

## Scientific and practical conference with international participation dedicated to the world health day 2025 "HEALTHY BEGINNINGS, HOPEFUL FUTURES". April 4, 2025. Bogomolets National Medical University, Kyiv, Ukraine

Wiad Lek. 2025;78(5):1227-1234. doi: 10.36740/WLek/205695 DOI

### Hygienic assessment of the safety of cereal grain grown from seed material treated with combined fungicides containing tebuconazole and metalaxyl-M

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#### ABSTRACT

**Introduction:** A comprehensive approach to solving many issues ensures the country's food security. The main criteria for such security are the qualitative and quantitative provision of food products to the population, among which grain products occupy the first place in Ukraine. In the technological cycle of growing grain crops, storing the harvest for its subsequent use as seed material makes up a significant part of the total duration of this process. Unfavourable storage conditions can lead to substantial losses of seed material. In modern intensive technologies for growing cereals, fungicides are used to prevent the effects of fungal pathogens.

**Aim:** To assess the safety of cereal grain grown from seed material treated with the combined fungicide formulation containing tebuconazole and metalaxyl-M (30 and 20 g per litre of preparation, respectively) from a hygienic standpoint.

**Materials and Methods:** Material – wheat seeds treated with fungicide preparation at a rate of 1.0 litre per ton; active ingredients (a.i.) of the preparation are tebuconazole ((RS)-1-p-chlorophenyl-4,4-dimethyl-3-(1H-1,2,4-triazol-1-yl-methyl) pentane-3-ol, FRAC Group G) and metalaxyl-M ((R)-2[(2,6-dimethyl phenyl)-methoxy-acetylamino]-propionic acid methyl ester, FRAC Group A). Methods – natural in-field hygienic experiment, organoleptic method, gas-liquid chromatography (GLC), statistical methods.

**Results:** It was found that the organoleptic properties (odour, colour, appearance) of wheat grown from treated material did not differ from the control samples taken from plots where untreated seeds were sown. The content of active ingredients at different time points after sowing were as follows: for tebuconazole on day 27 in the green mass of spring wheat plants <0.07 mg/kg, on day 60 in the spikes – <0.07 mg/kg, on day 111 (yield) in grain – <0.07 mg/kg (with the limit of quantification of the GLC method being 0.07 mg/kg) and for metalaxyl-M <0.2 mg/kg, <0.2 mg/kg, <0.07 mg/kg (with the limit of quantification of the GLC method being 0.2 mg/kg), respectively. It should be noted that these values did not exceed the approved medical and sanitary standards (maximum residue levels (MRLs), which are 0.2 mg/kg for tebuconazole in cereal grains and 0.2 mg/kg for metalaxyl -M in cereal grains.

**Conclusions:** Residual amounts of tebuconazole and metalaxyl-M were not found in wheat plants during the vegetative season and during harvesting, which indicates that when treating seed material with a preparation containing tebuconazole and metalaxyl-M, its content in the grown grain crop does not exceed the MRLs established for cereal grain. Considering the technology of preparation application (pre-sowing seed treatment) and the absence of residual quantities of active substances in the harvest, we concluded and subsequently suggested that setting a pre-harvest interval before harvesting spring wheat is inappropriate. When applying the preparations containing tebuconazole and metalaxyl-M, we recommend monitoring the content of active ingredients in cereal grains by determining both a.i. Regarding the above-stated, application of fungicide formulation containing tebuconazole and metalaxyl-M (30 and 20 g per litre of preparation, respectively) for pre-sowing treatment of spring wheat seeds (following the application rates and techniques approved by State authorities) will not pose a risk and danger to the population consuming food products made from grain harvested from treated seed material.

**KEY WORDS:** Agricultural crops, environment, food safety, public health

## Current problems in breast cancer early detection in Ukraine: opportunities for artificial intelligence integration

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### ABSTRACT

**Introduction:** Breast cancer remains one of the most prevalent oncological diseases among women in Ukraine. According to the National Cancer Registry, over 12,500 new cases were reported in 2023 alone. Early detection significantly increases the chances of successful treatment, with screening mammography playing a key role. However, unlike many European countries that utilize double reading, Ukraine relies on a single radiologist to interpret each mammogram, increasing the likelihood of diagnostic errors. This creates a strong case for the integration of artificial intelligence (AI) as a supportive tool to improve screening outcomes and reduce human error.

