



iCREATE

Increasing Capacity in
Research in Eastern Europe

**CONTEMPORARY ISSUES
IN
PREVENTIVE MEDICINE**

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I extend my best wishes to everyone attending the Second International Conference "Contemporary Issues in Preventive Medicine." Through the NIH Fogarty iCREATE initiative, we are committed to supporting the growth of research capacity in Eastern Europe. Wishing you meaningful discussions and impactful outcomes.

**Cara J. Hamann, PhD, MPH,
Principal Investigator of iCREATE, University of Iowa, USA**

Yerevan State Medical University has become a sustainable center of excellence in injury research and education as part of the iCREATE: Increasing Capacity for Injury Research in Eastern Europe Project. As a Co-PI in this project, I am honored to be part of the initiatives that take part in our partner countries and it was a pleasure to see the research and commitments of the accepted participants at the Second International Conference "Contemporary Issues in Preventive Medicine" that takes place in December 2025.

**Diana Dulf, PhD,
Co-Principal Investigator of iCREATE, Babes-Bolyai University,
Romania**

It is a great pleasure and an honor to host the second symposium organized within the framework of the iCREATE project at Yerevan State Medical University (YSMU), held in a hybrid format. YSMU is one of the oldest and most respected educational institutions in Armenia, known for its rich traditions, high-quality education, and regional excellence.

This second Hybrid Conference, "Contemporary Issues in Public Health," continues the series of events held under the iCREATE project, bringing

together partners from the University of Iowa (USA), the Department of Public Health; Babeş-Bolyai University (Romania); Yerevan State Medical University (Armenia); Ivane Javakhishvili Tbilisi State University (Georgia); and Nicolae Testemițanu State University of Medicine and Pharmacy (Moldova).

This conference continues the important and ambitious work in public health, fostering a community of young professionals who learn from one another's experiences and contribute to advancing the field nationally, regionally, and internationally. The program addresses a wide range of topics, including injury and violence prevention, environmental and occupational health, nutrition, behavioral health, and emerging challenges such as internet and digital-device addiction.

Artashes Tadevosyan, MD, PhD
Professor, Head of Public Health and Health Care Organizing
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I am very excited to be the host of the second symposium held in the framework of iCREATE project at Yerevan State Medical University (YSMU). YSMU is one of the highly respected and oldest educational institutions in Armenia, with rich traditions, high quality education and regional excellence. For many of you this was the first real and challenging scientific experience and I really hope that this conference has instigated your academic and scientific curiosity that will lead you to new and exciting opportunities.

Konstantin Yenkovyan
Vice-rector for Science, professor

1. VIOLENCE AND INJURY PREVENTION

CHILD SAFETY ON THE ROAD: PARENTAL AWARENESS AND USE OF RESTRAINT SYSTEMS IN THE REPUBLIC OF MOLDOVA

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Background and Context: Road traffic accidents are a major cause of injury and death among children in Moldova. Although child restraint systems (CRS) are proven to reduce these risks, their use remains inconsistent due to insufficient awareness, legal enforcement, and cultural factors. Understanding these issues is essential to promoting better safety practices and reducing preventable childhood injuries in transport-related incidents.

Objectives and Research Questions: The aim of this study is to assess public knowledge, attitudes and practices regarding the use of CRS among parents. Key aspects of this study are factors influencing the adoption of CRS, the main barriers to use, the level of parental awareness of national legislation, and what interventions can improve compliance and safety behavior.

Methodology: Ethical approval and informed consent were obtained from participants before data collection commenced. A mixed methods approach was used. Quantitative data were collected over a two-month period (April-May 2025) and are ongoing through a structured online questionnaire. To date, 59 respondents have completed the questionnaire, including both parents and non-parents, aged 18–55+ years from urban and rural areas. Questions assessed frequency of CRS use, reasons for use or non-use, perceived importance, and sources of information. Additionally, focus group discussions were conducted in several driving schools and children’s hospitals to collect qualitative information on beliefs, barriers, and potential improvements. Data will be analyzed using SPSS and Excel.

Key Findings and Results: Survey results revealed that only 44.1% of participants always use CRS, while 37.3% never do. Although 83.1% believe CRS are “very important,” 39% are unaware of existing legislation. Barriers included discomfort, lack of enforcement, and difficulty convincing children. Most respondents cited websites (64.4%) and user manuals (45.8%) as information sources. Incentives like stronger enforcement (39%) and free CRS access (15.3%) were highlighted as motivators. Participants without children or vehicles showed lower awareness and usage. The data underscores the importance of education and accessible information to improve CRS adoption.

Discussion: The findings suggest a significant disconnect between perceived importance and actual use of CRS in Moldova. Young adults and non-parents show the lowest compliance and awareness levels. The results emphasize the need for national education campaigns, legislative reinforcement, and digital tools to bridge information gaps. Focus group discussions will provide further insight into user behavior, helping design tailored interventions such as a localized mobile app for CRS education and guidance.

Conclusion: While awareness of child traffic safety is generally high, CRS usage remains inconsistent due to practical and informational barriers. Legislative reinforcement, community education, and digital applications could significantly enhance compliance. Strengthening public health strategies with evidence-based interventions is essential for improving child safety in road transport across Moldova.

EXPLORING BEHAVIORAL RISK FACTORS FOR ALCOHOL-IMPAIRED DRIVING AMONG LICENSED DRIVERS IN MOLDOVA

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Background and Context: Globally, alcohol is estimated to be responsible for approximately 3 million deaths annually, of which more than 250,000 are attributable to road traffic accidents. Driving under the influence of alcohol significantly increases the risk of road traffic crashes with severe consequences, including fatalities or serious injuries. In the Republic of Moldova, driving under the influence of alcohol remains a pressing issue, given both the high prevalence of alcohol consumption and the alarming statistics related to alcohol-associated traffic accidents.

Objectives and Research Questions: The research aims to investigate the causes of driving under the influence of alcohol among drivers in the Republic of Moldova and propose effective measures for reducing road traffic crashes and related injuries.

Methodology: A cross-sectional study was conducted to analyze behavioral risk factors associated with driving under the influence of alcohol among drivers in the Republic of Moldova. Data collection was based on a structured questionnaire administered between September and December 2024, targeting licensed drivers. Participation in the study was voluntary, free of charge, and based on informed consent. The ethics committee approved the research protocol.

Key Findings and Results: The study included 449 licensed drivers, of whom 165 males and 284 females. Most participants fell within the 18–24 age group (37.4%, n=169) and the 25–34 age group (28%, n=128). A significant majority of respondents resided in urban areas (84.2%) and held Category B driving licenses (95.8%). Most respondents (85.7%) reported never having driven after consuming alcohol, not even in small amounts. Additionally, 12.5% admitted to occasionally ("rarely") driving after drinking alcohol. Drivers who reported daily driving habits were more likely to engage in driving under the influence. Beginner drivers demonstrated the highest levels of caution, with 18.26%

stating they had never driven after consuming alcohol. However, as driving experience increased (1–7 years), so did the likelihood of driving under the influence. Most respondents (70.2%) expressed significant concern regarding the number of daily reported road traffic accidents, especially among those who had never driven under the influence of alcohol (62.4%). Individuals who had never driven under the influence were also the most supportive of stricter penalties (73.72%). Most participants (77.95%) agreed that drivers should completely abstain from alcohol before driving. Furthermore, more than half (52.78%) identified exceeding the legal alcohol limit as a common cause of road traffic accidents and injuries. In the Republic of Moldova, drivers are subject to legal sanctions if their blood alcohol concentration exceeds 0.3 g/l or 0.15 mg/l in exhaled air.

