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THEORETICAL FOUNDATIONS OF FOOD SAFETY MANAGEMENT RESEARCH

The article is devoted to the study of food safety management at restaurant enterprises. Improving food safety management at restaurant enterprises involves the use of the latest technologies and standards, as well as taking into account legislative requirements in the field of food safety. The enterprise must have appropriate procedures and instructions for the organization of food quality and safety control, as well as ensuring hygiene in the kitchen and in the restaurant. It is also important to ensure that food safety personnel are properly trained and educated so that they can apply procedures and standards correctly. In addition, the company must use high-quality and verified food suppliers. The concept of food safety was considered and its structural elements were determined. The basic principles of food safety management at restaurant enterprises were established. Relevant modern international organizations, their activities and the importance of influence on food safety are analyzed. The main documents at the state level responsible for regulating food safety have been identified. The main incidents of food safety violations and ways to eliminate them are considered. The relevance of the problem of improving food safety management at restaurant enterprises has been proven. The key problems in the field of food safety at restaurant enterprises were studied and the prospects for the development of food safety at restaurant enterprises were determined. Recommendations for improving food safety management at restaurant enterprises have been developed. Improving food safety management at restaurant enterprises is an important element of ensuring the restaurant's competitiveness and reputation. Customers will be more inclined to choose restaurants that maintain high standards of food quality and safety. The research is relevant in modern conditions, as food safety is becoming an increasingly important problem in the restaurant industry. The global COVID-19 pandemic has exacerbated this problem as people have become more aware of hygiene standards in public places, including restaurants. Ensuring food safety at restaurant enterprises is important not only for the health and safety of customers, but also for the successful operation of the enterprise itself. A restaurant's reputation can be seriously damaged if problems with food quality or safety are discovered.

Key words: international organizations, management, restaurant enterprise, quality standard, food safety.

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Язіна В. А., Вишнікіна О. В., Сабіров О. В., Гапоненко С. О., Гурбич Н. О. Теоретичні основи дослідження менеджменту харчової безпеки

Стаття присвячена вивченню менеджменту харчової безпеки на підприємствах ресторанного господарства. Було розглянуто поняття харчової безпеки та визначено його структурні елементи. Було встановлено основні принципи менеджменту харчової безпеки на підприємствах ресторанного господарства. Проаналізовано відповідні сучасні міжнародні організації, їх діяльність та важливість впливу на харчову безпеку. Визначено основні документи на державному рівні, що відповідають за регулювання харчовою безпекою. Розглянуто основні інциденти порушення харчової безпеки та шляхи їх усунення. Доведено актуальність проблеми удосконалення менеджменту харчової безпеки на підприємствах ресторанного господарства. Вивчено ключові проблеми у галузі харчової безпеки на підприємствах ресторанного господарства та визначено перспективи розвитку харчової безпеки на підприємствах ресторанного господарства. Розроблено рекомендації щодо вдосконалення менеджменту харчової безпеки на підприємствах ресторанного господарства. Харчова безпека є дуже важливою для ресторанного господарства та включає в себе правильне зберігання, готування та обробку їжі, щоб уникнути ризику захворювання гостей. Підприємства ресторанного господарства повинні дотримуватись високих стандартів гігієни, перевіряти якість продуктів і контролювати температуру зберігання. Також важливо навчати персонал правилам безпеки їжі та регулярно перевіряти усі процеси, пов'язані з приготуванням та подачею їжі. Забезпечення харчової безпеки допомагає зберегти репутацію закладу, забезпечити задоволення клієнтів та уникнути проблем з органами регулювання щодо санітарних норм. Харчова безпека в закладах ресторанного господарства є критичним аспектом, оскільки вона прямо пов'язана зі здоров'ям та безпекою споживачів. Основні аспекти важливості харчової безпеки включають: здоров'я споживачів, репутація закладу ресторанного господарства, відповідність діючому законодавству, зниження фінансових ризиків, збереження якості продуктів. Для успішного менеджменту харчовою безпекою в закладах ресторанного господарства важливо застосовувати системний підхід.