**Aim:** To justify the need for improving the breast cancer early detection system in Ukraine through the implementation of artificial intelligence and an interdisciplinary approach.

**Materials and Methods:** The current stage of the study includes:

- A literature review of international scientific publications on the application of AI in mammography screening;
- A comparative analysis of legal and regulatory frameworks in Ukraine versus countries that have adopted double reading and AI-based support systems;
- A conceptual review of clinical trial outcomes evaluating AI as a second reader in breast cancer diagnostics.

**Results:** International studies demonstrate that AI can enhance the sensitivity and specificity of breast cancer screening and reduce radiologists' workload. Evidence from trials such as MASAI indicates that AI-assisted reading can be non-inferior to double reading performed by two radiologists. In contrast, Ukraine currently lacks both the double reading protocol and practical experience in AI implementation, which may limit screening effectiveness and diagnostic quality.

**Conclusions:** Given the absence of double reading practices in Ukraine and the growing international evidence supporting AI in breast cancer screening, it is advisable to investigate how artificial intelligence can improve diagnostic accuracy and reduce missed or misinterpreted cases. Further research is warranted to explore AI integration into national screening programs, especially under current resource constraints.

**KEY WORDS:** Artificial intelligence, mammography, breast cancer screening, diagnostic support, public health systems

## Prevention of excessive intake of estrogen-like substances in the child's body by optimization of treatment protocols in dentistry

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### ABSTRACT

**Introduction:** Despite a range of existing preventive measures, the prevalence of caries, its intensity, and malocclusion remain quite high. To address this issue, dental practice has introduced fissure sealing, tooth restoration with fillings or artificial crowns, removable or fixed orthodontic devices, and adhesives. Derivatives of bisphenol-A are currently the most commonly used in the production of dental materials. When present in the oral cavity for a long time, they undergo partial dissolution, corrosion, and wear. Particles of this substance, which are chemically xenoestrogens, enter the child's body. They behave like natural estrogens, and in excessive amounts, they can cause various undesirable effects. It is not difficult to calculate the average amount of sealant needed to seal the fissures of permanent teeth in a child with a history of high-intensity caries in temporary teeth, considering that between 0.5 to 2.0gr. of material is used for one filling. The potential amount of estrogen-like substance that will act as an additional source of exposure to the child's body is also of concern.

**Aim:** To prevent the excessive intake of estrogen-like substances into the child's body by optimization of treatment protocols in dentistry.

**Materials and Methods:** The retention rate of Bis-GMA-free fissure sealant, using the criteria proposed by Tonn and Ryge, was assessed after 6 months of application.

**Results:** After 6 months, 118 occlusal surfaces of permanent molars and premolars were examined. A score of 0 was found on 73% of the teeth. Partial loss of sealant, corresponding to score 1, was detected on 19% of the teeth. Sealants were absent (score 2) on eight percent of the teeth.

**Conclusions:** The entire world is concerned about environmental pollution caused by plastic waste. When it enters the human body, due to its chemical nature, it behaves like natural estrogens, increasing the risk of premature sexual maturation, behavioral disorders, and more. The use of paper packaging for consumer goods, biodegradable tableware, and waste sorting, proposed in many countries, partially helps reduce the negative consequences of this situation. Dentistry is a branch of medicine that widely uses polymers. At present, it is impossible to eliminate them. Optimization of treatment protocols can help prevent the introduction of potentially harmful substances into the patient's body.

**KEY WORDS:** Bis-GMA-free fissure sealant, xenoestrogen, treatment protocols

# Analysis of the dynamics of morbidity of children of the first year of life in Ukraine during 2009-2023

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## ABSTRACT

**Introduction:** This year, World Health Day is dedicated to the health of mothers and newborns for a reason. In 2023, the World Health Organization, in its report "Nurturing Care Framework Progress Report 2018-2023: Reflections and Looking Forward," emphasized the importance of the first years of a child's life. It is during these years that a promising outlook for strong health, optimal nutritional status, and well-being throughout life is formed, which can also impact future generations. Despite progress in achieving the Global Early Childhood Development and Care System, the poorest and most unstable countries require increased investment in medical care for children in the early years of life.

