety.

Materials and methods: 466 respondents took part in the research. The questionnaires had been distributed at shopping centres. The results of questionnaires were processed by the SPSS. Respondents were split into the following age groups: 18-30; 31-40; 41-50; 51- 60 and 61 years and older. Results of the survey were grouped by age.

Results: The majority of respondents answered that “organic food is not necessary safe”. Most of the participants in 18-50 age groups claim that the letter E marks preservatives, but older than 51 stated that the letter E marked the food products approved by the EU. The press, Internet and the radio were more often mentioned as the source of information about healthy food and food additives by the participants of the age group of 41 years and older. The groups younger than 51 years old specified that the information received on food and additives was not sufficient. The majority of respondents thought that the main food safety risks were microorganisms, pesticides, and chemicals, BSE, while the 61 and older – that GMO, acrylamide, and irradiation.

Conclusions: The research demonstrates that consumers are insufficiently informed on proper nutrition, safe food products, different food additives and pollutants that may pose a potential risk to public health. The present survey has the potential to form an opinion of how Lithuanian consumers assess the food safety. This study is low-budget and easy to analyse; moreover, we believe that it could be modified appropriately to fit the assessments and habits of other populations, too.

Key words: food safety, Lithuanian consumers.

JEL codes: D01

Introduction

The rapid economic development of countries, different urbanisation and globalisation processes are closely related to the lifestyle changes that influence human nutrition, dynamics of development strategies results in changing food production, distribution, marketing and prices. Although availability of food has been increasing, occurrence of many low-value foodstuffs consumption whereof is stimulated by aggressive advertising is observed (WHO,

2008). In Lithuania, this relevant issue has been undergoing thorough examination, especially in recent years, as well as it has been making the need to search for different ways of solution and has been causing discussions related to food-safety and nutrition problems. Lately, consumption of high energy value food containing much fat and sugar has increased, whereas consumption of vegetables, fruit and cereal products is insufficient (WHO, 2003). Such nutrition changes stimulate occurrence of obesity, lipid metabolism disorders and different chronic non-infectious diseases (Beardsell et al., 2002, Novaković et al., 2009). The carried out research demonstrates that consumers are insufficiently informed on healthy diet, safe food products, different food additives and contaminants that may pose a potential risk to public health (Jakubowska and Smoczyński, 2007).

The aim

To find out how the Lithuanian consumers assess food safety.

Materials and methods

466 respondents (290 women and 176 men) took part in the inquiry. The questionnaires had been distributed in the biggest shopping centres in various Lithuanian cities and towns. The survey was carried out in September – October of 2012. Five questions were asked. For each question, a few answers were provided. People taking part in the survey were asked to choose and to mark the most appropriate answer about assessment of food safety.

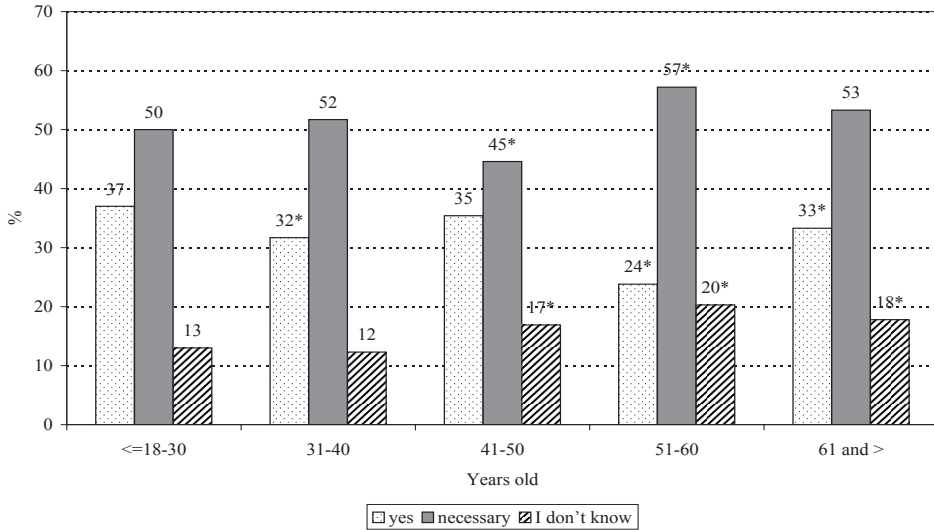
The results of questionnaires were entered into a database and processed by the SPSS data package. Since the age of respondents was different, the results structure was split by age: ≤18-30 years old; 31-40 years old; 41-50 years old; 51-60 years old; 61 years and older. Among the men and women taking part in the survey, 44.6 per cent covered the 18-30 years old age group, 21.8 per cent comprised the 31-40 years old age group, whereas the respondents of the 41-50 years old group amounted to 22.9 per cent of all the respondents. The 51-60 years old age group and the 61 years and older age group amounted to 6.5 per cent and 4.2 per cent respectively. An analysis of all answers to each question was carried out. Each answer variant was compared with the answers of the youngest age group.