Ключові слова: міжнародні організації, менеджмент, заклад ресторанного господарства, стандарт якості, харчова безпека.

Formulation of the problem. The problem of food safety is becoming more and more relevant in the restaurant business, as customers expect high quality and safety of food products. To ensure this, restaurant management must use the latest technology and standards, take into account legal requirements and have procedures and instructions for quality control and food safety. It is also important to train staff and use proven product suppliers. Ensuring food safety is important for a restaurant's competitiveness and reputation, and the global COVID-19 pandemic has heightened attention to hygiene standards. The successful operation of a restaurant depends on ensuring the quality and safety of food products.

Analysis of the latest research. Among the scientists who studied the issue of food safety in the restaurant industry, it is worth highlighting such scientists as T. Afanasyeva [1], Yu. Basova, I. Bezborodko, A. Borodai [3], S. Belyaeva [2], L. Byshovets, O. Davydova [4], O. Ivanishcheva, O. Zapototska [6], O. Kamushkov, O. Kurakin, A. Mostova [7], Yu. Nakonechna, T. Overkovska [8].

The purpose of the article. The purpose of this work is the analysis of food safety management of restaurant enterprises, assessment of domestic and international food safety standards, and justification of proposals for improving food safety management at restaurant enterprises.

Presenting main material. The main structural elements of food security (fig. 1).

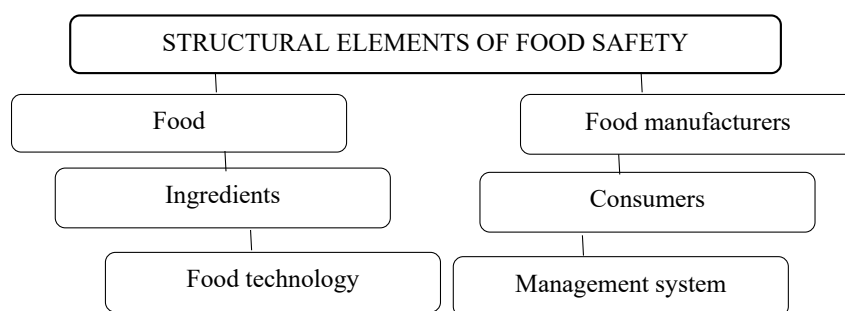


Fig. 1. The main structural elements of food security

Source: compiled by the author [2]

Structural elements of food safety are characterized by the following provisions [1]:

1. Physical access to adequate food products, which is ensured by the availability and sufficiency of food products [1].
2. Economic access to adequate food products, which means the availability of food products at reasonable prices [1].
3. Social access to adequate food products, which is ensured by equal access to food products for all people regardless of their social position [1].

4. Reliability of food products, which means the absence of harmful substances and microorganisms that can cause human disease [1].

5. Quality of food products, which covers taste and dietary properties of products, their nutritional value and compliance with quality standards [1].

For a reasonable understanding of structural elements, it is necessary to analyze them in more detail.

Physical access to adequate food means being able to obtain sufficient quantities of safe and nutritious food. To ensure physical access to food products, it is necessary to have the availability of products in markets, supermarkets, restaurants, cafes, shops and other places.

One of the main aspects of physical access is the availability of sufficient food to meet the needs of consumers. The availability of products depends on the efficiency of the system of production, storage and transportation of products. Also an important factor is the availability of products for people with different physical abilities, for example, for people with limited mobility or with certain dietary restrictions.

To ensure food sufficiency, it is necessary to have a sufficient amount of food for the population in each region and to comply with the requirements of the national program for providing the population with food products. This may require proper planning of production and import of products, increased production volumes, increased efficiency of transportation and storage of products.