**Aim:** To investigate the changes in the health of children under one year of age in Ukraine during the period 2009-2023 against the backdrop of the war events.

**Materials and Methods:** The study analyzed official statistical data from the Ukrainian Center for Medical Statistics.

**Results:** Maternal and child health protection is one of Ukraine's national priorities. According to the "New Life - New Quality of Maternal and Child Health Care" project, 19 perinatal centers were established and 114 newborn intensive care units have been operating since 2010. Achievements made during 2009-2020 regarding certain diseases among children under one year of age were nearly undone in the first two years of the war. Thus, the overall morbidity rate of children under one year of age decreased by 24% from 2009-2020, reaching 1219.7 ‰, but in just two years of full-scale invasion, it increased by 20%. A detailed analysis of infant morbidity for specific diseases revealed that the greatest increase in the last two years was observed in relation to the prevalence of infectious diseases (by 40%), nervous system diseases (by 32%), cerebral palsy (by 2.3 times), ear and mastoid process diseases (by 44%), respiratory organs (by 35%, with mortality from these rising by 88.8%), digestive organs (by 38%), skin conditions (by 30%), and musculoskeletal system disorders (by 2 times). Even diseases unrelated to infants, such as those of the circulatory system, became more common (by 86.6%). However, particular concern regarding infants is always caused by conditions arising in the perinatal period, which increased by 17.6%, and congenital malformations — which increased by 40% (with a 64% rise in the frequency of congenital malformations of the circulatory system). It is logical to assume that such negative changes are related, in particular, to the deterioration of medical care for children, including those in the first year of life. Indeed, the availability of specialized pediatric beds has decreased by 36.36%. The efficiency of using beds for premature and sick newborns has decreased — bed occupancy has almost halved, yet mortality on these beds has increased by 60%. The availability of pediatricians for the child population has decreased by 65% since 2009 (with a 50% decrease in the last two years), and the number of neonatologists has decreased by 36%. At the same time, staffing levels in certain positions have dropped to 70%, and widespread dual employment negatively affects the quality of care provided by exhausted doctors.

**Conclusions:** The deterioration in the health of children under one year of age is undoubtedly caused by the war. Despite the decrease in birth rates, and thus the reduction in the number of pregnant women and children, the burden on pediatric services has increased due to a lack of material, technical, and human resources in healthcare overall. However, preventive work with pregnant women and mothers remains relevant, emphasizing their responsible attitude towards preserving their own health and the health of their newborn children.

**KEY WORDS:** health, infant morbidity, medical care for children, neonatologists, pediatricians, perinatal centers

# Trends in maternal and infant mortality as integral indicators of maternal and child health

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## ABSTRACT

**Introduction:** Maternal and child health is a fundamental factor in ensuring sustainable social and economic development of society. Its preservation and strengthening have been identified as a priority of social policy. Integral indicators of maternal and child health are included in the Sustainable Development Goals at both global and national levels.

**Aim:** To assess progress in reducing maternal and infant mortality rates in the WHO European Region (WHO ER).

**Materials and Methods:** The study materials included scientific publications, national regulatory and legal acts, WHO and WHO ER program documents, and data from the European "Health for All" database. The study employed bibliosemantic, medical-statistical, and content analysis methods.

**Results:** Analysis of scientific literature and WHO documents revealed a significant global reduction over 20 years in maternal mortality by 38% and early childhood mortality by half. However, these rates remain substantial, and global targets have not yet been achieved.

Analysis of infant mortality rates in the WHO ER, based on estimated data, also showed a positive trend, decreasing by 62.5% between 2000 and 2022. In European Union (EU) countries, the reduction was 47.5%, and in Ukraine, it was 55.7%. However, significant disparities in infant mortality rates were identified. The average rate in the WHO ER was twice as high as in the EU. In Ukraine, the infant mortality rate was 11.1% higher than in the WHO ER and 2.3 times higher than in the EU. Several countries achieved notably low infant mortality rates, including Norway (1.8‰), Finland (1.9‰), and Sweden (2.1‰). At the same time, in some Central Asian countries, mortality rates reached 26.7‰ and 35.8‰, indicating a 20-fold difference in these indicators.