Conclusion: The data show a high level of compliance with alcohol-driving regulations. However, over 11% of drivers still report risky behaviors, justifying the need for further preventive measures. Strengthening roadside alcohol checks and promoting modern technologies are necessary. Continuous education and awareness campaigns targeting drivers, especially repeat offenders, are also essential.

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PERCEPTIONS OF THE BULLYING PHENOMENON: INSIGHTS FROM STUDENTS AND TEACHERS

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Background and Context: Nowadays bullying is a global crisis. According to the UNESCO Institute of Statistics, 1/3 of the world's youth suffer from bullying. In Republic of Moldova, first large-scale study on the bullying phenomenon was in 2019, prompting national anti-bullying efforts. Yet the issue remains alarmingly with 75,8% of children affected, from them 3 in 4 kids in Moldova experience bullying, in silence. This omnipresence problem demands urgent and constant intervention.

Objectives and Research Questions: The targets of this study are to examine the prevalence and understanding of bullying among scholar and pedagogue, identify main hazards and defense factors, and assess the effectiveness of anti-bullying measures. It addresses how both groups understand, experience, and respond to bullying in the school environment.

Methodology: The study is qualitative and cross-sectional, based on surveys conducted with children that are 13-17 years old and teachers. Prior approval for the school survey was obtained through an ethical consent process. Only individuals who provided informed consent were included in the survey. The youth sample comprised 381 kids from five schools in Chisinau that was selected, with a total of 400 respondents. Additionally, surveys were completed by 110 teachers teaching middle school classes in these 5 schools. The questionnaires included both closed and open-ended questions with 18 questions for youth and 12 for teachers.

Key Findings and Results: The study revealed significant gaps between children and teachers' perception of bullying. While 75,8% of pupils reported witnessing bullying, only 20% of teachers believed current school measures are effective. Bullying victimization was reported by 55,7% girls and 36,9% boys, yet 95,5% of teachers considered the school environment safe. Verbal bullying remains most prevalent (43,3%), with 28,2% of students

identifying classmates and 17,5% naming teachers as aggressors. Although 98,2% of teachers claimed to be well-informed about the phenomenon of bullying, 16,3% denied its existence. Moreover, 23,3% of kids stated they never report bullying incidents, while 70% of teachers felt students need more education on the topic. These differences highlight a clear disconnect in recognizing and addressing bullying.

Discussion: The findings highlight a stark mismatch between pupils lived experiences and teachers' perceptions of bullying. Although teachers report a high level of awareness, the denial of bullying in some cases raises concerns about recognition and response mechanisms. The identification of teachers as aggressors challenges traditional assumptions and highlights systemic issues. Moreover, the perception that existing school policies are sufficient contrasts with kids' reluctance to report incidents. These inconsistencies underline the importance of not only informing staff but also fostering a school culture where children feel safe, heard, and protected.

Conclusion: The findings underline that bullying remains a prevalent and underreported issue in schools, with a significant portion of pupils feeling unprotected. Despite teachers declared awareness, their responses point to implementation gaps in school policies. The educators themselves acknowledge the need for strengthening current strategies and ensuring stricter application. Therefore, the study calls for comprehensive interventions that include teacher training, children empowerment, and policy reinforcement to foster a genuinely safe and responsive educational environment.

DESIGNING A ROAD TRAFFIC INJURY REGISTRY IN THE REPUBLIC OF MOLDOVA

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Background and Context: A trauma registry is a standardized database that contains detailed information about traumatic events, patient characteristics, medical interventions, and treatment outcomes. In many developing countries, the implementation of such registries has significantly contributed to improving healthcare systems and injury prevention efforts. A national registry serves as a vital source of evidence-based data, supporting the monitoring and prevention of road traffic injuries at the national level.

Objectives and Research Questions: This study aimed to describe a novel model of a national road injury registry, including a thorough explanation of the variables that are required to develop road injury and death prevention measures, enhance the quality of healthcare and recorded data, and create road safety policies and strategies.

Methodology: Under the guidance of experts from the USA and Romania, a parallel injury data registry was piloted in three countries, Moldova, Armenia, and Georgia in 2018. In Moldova, the registry was tested in two hospitals, both capable of providing comprehensive care for injured patients. Data were collected retrospectively from patient medical records, without direct contact, using a validated questionnaire implemented across all three countries. Initially, on paper and then on the Redcap platform. The form included general patient information, medical care details, circumstances of injury, and injury type and location, with five additional sections: traffic injuries, self-harm, violence, sports-related injuries, and traumatic brain injuries. Based on the results, a National Road Injury Registry Model was developed in 2023. This concept model has been officially recognized through the granting of the Innovator Certificate, highlighting its originality and relevance.

Key Findings and Results: According to pilot registry data, 7,946 patients with various injuries were recorded in the emergency department of the Institute of Emergency Medicine. To identify road traffic injury (RTI) cases, complex filters were applied in Epi

Info, including road traffic event, trauma mechanism, activity during injury, injury location, and road environment. Although the retrospective analysis allowed for the development of a basic profile of RTI patients, covering sex, age group, social status, type of transport, injury circumstances, and nature of injuries, the available data were insufficient for an in-depth analysis. The lack of standardized, internationally comparable data underscored the urgent need for a unified National Road Injury Registry. The proposed model includes four integrated data sources: police records, emergency call data (112), hospital records, and the National Health Insurance Company and the National Social Insurance House data on rehabilitation and compensation. Together, they form a centralized platform offering a comprehensive view of RTIs and supporting evidence-based policymaking in road safety and injury prevention.

Conclusions: The data collection through the pilot registry highlighted both existing gaps and the practical value of integrating such a system into medical institutions. The new model will provide a clear overview of road traffic injuries at both national and sectoral levels, enabling targeted preventive interventions. It will also facilitate progress monitoring, identification of risk factors, and the optimization of road safety measures.

THE PSYCHOLOGICAL IMPACT OF WORKPLACE VIOLENCE ON PHARMACISTS

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Background and Context: Pharmacists often face workplace violence, an issue that remains underreported despite its psychological and professional impact. In Moldova, there is limited data on the nature and consequences of such incidents. This study explores the sources of violence in pharmacies and how these events affect pharmacists' emotional well-being and professional choices.