Elements of physical access to adequate food also include the availability of food at reasonable prices, allowing more people to have access to adequate food. It is also important to ensure physical access to food products in case of extreme situations, such as natural disasters, wars or other crisis situations.

In order to ensure physical access to adequate food products, it is also important to ensure proper storage and transportation of products so that they do not spoil and become unsafe for consumption. In this context, it is important to ensure proper conditions in all links of product supply – from the producer to the final consumer [3].

Economic access to adequate food means the ability of people to have sufficient access to the food they need that is safe, nutritious and healthy at affordable prices. This is an important issue for many people around the world, especially in low-income countries.

One of the most important organizations dealing with issues of food availability and quality is the World Health Organization (WHO) [12]. WHO works to improve economic access to food, in particular, by developing national nutrition programs, improving the monitoring and evaluation system of food quality, promoting the development of food markets, and supporting the development of local and national food supply systems.

In addition to WHO, there are other organizations that deal with the problems of availability and quality of nutrition, in particular, FAO (Food and Agriculture Organization of the United Nations) [10], UNICEF (United Nations Children's Fund) [11], UN Women and others.

In addition, many countries and local governments are developing and implementing various programs and initiatives to ensure affordable access to adequate food products for their citizens. Such programs may include various measures, such as food subsidies for the most vulnerable population groups, support for small and medium-sized businesses in the food sector, development of infrastructure to ensure the supply of fresh and healthy food, support for local production and entrepreneurship in the field of agriculture and other.

In addition, it is important to pay attention to the impact of international trade and globalization on economic access to food products. Often, an increase in world trade can lead to changes in the production and supply of food products, which can affect the prices and availability of these products in different countries.

In this context, the World Trade Organization (WTO) plays an important role in solving the problems of economic access to food products by promoting free trade and developing trade rules that ensure a balance between the economic and social interests of different countries. The main goals of the WTO are shown in fig. 2.

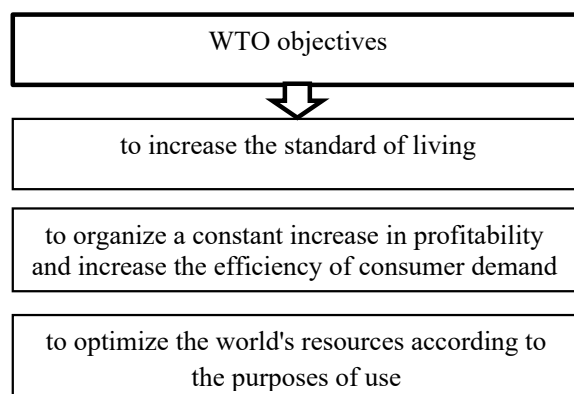


Fig. 2. The main goals of the World Trade Organization

Source: compiled by the author [4]

Food safety is an extremely important aspect of ensuring the proper standard of living and health of the population. It means that food products must be free from harmful substances and microorganisms that can cause human disease, and must meet established standards and requirements [4].

Ensuring the safety of food products requires compliance with a number of standards and procedures aimed at preventing the contamination of food products with harmful substances and microorganisms. Such procedures include the use of safe methods of food production, transportation and storage, as well as food quality control at all stages of production and distribution.

National and international food safety organizations such as the FAO (Food and Agriculture Organization of the United Nations) and the World Health Organization (WHO) develop and set food safety standards that help ensure food safety worldwide. In addition, government regulatory and supervisory bodies establish rules and regulations that aim to ensure food safety at the local level.

One of the aspects of food safety is their impact on the environment and ecology. During the creation, delivery and storage of food, various chemicals and other materials can be used that can have a negative impact on the environment. For example, the use of pesticides and other chemical means of plant protection can lead to soil and water pollution, which can negatively affect ecosystems and human health.

Therefore, an important aspect of food safety is their impact on the environment and the development of environmental policy in the food industry. The development of a green economy and ecological production practices can help ensure food safety and reduce their negative impact on the environment.