Results

Organic food products contain neither synthetic food additives nor hormones. Quality of organic food products is guaranteed by strict control of cultivation and processing thereof, they are marked by a special symbol. Most respondents representing all age groups answered that “organic food is not necessarily safe”. But it is worthy to underline that the respondents of 41-50 and 51-60 age groups answered essentially different. Their percentage distribution ranged from 45% to 57% respectively (Fig. 1).

Fig. 1

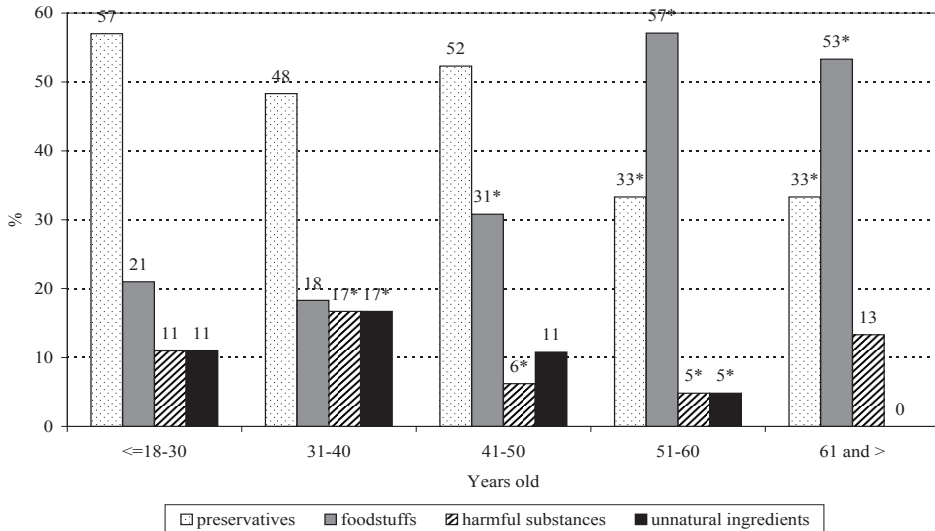
Percentage distribution of answers of respondents to the question: “Is organic food safe?”



*p<0.05 compared with the youngest age group
Source: own research.

Fig. 2

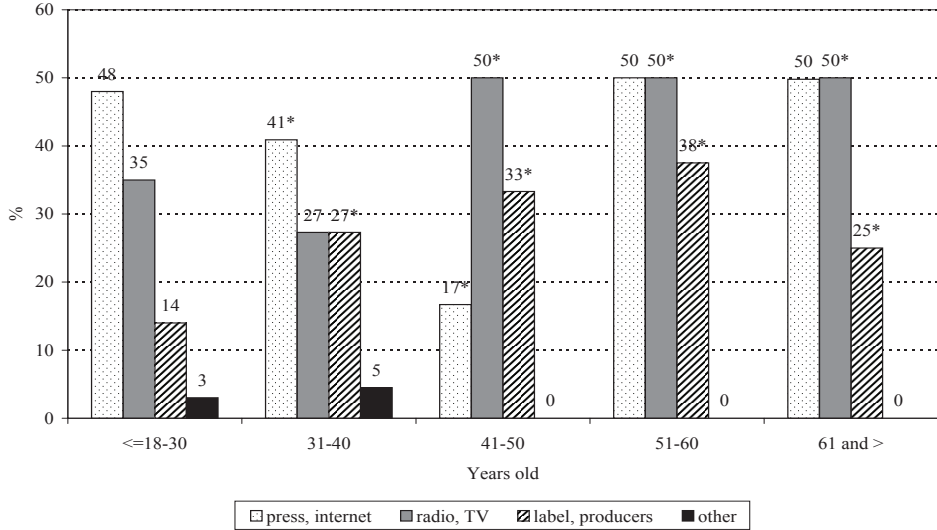
Percentage distribution of answers of respondents to the question: “What does the letter E on a label mean?”