Objectives and Research Questions: The study aimed to identify the main factor of workplace violence against pharmacists in Moldova, examine the coping strategies pharmacists adopt, and assess the emotional and behavioral consequences of such incidents on their lives and careers. It also explored the reasons behind underreporting.

Methodology: A cross-sectional study was conducted using a confidential survey distributed to pharmacists across Moldova. The questionnaire gathered data on the type and source of violence experienced, pharmacists' responses, reporting behaviors, and emotional consequences. Responses were analyzed using descriptive statistics to identify trends in aggression, coping mechanisms, and psychological impact, including avoidance and hypervigilance. The anonymity of participants was ensured, and ethical standards were followed throughout the study. This approach allowed us to assess the perceived severity of workplace violence in the pharmaceutical field in Moldova.

Key Findings and Results: Patients were responsible for 79.7% of violent incidents, while small percentage involved patients' relatives (1.4%), coworkers (2.9%), and supervisors (5.8%). Some pharmacists faced violence from both patients and colleagues (1.4%). In terms of responses, 27.9% asked aggressors to stop and spoke to colleagues, 23.3% reported the incident to management, and 18.6% confided in family or friends. Only 4.7% changed jobs. However, 14% took no action, citing fear or lack of trust in the system. Emotional consequences included distressing memories (51.4%), avoidance behaviors (55%), and varying levels of hypervigilance, with 29% reporting moderate levels.

Discussion: Psychological violence in the pharmacy workplace can seriously affect how pharmacists carry out their duties. When faced with aggression—whether from patients or coworkers—they may experience strong negative emotions like fear, anger, or frustration. These emotional reactions can reduce concentration, increase the risk of mistakes, and ultimately compromise patient safety. Studies have shown that errors often occur right after such aggressive events, likely due to emotional stress (Irwin, 2013). This highlights the importance of creating a safe and supportive work environment to protect both pharmacists and the people they care for.

Conclusion: Workplace violence in pharmacies is more than an occasional risk - it's a persistent problem with emotional and professional consequences. Pharmacists adopt different coping strategies, but a lack of reporting reflects fear and systemic gaps. Addressing this issue requires stronger institutional responses, clearer policies, and mental health support to ensure safe and respectful work environments.

ADDRESSING GENDER-BASED VIOLENCE IN MOLDOVA: GAPS AND OPPORTUNITIES IN THE HEALTHCARE SYSTEM

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Background and Context: In Moldova, a major challenge is the widespread tolerance of violence against women, fueled by deep-rooted stereotypes and traditions. Gender-based violence is often seen as a private matter, even by professionals. The medical system has the potential to play a key role in prevention and support, especially in small towns lacking specialized institutions.

Objectives and Research Questions: This research aimed to assess Moldova's healthcare response to gender-based violence by analyzing legal frameworks, evaluating medical staff's knowledge, and identifying system strengths and weaknesses. It examined health workers' awareness of regulations, their involvement in prevention, training participation, and interactions with victims to improve care and case reporting.

Methodology: A qualitative study was conducted among medical professionals in Moldova. In the period of March-May 2024, 30 interviews were performed, of them 3 online and 27 face-to-face with 27 health workers and 3 social workers. Inclusion criteria were being nurses, emergency nurses, family doctors, and gynecologists with at least 5 years of experience. An interview guide was developed with questions for each specialist, aiming to explore their knowledge of gender-based violence. Interviews lasted 20–60 minutes, were recorded with consent, and ensured confidentiality. All the records get a unique code, transcribed, and then analyzed. Ethical committee approval was obtained.

Key Findings and Results: The review highlights notable legislative progress in Moldova regarding the protection of gender-based violence victims, along with the development of support and counseling services. Education and awareness campaigns have been vital in challenging stereotypes and shifting community attitudes. However, significant shortcomings remain in the medical system's response. Interviews with 30 health and

social workers revealed limited knowledge of protocols, minimal training, and weak involvement in prevention and reporting. Interventions occur mostly in severe cases, and multidisciplinary teams lack standardized communication. Family doctors rarely document or monitor cases unless hospitalization is required. Deep-rooted societal beliefs and the absence of a systemic strategy further hinder effective response. Respondents emphasized the need for structured training and routine screening to enhance early detection and improve coordination among professionals addressing gender-based violence.

Discussion: The project results highlight the need for strategic improvements in Moldova's medical response to gender-based violence. Key recommendations include implementing targeted training for health workers on legal and procedural aspects, promoting research to develop evidence-based solutions, and organizing awareness campaigns to shift societal and professional attitudes. These measures could strengthen case identification, management, and overall system effectiveness in addressing gender-based violence. The study underscores the importance of education, evidence, and cultural change in improving healthcare support for affected individuals.

Conclusion: This study underlines the gaps in the Moldovan medical system's response to gender-based violence, including limited awareness, lack of training, and weak interprofessional coordination. Despite the existence of multidisciplinary teams, the absence of standardized procedures and routine screening hinders effective case management. Strengthening the system requires comprehensive training, improved communication protocols, and sustained awareness efforts. By addressing these shortcomings, the healthcare sector can play a vital role in preventing and managing gender-based violence across Moldova.

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HIDDEN DANGERS: ACCIDENTAL POISONINGS AMONG CHILDREN UNDER FIVE IN GEORGIA

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Background and Context: Poisoning among children under five years of age is a critical public health problem in low- and middle-income countries, where the vulnerability of this age group is exacerbated by factors such as inadequate regulation of hazardous substances and lack of public awareness. Poisoning can lead to serious health consequences, with children facing increased risks due to their stage of development and exploratory and impulsive behavior. Accidental poisoning in children is characterized by regional differences. Cultural factors and economic constraints frequently contribute to unsafe storage, usage of toxic substances and a lack of education regarding the risks of common substances. By prioritizing prevention and education, the incidence of poisoning in children can be significantly reduced.

Objectives and Research Questions: The overall aspect of unintentional poisoning among children is poorly understood in Georgia. In order to gain a better understanding of the burden and outcomes of child poisoning in Georgia, the study aimed to describe the trend of accidental poisoning of children under five.

Methodology: This study utilized secondary data on pediatric poisoning cases extracted from the official hospitalization database maintained by the National Center for Disease Control and Public Health of Georgia (NCDC). The data covers hospital admissions related to unintentional poisoning in children aged 0–4 years from 2015 to 2023. Poisoning diagnoses were classified according to the International Classification of Diseases, 10th Revision (ICD-10). Demographic characteristics, such as age, sex, and year of hospitalization, were analyzed. Data were anonymized and analyzed using SPSS, employing descriptive statistics to assess trends over time and identify the most substances involved in poisoning-related hospitalizations.

Key Findings and Results: Between 2015 and 2023, a total of 3,340 hospitalizations for unintentional poisoning among children under five were recorded across Georgia. Of these, 55% (n=1829) involved male patients, suggesting a gender-related difference in exposure risk. Yearly hospitalizations showed a declining trend overall, despite fluctuations. In 2015, there were 359 cases, with a noticeable increase in 2020, potentially linked to changes in household routines during the COVID-19 pandemic. By 2023, the number of annual hospitalizations had declined to 253, representing a 29% decrease compared to 2015. Pesticide poisoning (T60) has the highest frequency among other categories accounted 577 (17.3%) hospitalizations following by corrosive substances with 466 (14.0%) cases and agents primarily affecting the cardiovascular system with 457 (13.7%) hospitalizations.