In addition, the issue of food safety is related to the problem of global food processing and transportation. Often, food grown in one country is processed and transported to other countries, which can create additional food safety issues [5]. In particular, such a process can lead to the contamination of food with harmful substances, as well as increase the risk of spreading diseases through infections and diseases [1]. The purpose and functions of the World Health Organization (WHO) are indicated in fig. 3.

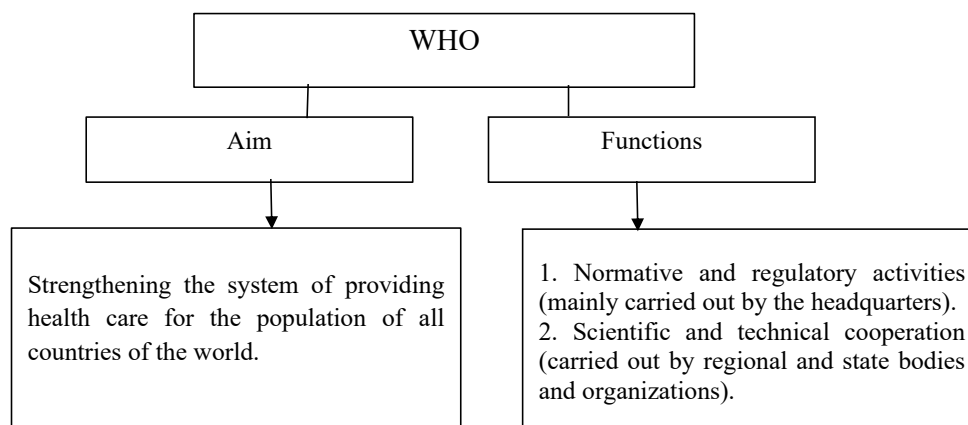


Fig. 3. Purpose and functions of WHO

Source: compiled by the author [5]

The principles of food safety management cover the entire life cycle of food products, starting with the raw material supply stage and ending with the consumption stage (figure 4). This cycle covers the processes from the creation of a product to its removal from the market, including such stages as production, processing, transportation, storage and sale. The importance of each stage in the food processing industry to ensure the safety and quality of the product requires systematic integration and consideration of risks, taking into account scientific research and evidence:

1. Product development: this stage includes concept definition, formulation and formulation development, research and packaging development.
2. Production: this stage includes purchasing raw materials, manufacturing the product, its packaging and labeling.
3. The distribution stage includes the distribution of the product through the distribution network to retail outlets and other establishments where consumers can purchase it.
4. Implementation and use: this stage includes the sale of the product and its use by consumers.
5. Withdrawal from the market: This step involves withdrawing the product from the market if safety or quality issues are identified.

The life cycle of food products is important for ensuring the safety of food products, because at each stage there may be risks of contamination of the product, which can negatively affect the health of consumers [6]. Product life cycle management includes the development and implementation of quality control procedures, ensuring

product safety and monitoring risks at each stage. The main principles of food safety management and their characteristics are shown in fig. 5.

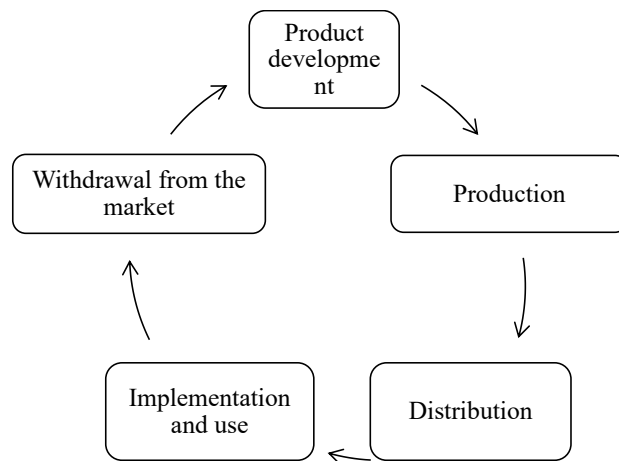


Fig. 4. Life cycle of food products

Source: compiled by the author [6]

These principles are designed to ensure a high level of food safety at all stages of the food life cycle and to increase consumer confidence in food products.