The trend in maternal mortality rates in the WHO ER between 2000 and 2020 was positive, with a reduction rate of 50.0%. In EU countries, this indicator decreased by 45.5%, and in Ukraine, by 52.8%. Disparities in maternal mortality rates within the region reached a 25-fold difference. Specifically, in 2020, the maternal mortality rate in Norway was 2 cases per 100,000 live births and in Germany, 4 cases per 100,000 live births, while in Kyrgyzstan and Uzbekistan, it was 50 and 30 cases per 100,000 live births, respectively.

According to the 2024 Report on the State of Health in Europe, it was emphasized that many infants and children continue to die from preventable causes. Statistical data indicate that many countries are lagging behind the schedule for achieving the Sustainable Development Goals related to maternal and newborn mortality. This necessitates a comprehensive set of measures, including preventing unwanted pregnancies, ensuring access to high-quality care during pregnancy, childbirth, and the postpartum period, strengthening reproductive health, providing skilled birth attendance, promoting breastfeeding and adequate nutrition, vaccination, and treatment of common childhood illnesses, among others. An approach focusing on both immediate biomedical causes of mortality and broader social, economic, and environmental determinants is essential.

**Conclusions:** Despite positive trends in reducing maternal and infant mortality, significant disparities in progress toward achieving target indicators persist, requiring comprehensive measures to improve healthcare services and address key determinants.

**KEY WORDS:** maternal mortality, infant mortality, trends, Sustainable Development Goals, strategies

## Experience of using the theoretical model in the study of market efficiency of services

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### ABSTRACT

**Introduction:** The active development of modern medicine is inevitably accompanied by numerous clinical trials that form the basis of evidence-based medicine and provide answers to questions of varying complexity. In a situation where a person's life may depend on the treatment tactics recognised as effective in a particular clinical trial, it is extremely important that this clinical trial is conducted correctly and contains not only data analysis but also theoretical concepts. There are many requirements for conducting clinical trials, one of which is the use of a theoretical model. The choice of a theoretical model depends on many characteristics: study design, data, etc. Unfortunately, there are many clinical trials in the world in which various mistakes have been made, including the failure to use a theoretical model. Fortunately, such models are available in healthcare organisations, although they are borrowed from econometrics.

**Aim:** To present the experience of using the theoretical model in studies that evaluate the organisation of services for patients with rhythm disturbances.

**Materials and Methods:** The organisation is evaluated on the example of the theoretical model of D. Dranov and M. Satterwhite.

**Results:** There are many opportunities to use this theoretical model, as it describes the process of any service in a competitive environment. The model allows to link the basic characteristics of the service, such as quality and comfort, with market characteristics: demand, price (through the corresponding elasticities), which allows using these variables to reach the balance values of price, quality, and comfort. The idea of applying the model is that if the regularities predicted by it are confirmed by the characteristics of the service provision organisation, then the current values of the three main variables (price, quality, and comfort) are close to optimal.

Dranov and Satterwhite's theoretical model is based on the market behaviour of a service provider that seeks to maximise profits under the constraints set by demand by optimising three main variables, namely price ( $p$ ), quality of service ( $ql$ ) and comfort ( $cm$ ). Demand  $q$  is a function of the last three, i.e.  $q(p, ql, cm)$ . Demand limits the price and increases  $ql$  and  $cm$ .

Of course, this model cannot be presented in this format for practical evaluation, as it contains a number of unmeasured and unknown values, which requires first of all the definition of unmeasured variables and approaches to working with unknown values.

We first developed a transition to an empirical model on the example of a healthcare organisation in the context of working with patients with heart rhythm disorders.

**Conclusions:** the empirical model was used to understand the extent to which the organisation of services for patients with arrhythmias is adapted to the existing market.