Discussion: This study highlights that unintentional poisoning among young children remains a significant, yet largely preventable, public health issue in Georgia. The predominance of pesticide poisoning reflects Georgia's agricultural profile and may point to unsafe household storage and handling practices. Likewise, the prevalence of poisonings from corrosive agents and cardiovascular medications indicates the need for stronger parental education and childproof packaging standards. While the decline in hospitalizations since 2021 is promising, it is unclear whether this reflects genuine improvements or underreporting. The spike in 2020 could be linked to increased household exposure during pandemic lockdowns, a trend observed in other countries.

Conclusion: These findings reveal a persistent burden of accidental poisonings among young children in Georgia and underscore the urgent need for targeted prevention strategies. National efforts should focus on public education, improved household safety practices, stronger regulation of toxic substances, and enhanced poisoning surveillance systems to reduce the incidence and severity of these preventable injuries.

TRAUMA ASSESSMENT AMONG CYCLISTS

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Background and Context: As urban populations expand rapidly and concerns about pollution and congestion grow, cycling has emerged as a widely promoted sustainable mode of transportation. While it offers significant health and environmental benefits, it also carries increased risks of accidents and injuries. This study responds to the growing need to understand the nature of bicycle injuries, particularly among the young urban population, in order to develop sustainable public prevention strategies and policies.

Objectives and Research Questions: The study aims to assess the frequency and severity of injuries among cyclists, identify the most common causes and risk factors contributing to accidents, and explore the level of use of protective bicycle equipment. In addition, it aims to collect cyclists' perceptions of safety in order to identify relevant preventive measures.

Methodology: This research is a descriptive, observational, cross-sectional questionnaire-based study. A total of 86 volunteer respondents, with different ages, genders and experiences, were recruited online through bicycling communities and targeted outreach. The questionnaire included both quantitative and qualitative components, considering demographics, accident history, types of injuries, use of protective equipment and individual perceptions. The descriptive statistics (frequencies, percentages, means, standard deviations) were used to synthesize the data. The injuries were categorized into superficial wounds, contusions, fractures, dislocations/sprains and head injuries. The risk factors were grouped into individual, infrastructural and environmental categories. Thematic analysis was applied to open-ended responses.

Key Findings and Results: The sample was predominantly made up of young adults (75% aged 18-25 years), 47% of whom reported at least one cycling accident. Most incidents occurred on public roads and almost 75% involved falls rather than collisions. More than half of the injuries were minor (scratches, bruises), with only 42% of injured cyclists seeking medical attention. It is worth noting that only 10% of cyclists were wearing protective equipment at the time of the accident; however, 95% of those involved in the incidents felt that the lack of such equipment aggravated the consequences. Helmet use

was particularly low, despite a recognized association with injury reduction. The findings suggest a divergence between awareness and behaviour regarding cyclist safety and highlight the vulnerability of cyclists to traffic conditions.

Discussion: The results highlight a strong correlation between lack of protective equipment and injury severity, amplified by infrastructural and behavioural factors. The prevalence of non-collision accidents suggests that many incidents could be prevented by improving road conditions, increasing cyclists' awareness and improving equipment use. The negative psychological impact, although less pronounced, was recognized by some respondents. The subjective perspectives collected from participants further reinforce the need for integrated approaches combining education, personal responsibility and targeted public policies. These findings are aligned with international literature on urban cycling safety and provide context-specific evidence for the emerging urban mobility agenda in Moldova.

Conclusion: The study reveals a significant exposure to accidents among cyclists, largely driven by falls and insufficient use of protective equipment. The findings indicate an urgent need for improved infrastructure for cyclists, targeted educational campaigns and regulatory interventions to enhance safety. Respondents demonstrated an awareness and a desire for change, supporting the call for coordinated action by authorities and civil society to promote a safer cycling culture and reduce the frequency and severity of accidents.

VIOLENCE AGAINST CHILDREN WITH AUTISM SPECTRUM DISORDERS IN THE CITY OF YEREVAN

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Background and Context: Violence against children with autism spectrum disorder (ASD) remains a largely unexplored issue in Armenia, particularly in Yerevan. Despite the global recognition of the vulnerability of children with developmental disorders, limited research has been conducted on the forms, causes, and consequences of violence they experience. This study addresses this gap by exploring the experiences of parents of children with ASD, the nature and context of violence, and its broader social and psychological implications.

Objectives and Research Questions: The research aimed to examine violence against children with ASD in Yerevan and to:

1. Identify the main causes of violence and the social factors contributing to it.
2. Reveal the consequences of such violence on the physical and mental well-being of the children.

The guiding research questions focused on how violence manifests in families, institutions, and society; how parents perceive and respond to it; and what impact it has on children and family dynamics.

Methodology: A qualitative research design was employed, as the topic is under-researched and required an in-depth understanding of participants lived experiences. The study was conducted in Yerevan using convenience sampling to select ASD support centers and snowball sampling to recruit participants. In total, 20 parents of children with ASD were interviewed. Data collection was based on in-depth, semi-structured interviews lasting 20–30 minutes each, recorded with informed consent. The data were entered and analyzed using Microsoft Excel. Ethical considerations ensured voluntary participation, anonymity, and data confidentiality.

Key Findings and Results: Parents reported early detection of ASD symptoms such as lack of response to name, poor eye contact, and speech delay. Identified contributing factors included prenatal stress, oxygen deficiency, genetic predispositions, and environmental influences. Many parents experienced severe emotional distress and initial

denial following diagnosis but gradually adapted through personal effort and family support.

Financial hardship emerged as a major barrier to accessing therapy, as services were often unaffordable and state-supported options limited. Behavioral challenges in children were diverse, including aggression, self-stimulatory behaviors, and emotional outbursts. Parental responses ranged from positive reinforcement and distraction to punishment.

While some parents firmly opposed any form of violence, others admitted resorting to psychological or physical punishment under stress or when alternative strategies failed. Reactions to punishment varied among children, from fear and withdrawal to psychosomatic responses. Violence was largely linked to parental emotional overload and lack of coping resources.

Parents also highlighted social stigma and institutional exclusion, such as rejection from kindergartens and inadequate school support. Negative societal attitudes contributed to parents' and children's psychological strain, leading to social isolation.

Discussion: The findings reveal that violence against children with ASD in Yerevan is a multifaceted issue, rooted in emotional, social, and systemic challenges. Parents often face overwhelming stress, lack of awareness, and limited access to professional guidance. The persistence of societal stigma and institutional neglect exacerbates both the vulnerability of these children and the emotional strain on families. The results suggest that violence often stems not from intent but from desperation, lack of resources, and insufficient societal support structures.