However, the general principles of restaurant management usually include the following aspects, which are depicted in fig. 6.

In accordance with the requirements of the SOD, the following principles should also be noted:

1. The enterprise must ensure the availability and sufficiency of food products, as well as ensure the safety of the products produced.

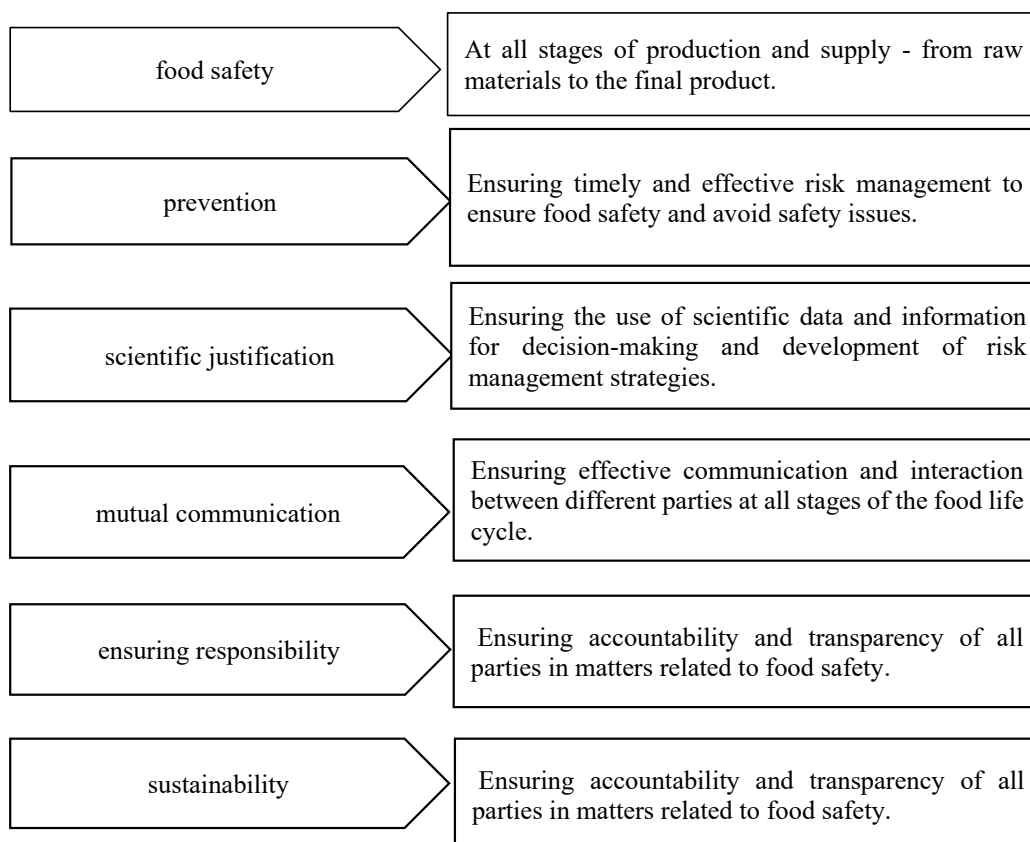


Fig. 5. Basic principles of management

Source: compiled by the author [7; 8]

2. The enterprise must develop and implement a food safety management system, including product quality control procedures, relevant documentation and personnel training.

3. The enterprise must monitor all stages of production and storage of food products, from the beginning of the supply of raw materials to the end of sale.

4. The enterprise must ensure thorough control of all types of possible food safety risks, including physical, biological and chemical risks.