*p<0.05 compared with the youngest age group
Source: own research.

Fig. 3

Percentage distribution of answers of respondents to the question: “From what sources do the respondents receive information on health food and additives thereof?”

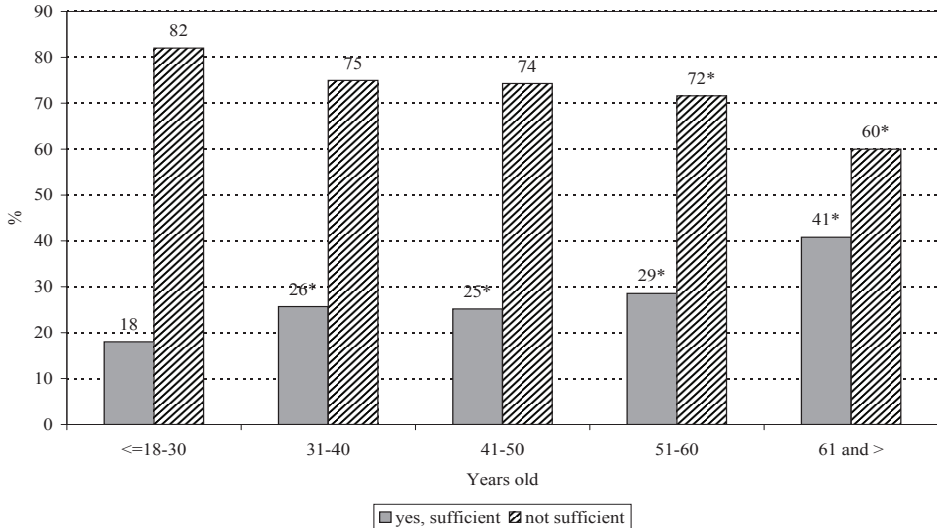


*p<0.05 compared with the youngest age group

Source: own research.

Fig. 4

Percentage distribution of answers of respondents to the question: “Do the consumers receive sufficient information on food and additives thereof?”



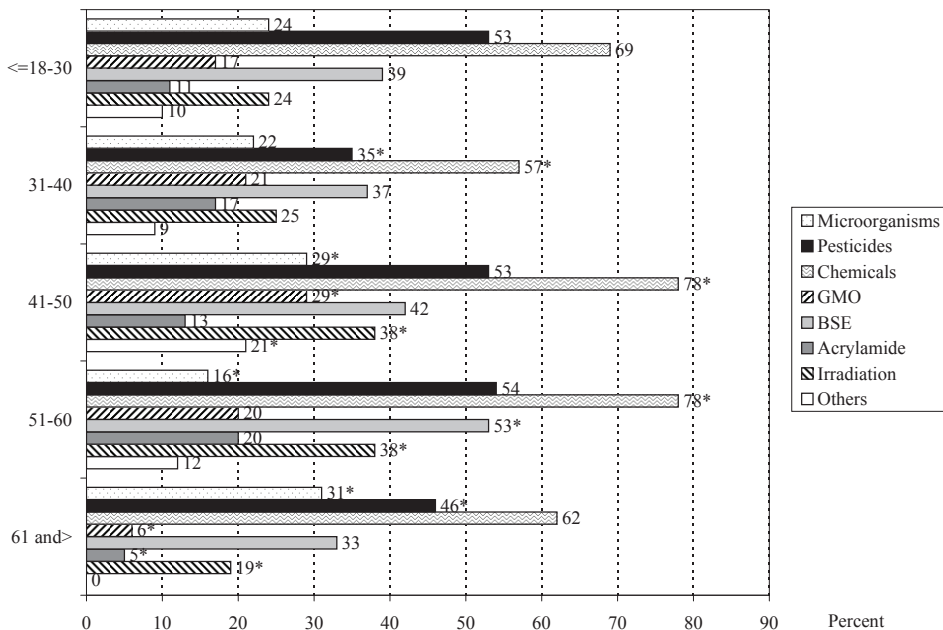
*p<0.05 compared with the youngest age group

Source: own research.

Not all food additives marked by the letter E are favourable to our health; therefore, it is important to identify and avoid them (Jahn et al. 2005). The majority of respondents in the 18-50 age groups answered that the letter E marks preservatives. Their percentage distribution ranged from 48% to 57% (Fig. 2). The most frequent answer provided by respondents of the 51 and older age groups (53-57%) stated that the letter E marks the food products approved by the European Union (EU). Statements that the letter E might mark unnatural ingredients or potential harmful substances were sustained by negligible percentage of respondents in different age groups (Fig. 2).