Conclusion: This study underscores the urgent need to address violence against children with ASD in Armenia through awareness-raising, parent education, and professional support services. Strengthening inclusive education systems, providing affordable therapy, and combating societal stigma are critical steps. The findings contribute to a deeper understanding of the problem and can serve as a foundation for future research and policy interventions aimed at improving the well-being and protection of children with ASD.

ANALYSIS OF DISTRACTED PEDESTRIAN BEHAVIOR: FINDINGS FROM A SURVEY CONDUCTED IN MOLDOVA

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Background and Context: Urban environments, technology use, and situational factors heavily influence pedestrian distracted behavior. Mobile phone use, hurry, and conversations are major causes of distraction, increasing accident risks, especially among young pedestrians. Previous studies highlight that inadequate infrastructure, poor visibility, and lack of proper crossings exacerbate unsafe behavior. Positive pedestrian behaviors are associated with higher education levels and structured environments.

Objectives and Research Questions: This paper aims to examine the impact and causes of distracted pedestrian behavior and to propose effective measures to reduce road accidents and injuries.

Methodology: A descriptive, cross-sectional, narrative study was conducted. Data was collected between September and December 2024 using a structured questionnaire disseminated via Google Forms using social networks. The questionnaire gathered information on age, sex, area of residence, and education level to identify behavioral trends, daily travel habits, frequency of jaywalking, mobile phone use while walking, other distractions, personal experiences with dangerous situations, perceptions of safety, and suggestions for improving pedestrian behavior.

Key Findings and Results. The study surveyed 127 participants, almost equally split by gender, with most aged 45–54 years. Over half lived in urban areas, and the majority had secondary vocational education. Public transport is used daily by 30% of respondents, while 40.94% - several times a week. Walking was a daily habit for 80% of respondents, with public transport, cars, bicycles, and scooters used less frequently. Mobile phone use while walking was widespread: about 75% used their phones at least several times per week. Digital multitasking is frequent among pedestrians, increasing the risk of accidents due to inattention. A small proportion of respondents (5.51%) completely avoid such behaviors, demonstrating a higher level of risk awareness. Listening to music is less common than using the phone for texting or calling, but it can also contribute to reduced

attention while walking. About 72.44% of respondents reported being involved in dangerous pedestrian situations, mainly near-miss accidents and unsafe crossings. Distracted behavior was most prevalent among young adults, but was also significant among other age groups (18.1%). Over 76% of participants perceive distraction as a major risk for pedestrians. Main distraction factors include mobile phone use (over 50%), hurrying (over 30%), and social conversations. Almost 77.2% observe distracted pedestrian behavior at least several times a week. Participants propose solutions such as awareness campaigns, school-based road safety education, stricter fines, improved crosswalk visibility, pedestrian overpasses, and smart technologies to reduce risks and enhance pedestrian safety.

Discussion: The study findings confirm that distracted pedestrian behavior, particularly mobile phone use while walking, is a growing safety concern in Moldova's urban areas. Strengthening awareness through education, visible enforcement, and urban design improvements could substantially reduce distraction-related accidents. Integrating smart technologies, such as visual alerts or signal-based reminders may further enhance pedestrian safety.

Conclusion: This study highlights that distracted behavior among pedestrians is a widespread and serious issue, significantly increasing the risk of accidents. Mobile phone use, hurry, and social interactions are key contributing factors to pedestrian distraction. The high percentage of individuals involved in near-miss incidents emphasizes the urgent need for preventive measures.

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2. EPIDEMIOLOGY OF COMMUNICABLE DISEASES

SURVEILLANCE AND CONTROL OF HEMATOPHAGOUS VECTORS IN THE REPUBLIC OF MOLDOVA

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Background and Context: Vector-borne diseases (VBD) pose a significant global health threat, accounting for 17% of infectious diseases and over 700,000 deaths annually, according to WHO. Climate change, globalization, and human-driven ecological shifts have expanded vector habitats, even into temperate regions like Europe. Resistance to insecticides further complicates control efforts. In Moldova, favorable climate and ecology support vector development. A national monitoring and reporting system is essential to prevent outbreaks and protect public health.

Objectives and Research Questions: Evaluate the global epidemiological situation of VBD, focusing on recent surveillance and control trends. Analyze Moldova’s epidemiological context, identifying local vectors and related diseases. Review national surveillance and control measures in line with current epidemiological realities.

Methodology: The literature review is a descriptive analysis of specialized sources. The following study methods were applied: historical, comparative, graphical, descriptive, and synthetic analysis. The methodology for selecting bibliographic sources included several databases:

- PubMed (<https://pubmed.ncbi.nlm.nih.gov/>)
- Mendeley (<https://www.mendeley.com/>)
- ScienceDirect (<https://www.sciencedirect.com/>)
- National Bibliometric Instrument (<https://ibn.idsi.md/>)
- Databases of the National Agency for Public Health (ANSP)

These sources supported a comprehensive overview of the topic and informed the thesis findings.

Key Findings and Results: In Moldova, hematophagous vectors such as *Anopheles maculipennis* s.l., *Aedes vexans*, *Culex pipiens* s.l., *Ixodes ricinus*, *Dermacentor marginatus*, *Haemaphysalis punctata*, and *Phlebotomus papatasi* have been identified through entomological sampling, laboratory, and molecular methods, including PCR and ELISA. These are used to detect pathogens like Plasmodium, West Nile Virus (WNV), *Borrelia burgdorferi*, and Tick-Borne Encephalitis Virus (TBEV). Malaria remains a risk due to imported cases. *Dirofilaria* spp. has been found in mosquitoes, with sporadic human infections. Lyme disease, transmitted primarily by *Ixodes ricinus*, is the most common VBD, with increasing incidence. Although no human TBE cases have been confirmed, the virus has been detected in ticks. No vector control measures are currently implemented.

Discussion: The growing presence of vector-borne pathogens in Moldova underscores the importance of continuous entomological surveillance. Molecular tools such as PCR and ELISA significantly enhance the detection of both vectors and pathogens. The rise in Lyme disease cases, coupled with the absence of vector control programs, signals the need for urgent public health interventions. Despite the eradication of malaria, the ongoing risk of reintroduction persists due to climate suitability and global travel. TBEV presence in ticks suggests a potential threat, emphasizing the importance of proactive strategies to prevent disease transmission.

Conclusion: Strengthening vector surveillance and control in Moldova is essential to mitigate the growing threat of vector-borne diseases. Advanced diagnostic techniques improve risk assessment and early detection, but without active vector control, public health remains vulnerable. Strategic priorities should include enhanced monitoring, legislation, public awareness campaigns, and international collaboration to ensure effective vector management and safeguard public health.

EPIDEMIOLOGICAL SITUATION AND IMMUNOPROPHYLAXIS OF PERTUSSIS IN POST-PANDEMIC PERIOD IN ARMENIA

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Background and Context: Pertussis (whooping cough) is a highly contagious respiratory disease by airborne transmission. Children under the age of 5 are mostly infected. Infants have high risk of neurological and respiratory complications, disability and death. According to WHO estimation, pertussis cases have increased worldwide after COVID-19 pandemic due to the lack of immunity, especially in European region, where 87,046 pertussis cases and 20 deaths (in infants <12 months) were registered in 2023.