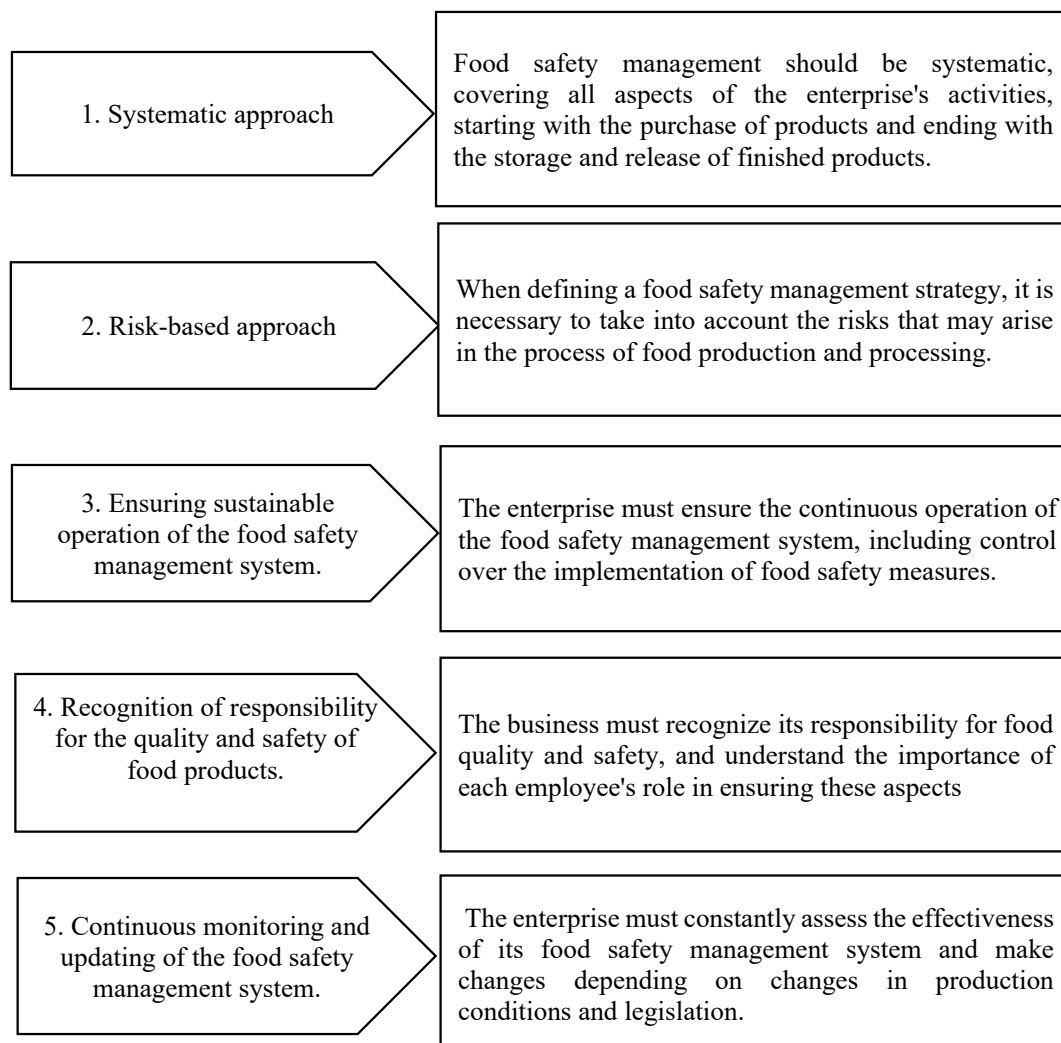


Fig. 6. Principles of food safety management in the restaurant industry

Source: compiled by the author [13]

5. The enterprise must develop and implement a system of monitoring and assessment of food safety risks, including analysis of potential risks and assessment of the impact on consumer health.