The results of research studies where publicized on the most common sources of information about the safe food, additives, etc. Health professionals, nutritionists, and food labels were highly trusted sources of food safety information, while the Internet, radio, and television were the least trusted (Enefi ok Ekanem et al. 2008). According to our research, the answer to the question “From what sources do the residents receive information on health food and additives thereof?” the respondents usually specified the press and the Internet, whereas the radio was mentioned more often (50%) by older age groups respondents (41 years and older). Moreover, a considerable percentage of people older than 31 years

Fig. 5
Percentage distribution of answers of respondents to the question:
“What is the main food safety risk?”



*p<0.05 compared with the youngest age group
 Source: own research.

specified that they receive the information on food quality by reading product labels. Their percentage distribution ranged from 25% to 38% (Fig. 3). Answering the question **“Do the consumers receive sufficient information on food and additives thereof?”** respondents in all age groups normally specified that the information received was not sufficient, especially youngest than 51 years old Lithuanian citizens. Their percentage distribution ranged from 75% to 82% (Fig. 4).

This scientific research shows that Lithuanians know too little, they do not get enough information about healthy diet, safe food, variety of food additives and contaminants that may pose a risk to public health. Answering the question **“What is the main food safety risk?”** the majority of respondents thought that the main food safety risks were microorganisms, pesticides and chemicals, as well as many of the respondents felt that *Bovine spongiform encephalopathy* (BSE) was also a significant risk factor for food (Fig. 5). The respondents of age group of 61 and older thought that GMO (genetically modified organisms), acrylamide and irradiation were a lower risk factors for food safety risk (the percentage distribution was 29%, 5%, and 19% respectively) (Fig. 5).

Discussion

After having noticed that certain food products pose a constant risk to health, the European Union adopted a few legal acts committing to stricter control of certain goods imported from third countries. Since 2004, the Decree of the Minister of Health approving the list of “sensitive” food products took effect in Lithuania as well. Attitude of most people towards healthy food is different. It depends on age, sex, social status. Most consumers’ opinion is that organic food products shall be free of heavy metals, pesticide residues, and excess of nitrates (Dolatowski and Drozd 2007). Organic agricultural products and food products shall not contain genetic modifications. Over 80.0% of the Western Europe population believes that organic products are of the better taste. However, some experts maintain that organic products are just an absurd fashion, whereas others state that they are necessary for our daily nutrition (Hawkes 2006, Magnusson et al. 2003). To the question: “Is organic food safe?” the respondents of 41-50 and 51-60 age groups answered essentially different. Their percentage distribution ranged from 45% to 57% respectively.

According to representatives of the Ministry of Health of the Republic of Lithuania, the food production industry uses too much additives improving the taste of the product as well as too much flavours, thus contributing to production of cheaper food products using lower quality raw material. Many respondents have heard about the letter E found on food packages; however, not all of them know what it means. The majority of respondents in the 18-50 age groups answered that the letter E marks preservatives.

Usually the respondents specified the press and the Internet as the most common sources of information about healthy food and additives, whilst the radio was mentioned more often by 41 years and older. Among the younger than 51 years old consumers there was an opinion that they didn’t receive sufficient information on food and additives.

Food quality, in particular food safety, is the most important task of the modern food industry. Lately, a lot of data related to food contamination by pathogenic microorganisms, pesticides, chemicals, genetically modified organisms, acrylamide, irradiation and other items have been published. A majority of consumers express confidence in the safety of these products, 74% believe the government should be more involved in ensuring that these products are safe and efficacious (Crowley and FitzGerald 2006). The majority of respondents claimed that the main food safety risks were microorganisms, pesticides and chemicals, *bovine spongiform encephalopathy* (BSE). These results are based on the fact that acrylamide, irradiation and genetically modified organisms are less known to the Lithuanian people, because they are more recent.

Conclusions

The research demonstrates that consumers are insufficiently informed on healthy diet, safe food products, different food additives and contaminants that may pose a potential risk to public health. The present questionnaire has the potential to form an opinion of how the Lithuanian consumers assess the food safety. This study is low budget and easy to analyse; moreover, we believe that it could be modified appropriately to fit the assessments and habits of other populations as well.