Objectives and Research Questions: The objective of the research is to assess the epidemiological situation with pertussis in the post-pandemic period and the process of immunization in Armenia.

Methodology: Descriptive statistics were performed. To collect the data, we used the statistical yearbook "Health and Healthcare" of the NIH of Armenia. To study the dynamics of changes in the incidence of pertussis, we calculated the incidence rates per 100,000 population from 2010 to November 2024 in entire population (before and after pandemic) and predicted the trend for the coming months using the approximation method. To assess the immunization process to pertussis, we examined trends in the coverage of the third dose of pertussis vaccine for children under 1 year of age in Armenia from 2010 to 2023.

Key Findings and Results: In Armenia, the epidemic situation with pertussis has remained tense after COVID-19 pandemic. The incidence rate was 2/100,000 (n=50) in 2023 and 4.1/100,000 (n=119) in January-November 2024. The majority of cases were among children under the age of 5. During the pandemic, the number of cases decreased significantly, with the incidence rates ranging of 0.47-0.07 from 2020 to 2022. Considerable increase in cases was also registered in 2014: 2.8/ 100,000 (n=85) and in

2018: 5.9/100,000 (n=174). According to the polynomial interpolation diagram, the number of pertussis cases is predicted to increase in the coming months. After 2017, the coverage of children with the third dose of pertussis vaccine in Armenia began to decrease. During the pandemic, it remained low (91.7-92.9%). In 2023 it was 94% in national level, but there is insufficient coverage in subnational levels (91%).

Discussion: Epidemiological observations indicate that the dynamics of the incidence of pertussis is expressed periodically with an interval of 4-5 years, which indicates the immunity gaps of the population. A similar epidemiological situation has developed in the European region: 25,000 pertussis cases were registered in 2023; 32000 cases were in January-March 2024. The previous epidemic waves were in 2019 (n=34,468) and 2016 (n=41,026). Between 2011 and 2022, 103 fatal pertussis cases were reported, 23% of which were adults. From January 2023 to March 2024, there were 19 death cases, 42% of which among adults.

Conclusion: Pertussis has been activated in recent years. There have been changes in the age distribution of pertussis cases with an increase in morbidity and mortality among adults. It can also be asymptomatic and undetectable in adults, so there may be more real cases than reported. Adults become main source of infection for infants. To prevent pertussis, it is recommended to raise awareness about vaccination and provide sufficient coverage (>95%) both in national and subnational levels.

3. ENVIRONMENTAL AND OCCUPATIONAL HEALTH

THE EFFECTS OF AIR POLLUTION ON HUMAN HEALTH

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Background and Context: Air pollution remains a major global environmental and public health issue. As a key component of the ecosystem, human health is significantly affected by air quality. Exposure to air pollutants is associated with various adverse health outcomes, particularly impacting the cardiovascular, respiratory, and nervous systems. Vulnerable populations—including children, the elderly, and individuals with chronic diseases—are disproportionately affected. Therefore, monitoring, prevention, and mitigation of air pollution are essential components of public health strategies.

Objectives and Research Questions: This study aims to evaluate the relationship between air pollution and its effects on human organ systems, primarily the nervous, cardiovascular, and respiratory systems. By examining environmental pollutant data alongside self-reported health indicators, the study seeks to elucidate the public health implications of air quality in urban and semi-urban environments.

Methodology: The investigation focused on three cities in Armenia—Yerevan, Goris, and Ararat—selected for their varying levels of air pollution, influenced by factors like climate, vegetation, and industrial activity. Air quality data for 2023 were obtained from the “HayHydromet” SNCO, specifically analyzing the concentrations of suspended particulate matter (dust), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and ground-level ozone (O₃). While annual average concentrations remained below national thresholds, episodic exceedances of daily limits were observed, particularly in Yerevan. Residents completed a 12-item questionnaire assessing self-perceived health status, the emergence of new symptoms potentially related to air pollution, and local environmental conditions.

Key Findings and Results: Analysis revealed a higher prevalence of symptoms associated with the nervous system, such as headaches (53.3%), drowsiness (46%), cognitive difficulties (40.1%), and memory impairments (39.4%), in areas with pollutant

concentrations nearing permissible limits. Cardiovascular symptoms, including chest discomfort (27%), dyspnea (21.2%), and chest pain (19%), were also reported. Respiratory symptoms, particularly coughing and shortness of breath, affected 48.9% of respondents. Dermatological manifestations, notably hair loss (52.6%), as well as pruritus (19%) and rashes (18.2%), were also recorded, although 39.4% of participants did not report any skin-related symptoms. No statistically significant associations were found between symptom prevalence and environmental factors such as green space availability or waste management practices.

Discussion: Findings suggest a substantive association between elevated air pollutant exposure and the incidence of neurological, cardiovascular, and respiratory complaints. Pollution sources varied by region. Notably, urban centers with higher industrial and vehicular emissions, such as Yerevan and Ararat, demonstrated greater symptom burden among residents, including headaches, shortness of breath, chest pain, drowsiness, and skin irritation. These data underscore the multifaceted health risks posed by air pollution and the importance of implementing localized, evidence-based strategies to mitigate exposure.

Conclusion: Air pollution constitutes a pressing environmental determinant of health, contributing to an increased burden of disease across multiple physiological systems. The present study highlights a consistent pattern of health effects corresponding to higher ambient pollution levels, particularly in urban-industrial regions. These findings reinforce the imperative to prioritize air quality control measures within national public health frameworks, especially in communities subject to elevated environmental risk.

CHARACTERIZATION OF VIBRATION DISEASE SYMPTOMS AMONG DENTISTS

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Background and Context: Vibration is one of the most prevalent occupational features. Prolonged exposure to vibration can result in pathological changes in the peripheral nervous system and vascular structures, ultimately leading to the development of vibration-induced disease. Early manifestations include paresthesia, sensations of cold, and pain in the fingers. These symptoms are often transient during the initial stages, preceding irreversible organic changes. Dentists are particularly susceptible due to the frequent and prolonged use of high-speed turbine handpieces.

Objectives and Research Questions: This study aims to assess the prevalence of vibration disease symptoms among dentists practicing in Yerevan, investigate correlations with their professional experience years, the impact of the duration of the vibration, to identify the most commonly reported clinical manifestations, and evaluate the preventive measures implemented by dental practitioners.

Methodology: The research was conducted using structured questionnaires distributed to 100 dentists currently practicing in Yerevan. Of the participants, 63% were female and 37% male. Regarding professional experience, 58% of the participants had less than 10 years of experience, 22% had 10–20 years of experience, 18% had 20–30 years of experience, and 2% had over 30 years of experience. Weekly exposure to vibration was reported as follows: 44% up to 5 hours, 25% up to 10 hours, 14% up to 15 hours, and 17% 20 hours or more.