6. The enterprise must establish quality and safety standards for food products that meet national and international regulatory requirements.

7. The enterprise must ensure planning and management of waste generated during the production and storage of food products to ensure appropriate treatment and disposal of the relevant waste.

The implementation of food safety management principles helps to ensure the efficiency of the operation of restaurant enterprises, to reduce costs for the production and sale of food products, as well as to increase consumer confidence in the quality and safety of food products, which in turn ensures the growth of the enterprise's profit and increases its competitiveness on the domestic market. In addition, compliance with food safety management principles is necessary to meet legal requirements for food safety and quality. Failure to comply with food safety requirements can have serious consequences, such as fines, product recalls, lawsuits and loss of consumer confidence. For enterprises involved in the preparation of food, compliance with the principles of food safety management is particularly important. They have a great responsibility to ensure the safety and quality of the products they use in their work and serve to their customers. In addition, compliance with the principles of food safety management

contributes to the creation of a positive image of the enterprise, which ensures the attraction of new customers and the preservation of existing ones.

In Ukraine, state control over compliance with food safety requirements is carried out by the State Service of Ukraine for Food Safety and Consumer Protection (State Consumer Protection Service). In addition, compliance with the principles of food safety management can be checked by other regulatory bodies, such as the State Fiscal Service, the State Environmental Inspection, etc.

Administrative, civil and criminal responsibilities are provided for non-compliance with food safety requirements, depending on the severity of the violation.

Violation of legislation on product safety and quality may result in fines established by law. For example, in Ukraine, according to the Code of Ukraine on Administrative Offenses, fines for violating product safety requirements can range from 1,700 to 5,100 hryvnias. In addition, for some food safety violations that may cause serious consequences for the health of consumers, criminal sanctions for restaurant enterprises may be provided, such as imprisonment or the deprivation of a license to conduct a restaurant activity.

The problem of improving food safety management at restaurant enterprises is relevant from various angles.

On the one hand, it is a matter of ensuring the safety and health of customers who visit restaurants and other public catering establishments. Failure to comply with food safety requirements can lead to the spread of infectious diseases and other health problems. Such cases can negatively affect the company's reputation and lead to a loss of customer trust.

Also, the problem of improving food safety management at restaurant enterprises is relevant from a legal point of view. Ukrainian legislation provides requirements for food safety and establishes responsibility for their violation. Therefore, restaurant enterprises must comply with these requirements and ensure a high level of food safety in their establishments.

Due to the growing popularity of the food industry and increased competition in the restaurant market, enterprises began to pay more attention to food safety issues. Also, standards and requirements for product quality are changing, which poses new challenges to restaurants in terms of compliance with food safety standards. In addition, non-compliance with food safety principles can lead to serious consequences for the health of customers, which can lead to complaints and negative feedback, which in turn can affect the company's reputation and profitability. Despite this, legislation in the field of food safety is constantly changing, which may lead to the need for constant adaptation and improvement of food safety management systems at restaurant enterprises.

The statistics of food safety violations in restaurants in Ukraine in recent years has been quite high, which indicates the need to improve food safety management at enterprises in this field. The relevant state authorities are taking measures to reduce the number of violations and increase the level of food safety at restaurant enterprises. Some organizations, such as the WHO and the WHO European Office for Food Safety and Health (WHO/Europe), publish reports on the state of food security in various countries around the world. Below it is proposed to consider which organizations deal with the issue of food safety (fig. 7).