**KEY WORDS:** theoretical model, rhythm disturbance

## Job satisfaction of healthcare professionals: a necessity or a modern trend?

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### ABSTRACT

**Introduction:** In the context of a full-scale war on the territory of Ukraine and a decrease in the number of healthcare professionals, managers of healthcare institutions face the problem of retaining their human resources. One of the components of retaining human resources is the use of tangible and intangible incentives to enhance job satisfaction of healthcare professionals.

**Aim:** To assess the necessity of studying job satisfaction among healthcare professionals.

**Materials and Methods:** A review of 35 scientific sources on job satisfaction of healthcare professionals based on PubMed and the V.I. Vernadskyi National Library of Ukraine was conducted.

**Results:** In recent years and even decades, the issue of job satisfaction among personnel has become particularly acute. This is due to the fact that society has undergone major transformations and all aspects of economic life have strengthened, leading to the need for highly efficient employees in various fields of activity. The contradiction between the demand for product quality improvement and the decrease in the number of professionals responsible for this has become more intense. Employers are setting increasingly higher requirements for educational standards, professional competence, and labor productivity. The relationship between job satisfaction and productivity has been studied for a decade (J. Kaap-Deeder, 2018; O.M. Shovgelya, 2012; S.R. Covey & Colosimo J., 2011, etc.), but numerous studies conducted in this area in different countries have shown conflicting results. Personal characteristics of employees, such as cognitive abilities and emotional stability, as well as their work experience and prospects for applying the acquired skills, are also related to job satisfaction. According to several studies (Vezhnovets T.A., 2017; Udod M.O., 2020), job satisfaction in the healthcare system is associated with emotional burnout syndrome, which together can affect the quality of healthcare and, consequently, the health of the population as a whole. The risk of this combined impact increases due to a combination of professional factors such as high and irregular workload, work-life balance, high emotional stress from communicating with patients and their families, the need for quick decision-making, and great responsibility for the lives and health of patients.

**Conclusions:** The study of job satisfaction of healthcare professionals is currently both relevant and essential, considering its impact on the quality of healthcare, the risk of professional burnout among healthcare workers, and the significant psycho-emotional burden they experience due to ongoing military actions.

**KEY WORDS:** job satisfaction, healthcare professionals, professional burnout, human resources

## The role of vitamin D imbalance in the etiopathogenesis of complications of acute pancreatitis

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### ABSTRACT

**Introduction:** Vitamin D (25(OH)D) plays a crucial role in numerous anti-inflammatory, immunomodulatory, and metabolic processes and potentially significantly impacts the clinical course of acute pancreatitis. The prevalence of this condition is increasing every year in Europe and, in some countries, reaches up to 100 cases per 100,000 population. The involvement of a multidisciplinary team of medical professionals is essential for improving the management of acute pancreatitis, as it is one of the most complex surgical diseases with a high risk of complications and a mortality rate of up to 42%. A common consequence of acute pancreatitis is vitamin D imbalance. However, the role of the latter as a risk factor for the disease and its complication, acute secondary sarcopenia associated with the disease (SSARC), has not been sufficiently studied and requires increased attention from the scientific community.

**Aim:** To determine the role of vitamin D imbalance as a risk factor for developing acute pancreatitis and secondary sarcopenia associated with acute pancreatitis.

**Materials and Methods:** We conducted a descriptive review of current research data regarding the role of vitamin D imbalance as a risk factor for acute pancreatitis and its complication, secondary sarcopenia associated with the disease, which significantly affects patients' prognosis and quality of life of patients.

**Results:** Research has proven that vitamin D insufficiency or deficiency in blood serum is quite common in patients with acute pancreatitis: according to current studies, the decrease in serum 25(OH)D levels ( $<50$  ng/ml) of varying severity among hospitalized patients was 72.2-84.7%, while normal levels ( $>50$  nmol/l) were found in only 15.3-27.8% of patients with acute pancreatitis. A negative correlation was also reported between the severity of acute pancreatitis according to the revised classification (Atlanta, 2012) and serum 25(OH)D levels. Moreover, severe vitamin D deficiency ( $\leq 13.28$  ng/ml) can be considered a significant predictor of severe acute pancreatitis (sensitivity 83.3%, specificity 94.4%).