Results and Discussion: Our findings indicate a notable prevalence of early-stage vibration disease symptoms among the surveyed dentists of Yerevan. Symptoms included tingling in 25% of participants, pain in 32%, and pallor of fingers in 5%. Only 38% reported being asymptomatic. In 33% of cases, symptoms were limited with the hand, while in 29%, they extended proximally. Onset of symptoms occurred within one year of beginning professional activity in 27% of participants and after five years in 30%. Symptom duration was less than one hour in 35% of cases and exceeded one hour in 24%. Fortunately, episodes consistent with Raynaud's phenomenon were reported by only two

individuals. As preventive strategies, 38% of respondents reported taking periodic breaks, and 16% reported the use of alternative instruments.

Conclusion: Noting the high prevalence of vibration-induced symptoms among dentists, implementation of targeted preventive strategies is imperative. Enhancing awareness regarding vibration-related occupational risks is essential. Modern dental equipment minimizes vibration exposure. The literate organized working and resting schedules are also important. As the majority of reported symptoms correspond with the early stages of the disease (they are functional changes), early intervention and preventive measures are likely to yield favorable outcomes.

ENVIRONMENTAL BURDEN IN THE EDUCATIONAL SECTOR: A HYGIENIC AND PREVENTIVE APPROACH TO TEACHERS' HEALTH

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Background and Context: The quality of the living environment is a key determinant of both physical and mental health, shaped by factors such as living conditions, access to utilities, environmental risk factors, and opportunities for rest and recovery. In the context of rapid urbanization and growing exposure to environmental stressors, this study explores how residential and environmental characteristics influence health perceptions, based on data from a representative sample of teachers.

Objectives and Research Questions: This study aimed to identify the main environmental risk factors and health outcomes among teachers in pre-university institutions. The research question was: To what extent do air quality, noise exposure, housing conditions, and access to utilities influence teachers' physical and mental health indicators?

Methodology: To achieve the research goal, a descriptive longitudinal study was conducted in general education institutions in the Republic of Moldova. Data were collected via questionnaires and interviews, assessing environmental risk factors, living and working conditions, and health status. The main tool included 159 questions across 11 chapters, covering demographics, clinical status, nutrition, and psychological aspects. Closed and multiple-choice items were used.

Key Findings and Results: This study evaluated the health status and environmental living conditions of 563 Moldovan teachers, predominantly female (91.1%), with a mean age of 44.2 years and 20.8 years of experience. Most lived in individual houses (59.1%). Subjectively, 63.4% reported satisfactory health, 27.0% felt medically well, and 7.1% had serious conditions. Common illnesses included hypertension (8.9%), chronic pyelonephritis (4.1%), bronchitis, and gastritis. Foul odors were occasionally perceived by 36.1% and permanently by 14.2%; 67% associated polluted air with symptoms like headaches (29.3%) and fatigue (14.2%). Traffic noise was reported by 81%, with 33.7% experiencing night-time sleep disruption and 8% reporting permanent disturbances. These

findings underscore the impact of environmental factors on teachers' health, requiring targeted preventive and public health measures.

Discussion: These findings are consistent with existing literature highlighting the adverse effects of environmental stressors on occupational health. Similar to our study, research conducted in the United States emphasizes that chronic exposure to noise and poor air quality contributes to increased cardiovascular risk and psychological distress. Additionally, studies from the United Kingdom confirm that noise pollution, particularly during nighttime, impairs sleep and cognitive functioning. The observed prevalence of hypertension and fatigue among teachers parallels results from occupational health studies in educational settings in Thailand, which associate environmental discomfort and overcrowding with higher morbidity and burnout risk.

Conclusion: The study highlights the significant influence of environmental and living conditions on the health and well-being of teachers. While subjective health status is generally satisfactory, the presence of chronic diseases and symptoms linked to air and noise pollution suggests underlying risks. These findings underscore the need for integrated public health interventions focused on improving residential environments and mitigating occupational stressors in the educational sector.

THE IMPACT AND IMPORTANCE OF DAYLIGHT IN THE LIVES OF ADOLESCENTS AND STUDENTS

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Background and Context: Daylight has influenced human health and behavior since ancient times, playing a vital role in regulating sleep, mood, and productivity. With modern lifestyles increasingly spent indoors, access to natural light has become limited, raising concerns about its impact on adolescents' physical and mental well-being, academic success, and emotional balance.

Objectives and Research Questions: This study aims to explore how daylight affects students' health, learning, and emotional state. Key questions include: How does light deficiency impact mood and academic performance? What role does daylight play in sleep patterns, energy levels, and vitamin D synthesis?

Methodology: A structured online survey was distributed via Google Forms to 152 students aged 15–24. The questionnaire assessed their exposure to daylight, mood, sleep quality, study habits, and understanding of vitamin D's role. Data were analyzed using Google Sheets for statistical summaries and visualizations. Questions covered preferences for daylight versus artificial light, seasonal changes in energy levels, and symptoms potentially related to low light exposure. Participants' perceptions of daylight's effects on concentration, health, and well-being were collected to draw correlations between natural light availability and performance. Responses were processed quantitatively to identify trends and highlight key areas for intervention.

Key Findings and Results: 58.6% reported improved mood with daylight exposure, and 42.8% said it increased their energy. Most were more active during daylight hours. 44.1% used sunlight to wake up, and 83.6% preferred natural over artificial light. Daylight positively affected productivity (30.3%), while winter months saw a 44.7% drop in activity levels. Only 21.7% reported health issues from lack of light, primarily related to the nervous system. Students also linked vitamin D with better skin (57.9%) and bone strength (55.3%). Overall, natural light was associated with better mood, focus, and physical health.

Discussion: These findings support existing literature on the benefits of daylight for cognitive performance and emotional stability. The positive perception of natural light

suggests it is essential for mental and physical well-being. Seasonal decreases in daylight, especially in winter, contribute to reduced activity and may trigger symptoms of seasonal affective disorder. Classroom and workspace design, as well as educational awareness around light exposure and vitamin D, could improve student outcomes and prevent light-related health issues. There is also a growing need to integrate more outdoor activities into school routines.

Conclusion: Daylight plays a significant role in adolescent health and learning. Improved exposure enhances mood, energy, and focus, while deficiency may contribute to seasonal fatigue and emotional stress. Promoting awareness, increasing daylight access, and adapting learning environments can significantly improve student well-being and academic performance.

AIR POLLUTION AND HEALTH: A COMPARATIVE STUDY OF ARMENIA AND SWEDEN

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Background and context: Air pollution and climate change were identified by the World Health Organization (WHO) in 2019 as the leading environmental threats to global human health. According to WHO data, 99% of the world's population breathes air that exceeds the organization's recommended pollution limits. In this study, we conducted a comparative survey in Armenia and Sweden, as air pollution levels in Armenia are significantly higher than those in Sweden.

Objectives and Research Questions: To compare the health impacts of air pollution in Armenia, a high-pollution country, and Sweden, known for clean air.