Acknowledgements

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Ocena bezpieczeństwa żywności przez konsumentów litewskich

Streszczenie

Wprowadzenie: Na Litwie istnieje problem edukacji i postaw społeczeństwa w kwestii jakości i bezpieczeństwa konsumowanej żywności.

Cel pracy: Określenie postaw społeczeństwa litewskiego w kwestii bezpiecznej żywności.

Material i metody: W badaniu ankietowym wzięło udział 466 osób. Kwestionariusze ankietowe rozdawano respondentom w największych centrach handlowych. Uzyskane na podstawie kwestionariuszy dane poddawano analizie statystycznej w programie SPSS. Obliczenia statystyczne wykonywano dzieląc respondentów na następujące grupy wiekowe: ≤18-30; 31-40; 41-50; 51-60 oraz w wieku 61 i więcej lat.

Wyniki: Badani konsumenci wyrazili opinię, że „żywność ekologiczna nie koniecznie jest bezpieczna” oraz że „oznakowanie literą E odpowiada zastosowaniu konserwantów”. Respondenci w wieku 18-50 lat odpowiedzieli, że litera E oznacza konserwanty, zaś starsi niż 51 lat, iż oznacza środki spożywcze, zatwierdzone przez UE. Większość respondentów w wieku poniżej 51 stwierdziła, że ilość informacji na etykietach żywności jest niewystarczająca. Odnotowano, że źródłem informacji dotyczących bezpieczeństwa żywności oraz dodatków do żywności jest prasa oraz Internet. Radio jako źródło informacji o bezpieczeństwie żywności wskazali głównie badani w wieku 41 lat i więcej. Większość respondentów odpowiedziała, że głównym zagrożeniem dla bezpieczeństwa żywności są mikroorganizmy, pestycydy, chemikalia, BSE, zaś grupa 61 lat i starsi - iż GMO, akrylamid i napromieniowanie.

Wnioski: Badanie wykazało, że konsumenci nie są wystarczająco informowani o bezpiecznych środkach spożywczych, dodatkach do żywności i zanieczyszczeniach, które mogą stanowić potencjalne zagrożenie dla zdrowia publicznego. Badanie miało charakter sondażowy, służące uzyskaniu informacji o sposobie oceny bezpieczeństwa żywności przez konsumentów litewskich. Przeprowadzone badanie może, po modyfikacji, być wykorzystane dla oceny postaw i zwyczajów innych populacji.

Słowa kluczowe: bezpieczeństwo żywności, litewscy konsumenci.

Kody JEL: D01

Оценка безопасности продуктов питания Литовскими потребителями

Резюме

Введение: В Литве существует проблема обучения и отношения общества к качеству и безопасности потребляемых продуктов питания.

Цель работы: Определить отношение литовского населения по вопросу о безопасных продуктах питания.

Материал и методы: В опросе приняли участие 466 лиц. Анкетные вопросы раздавали респондентам в крупнейших торговых центрах. Полученные на основе вопросников данные подвергли статистическому анализу по программе SPSS. Статистические расчеты провели, распределяя респондентов по следующим возрастным группам: ≤18-30; 31-40; 41-50; 51-60 и в возрасте 61 и больше лет.

Результаты: Обследуемые потребители выразили мнение, что «экологические продукты питания не обязательно безопасны» и что «обозначение буквой E соответствует применению консервантов». Респонденты в возрасте 18-50 лет ответили, что буква E обозначает консерванты, тогда как лица в возрасте более 51 года, что она обозначает потребительские товары, утвержденные ЕС. Большинство респондентов в возрасте до 51 года констатировало, что объем информации на этикетках пищевых продуктов недостаточен. Отметим, что источником информации, касающейся безопасности продуктов питания и пищевых добавок, являются печать и Интернет. Радио в качестве источника информации о безопасности пищи указали в основном лица в возрасте 41 и больше лет. Большинство респондентов ответило, что основной угрозой для безопасности пищевых продуктов являются микроорганизмы, пестициды, химикаты, ГЭКРС, а группа лиц в возрасте 61 года и старше - что ГМО, акриламид и радиация.

Выводы: Обследование показало, что потребители недостаточно информированы о безопасных пищевых средствах, добавках к пищевым продуктам из загрязнений, которые могут собой представлять потенциальную угрозу для здоровья населения. Обследование имело зондажный характер, которое служит получению информации о способе оценки безопасности пищи литовскими потребителями. Проведенное обследование может, после видоизменения, быть использовано для оценки отношения и навыков других популяций.

Ключевые слова: безопасность пищи, литовские потребители.

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