Monitoring and correcting vitamin D imbalance has excellent potential in preventing recurrent attacks of acute pancreatitis and chronicity of the disease

due to its anti-inflammatory and antifibrotic properties. However, the issue of vitamin D therapy as part of a complex of measures to prevent secondary sarcopenia associated with the disease remains controversial among scientists and clinicians. On the one hand, some studies have reported no significant association between 25(OH)D levels and muscle strength, quality, and function. On the other hand, the inflammatory process is pronounced in acute pancreatitis and plays a key role in the etiopathogenesis of SSARC. Vitamin D has been shown to regulate inflammation in several ways. For example, it inhibits the important inflammatory regulator NF- $\kappa$ B (nuclear factor kappa-light-chain-enhancer of activated B cells) and synthesis of proinflammatory cytokines (TNF- $\alpha$ , IL-1 $\beta$ , IL-6). It increases the production of the anti-inflammatory cytokine IL-10 by binding to immune cells' vitamin D receptor (VDR). In addition, vitamin D directly affects immune cells: it inhibits the activation of T lymphocytes and the release of proinflammatory cytokines by macrophages by suppressing phagocytosis, suggesting an excellent potential for vitamin D therapy to prevent and treat SSARC.

**Conclusions:** These data indicate the prospects of monitoring and correcting of serum 25(OH)D levels as part of a set of measures to reduce the risk of acute pancreatitis, as well as the need for an in-depth study of the role of vitamin D in the prevention and treatment of secondary sarcopenia associated with acute pancreatitis.

**KEY WORDS:** vitamin D imbalance, acute pancreatitis, secondary sarcopenia, inflammatory processes

## The impact of social support and information hygiene on mental health during wartime: Survey results

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### ABSTRACT

**Introduction:** In the face of contemporary challenges caused by the full-scale military invasion of Ukraine, the mental health of the population is significantly affected by multiple stress factors. Isolation during the pandemic has shown that in times of social anxiety or instability, people often increase their information seeking. In this case, a sense of emotional security is promoted by social support, which can reduce anxiety associated with receiving potentially disturbing new.

**Aim:** To assess the impact of social support and frequency of news consumption on the mental health of adults during wartime.

**Materials and Methods:** Between April and June 2023, an online survey was conducted among 1,797 adults from all regions of Ukraine. Depressive and anxiety symptoms were assessed using the Patient Health Questionnaire-2 (PHQ-2) and the Generalized Anxiety Disorder 2-item (GAD-2) scale. Additional variables included age, gender, education level, place of residence, migration status, frequency of news consumption, and the presence and types of social support. Data analysis was performed using RStudio, employing contingency tables, analysis of variance, and regression models.

**Results:** One year after the onset of the full-scale invasion, a high level of social support from friends, relatives, and colleagues was reported by 21.8% of respondents. At the same time, only 1.6% acknowledged receiving significant support from local authorities and social services, regardless of migration status. Independent of gender and age, 21.2% of respondents view news up to once a day, while 49.6% reported continuous news consumption. Increased frequency of news consumption was associated with a 10% increase in the likelihood of experiencing depressive symptoms (OR=1.10; CI: 1.07-1.13) and an 11% increase in anxiety symptoms (OR=1.11; CI: 1.08-1.14). Conversely, a high level of social support reduced the likelihood of depressive symptoms by 27.2% (OR=0.79; CI: 0.77-0.81) and anxiety symptoms by 25.8% (OR=0.80; CI: 0.78-0.82).

**Conclusions:** Social support is a key determinant in improving psychological well-being during crises. Excessive news consumption increases the risk of depressive and anxiety symptoms, underscoring the necessity of maintaining information hygiene. The findings have practical implications for developing psychological assistance strategies, public information campaigns, and support programs for the population during emergency situations.