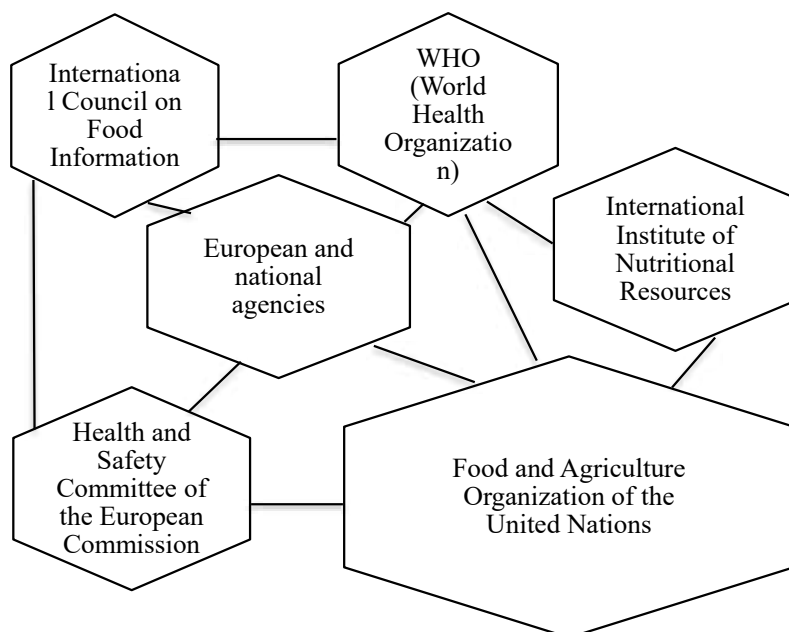


Fig. 7. International food safety organizations

Source: compiled by the author [9]

From the reports of international organizations on food safety, it is possible to draw conclusions about the state of food safety in the restaurant industry in individual countries.

According to WHO/Europe, more than 5,000 cases of food incidents related to restaurants were registered in the countries of the European Union during 2022 [9]. The main incidents of food safety violations are shown in fig. 8.

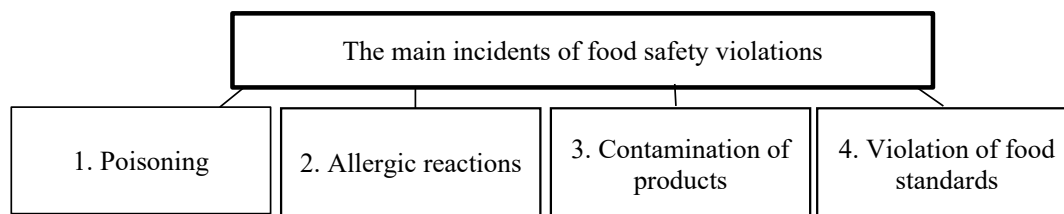


Fig. 8. Main incidents of food safety violations

Source: compiled by the author [9]

These incidents included cases of poisoning, allergic reactions, contamination of products and violations of food standards, which negatively affect the further activities of the restaurant business and create a negative image among competitors and customers.

In the world, there are serious problems with food safety at enterprises of the restaurant industry. Thus, 1–2 deaths and several serious cases of food poisoning are registered in the USA every year, which were related to restaurants.

Conclusion. The problem of improving food safety management at restaurant enterprises is relevant both in Ukraine and in other countries of the world. Ukraine, like many other countries, faces a significant number of food safety violations in restaurants. This may be due to insufficient control by the authorities, insufficient qualifications of industry workers, as well as a lack of awareness among consumers regarding food safety issues.

Since the restaurant business is quite popular and widespread, problems with food safety can have serious consequences for the health of consumers and negatively affect the image of the restaurant or the country as a whole. Therefore, improving food safety management at restaurant enterprises is an extremely important task to ensure safety and meet consumer needs.

According to the conducted research, the concept of food safety and its structural elements were defined. The main principles of food safety management, which are key to ensuring food safety and quality, were described. The relevance of the problem of improving food safety management, which is of great importance for ensuring safe and high-quality food products, was proven on the example of the restaurant industry. Therefore, restaurant enterprises must adhere to the principles of food safety management in order to ensure high quality and safety of food products for their customers.

So, it can be concluded that the problem of food safety in restaurants remains relevant both in Ukraine and in other countries of the world, and requires constant control and improvement of food safety management.

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