**KEY WORDS:** mental health, news consumption, assessment of social support, war



# Sociological study of alcohol abuse: assessing prevalence and identifying risk groups

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## ABSTRACT

**Introduction:** Alcohol dependence and risky patterns of alcohol consumption pose a serious threat to both individual health and the social and economic aspects of societal development. This phenomenon becomes particularly relevant in the context of modern society, where transformations in sociocultural conditions, stress, and lifestyle changes contribute to an increase in instances of risky alcohol consumption. Given these challenges, analyzing the prevalence of this phenomenon and identifying risk groups are crucial for developing effective prevention and intervention strategies.

**Aim:** Based on the materials of the sociological study, to determine the prevalence of alcohol abuse among the population and identify risk groups prone to developing alcohol dependence.

**Materials and Methods:** The sociological study was conducted using the WHO AUDIT standardized questionnaire through an anonymous online survey on the Google Form platform. The study was carried out in January–February 2025 and covered 129 individuals aged 19 to 69, of whom 36,4% were male and 63,6% were female. The majority of the respondents lived in urban areas (93,0%), had higher education (59,7%), and incomplete higher education (32,6%). Regarding the social status of the respondents, 55,0% were employed, 31% were students, 9,3% were retirees, and 4,7% were unemployed. Data analysis was performed by calculating the frequency of characteristics per 100 respondents and its standard error ( $\pm m$ ).

**Results:** Regarding the frequency of alcohol consumption,  $38,8 \pm 4,3$  per 100 respondents reported drinking alcohol once a month or less frequently,  $30,2 \pm 4,0$  per 100 consumed alcohol 2 to 4 times a month, and  $9,3 \pm 2,6$  per 100 did not consume alcohol at all. Meanwhile,  $10,1 \pm 2,7$  per 100 respondents reported drinking alcohol 4 times a week or more. A concerning fact is that among these individuals, 23,0% were young people under 25 years of age, and 30,8% were over 55 years old, with 69,2% of them holding a higher education degree. As for the number of alcoholic drinks consumed on a typical day when alcohol is consumed, the majority ( $56,6 \pm 4,4$  per 100) reported having one or two drinks, while  $6,2 \pm 2,1$  per 100 respondents consume 5 or more drinks.

Among those who are unable to stop once they start drinking,  $16,3 \pm 3,3$  per 100 respondents were identified, with 33,3% of them being young people under 25 years old. Alcohol consumption was a cause of not fulfilling responsibilities for  $14,7 \pm 3,1$  per 100 respondents; notably, 47,4% of these individuals were of working age. The need to drink alcohol in the morning to be able to do anything after excessive drinking the previous day was reported by  $5,4 \pm 2,0$  per 100 respondents, 28,6% of whom were under 25 years old. According to the survey results,  $74,4 \pm 3,1$  per 100 respondents do not feel guilty about drinking alcoholic beverages. Among the quarter of respondents who experience guilt due to alcohol consumption, the majority are urban residents – almost 9 out of 10 – hold a higher education degree, and are employed (60,6% each). A concerning finding is that  $10,9 \pm 2,7$  per 100 respondents reported amnesia of events from the previous day due to alcohol intoxication. The vast majority (85,7%) of this group hold a higher or incomplete higher education.

Alcohol abuse poses a serious threat to society, as it increases the risk of injuries both to individuals under the influence and to those around them. The study results revealed that  $9,3 \pm 2,6$  per 100 respondents reported incidents where their state of intoxication led to injuries to themselves or others. Data analysis showed that  $14,7 \pm 3,1$  per 100 respondents had received warnings from close individuals or healthcare professionals regarding excessive alcohol consumption.

**Conclusions:** The study revealed the prevalence of risky alcohol consumption patterns, posing a threat to public health. Young people under 25, individuals over 55, and respondents with higher education demonstrated an increased tendency toward regular and excessive alcohol consumption. Instances of regular drinking, amnesia, injuries, failure to fulfill responsibilities, and an inability to stop drinking indicate significant behavioral issues. The low level of self-criticism and insufficient awareness of the negative consequences of alcohol consumption among the respondents highlight the need to develop and implement comprehensive preventive measures aimed at promoting responsible attitudes toward alcohol and reducing alcohol-related harm.

**KEY WORDS:** alcohol abuse, alcohol dependence, risk groups, sociological survey, AUDIT