Objectives and Research Questions: Questions focused on age, gender, outdoor time, allergies, transportation habits, awareness of air pollution, actions to reduce it (e.g., saving electricity, using public transport), symptoms, infections, mood changes, fatigue, and diseases.

Methodology: A comparative cross-sectional study was conducted in Armenia and Sweden. Data were collected through a structured survey administered to 100 university students in each country. The survey focused on demographics, awareness of air pollution, daily habits (e.g., transportation choices, energy consumption), and health symptoms (such as respiratory issues, fatigue, and mood changes). Statistical analysis was applied to examine correlations between air pollution exposure and reported health outcomes. The study aimed to identify the impact of air pollution on health in two contrasting environments.

Key Findings and Results: The study surveyed 206 students (30% male, 70% female) from Armenia and Sweden. In Armenia, 58.8% were aged 21-25, and 41.7% lived in large cities. In Sweden, 52% were aged 21-25, and 47.5% lived in large cities. Armenian students spent more time outdoors, with 45.6% spending over 4 hours daily, compared to 20% in Sweden. Allergies were more common in Armenia, with 34.3% reporting a dust allergy compared to 18% in Sweden. Armenian students primarily use buses (59.2%) and

cars (54.4%), while Swedes prefer walking (54%). Health complaints were more frequent in Armenia, including cough, eye irritation, headaches, and respiratory infections, reflecting higher exposure to air pollution.

Discussion: The results indicate that Armenian students are less informed about air pollution and its health impacts compared to their Swedish counterparts. This lack of awareness may contribute to the lower level of participation in activities aimed at reducing pollution, such as saving electricity and using public transport. Additionally, the higher incidence of health problems among Armenian students—such as respiratory issues, fatigue, and eye irritation—suggests a possible link between air pollution exposure and adverse health outcomes.

In contrast, Swedish students, who are more informed and engaged in sustainable practices, report fewer health complaints, highlighting the importance of education and proactive measures in mitigating the effects of pollution.

Conclusion: This study highlights the significant differences in air pollution awareness, actions, and health outcomes between Armenian and Swedish students. The findings emphasize the need for increased education and proactive measures in Armenia to reduce air pollution and its associated health impacts, promoting healthier environments and better public health.

NEUROLOGICAL CONDITIONS UNDER THE INFLUENCE OF CLIMATE CHANGE: NEW RESEARCH DIRECTIONS

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Background and Context: Climate change has become an emerging factor in global public health, influencing not only infectious or respiratory diseases but also neurological health. Extreme temperatures, pollution, and climate variability affect both the central and peripheral nervous systems. In this context, understanding how the environment influences the onset and progression of neurological diseases becomes essential for both research and clinical practice.

Objectives and Research Questions: This study aims to identify the mechanisms by which climate change contributes to the onset or worsening of neurological conditions and to explore new directions for research in this field. The research targets questions related to climate-neurology correlations and possible interdisciplinary interventions.

Methodology: We conducted a narrative review of scientific literature published between 2013 and 2024, using databases such as PubMed, Scopus, and Web of Science. Inclusion criteria comprised studies analyzing the link between climate factors (e.g., extreme temperatures, pollution, climate change) and neurological conditions such as stroke, Alzheimer's disease, multiple sclerosis, and migraines. A total of 65 scientific articles were analyzed, of which 42 met the criteria for relevance and quality.

Key Findings and Results: The results indicate a consistent association between air pollution and an increased risk of neurodegenerative disorders, especially Alzheimer's and Parkinson's disease. Extreme temperatures are linked to higher incidence of strokes, particularly among the elderly. Climate change also appears to influence autoimmune inflammatory conditions such as multiple sclerosis. Migraines are frequently correlated with sudden changes in atmospheric pressure. Additionally, the data suggest that vulnerable populations – children, the elderly, and people living in areas with poor infrastructure – are the most exposed to these risks. Although causal relationships remain partially understood, there is a clear need for transdisciplinary research.

Discussion: Climate change impacts neurological health through both direct and indirect mechanisms, often mediated by socio-economic and environmental factors. The findings highlight the necessity of including climate data in models predicting neurological risk and developing tailored interventions. Future research directions should involve collaborations between climatologists, neurologists, and epidemiologists, utilizing modern monitoring and analytical technologies. This approach could lead to more effective and proactive public health policies.

Conclusion: The impact of climate change on neurological diseases is a rapidly evolving field. Understanding these connections is essential for prevention, early diagnosis, and adapting healthcare systems. A paradigm shift is needed in both research and practice to anticipate and manage the neurological effects of the climate crisis.

EVALUATING MEDICAL AWARENESS OF DIAMINE OXIDASE (DAO) DEFICIENCY AMONG PHYSICIANS IN ARMENIA

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Background and Context: Diamine oxidase (DAO) is an enzyme responsible for histamine metabolism, preventing its excessive accumulation in the bloodstream. DAO deficiency can cause histamine intolerance, leading to skin reactions, migraines, digestive disorders, and cardiovascular symptoms. Despite its clinical importance, DAO deficiency is often underdiagnosed due to non-specific symptoms and limited physician awareness. Addressing this gap is crucial for improving diagnosis, patient care, and treatment strategies.

Objectives and Research Questions: This study evaluates Armenian physicians' awareness of diamine oxidase (DAO) deficiency, focusing on their knowledge of symptoms, diagnostics, and treatment. It also reviews current diagnostic practices and suggests strategies to improve recognition and management. The goal of this study is to identify knowledge gaps and enhance clinical outcomes.

Methodology: A cross-sectional survey was conducted among physicians using a semi-structured questionnaire. The sample size was determined using Cochran's formula, based on the total number of registered physicians in Armenia. The questionnaire covered demographic data, awareness levels, diagnostic approaches, and treatment strategies. Participants were selected through random sampling to ensure a representative dataset. Ethical approval was obtained from the relevant committee, and all participants provided informed consent. Data confidentiality was strictly maintained. Statistical analysis was performed using SPSS (version 23.0), with significance set at $P < 0.05$.

Key Findings and Results: A total of 130 randomly selected physicians participated in the study, $p < 0.05$. Most were gastroenterologists (21%), rheumatologists (18%), urologists (16%), and general practitioners (16%). Among gastroenterologists, 78% had encountered suspected DAO deficiency, while 52% of rheumatologists, all urologists, and

general practitioners had not. Awareness of DAO increased with experience: 95% of those with 7–9 years were unaware, 52% of those with 4–6 years were familiar, and 88% of those with 10–12 years were aware. Awareness of DAO and its diagnostic methods varied. In total, 32% were familiar with DAO but not the diagnostics, 45% were unaware of both, and only 23% had full awareness. These findings highlight knowledge gaps and the need for physician education regarding DAO and its diagnosis.

Discussion: The study results show that overall awareness of DAO deficiency among Armenian doctors is relatively low. Of the 130 surveyed, many lacked knowledges about both the condition and its diagnostic methods. Awareness was higher among doctors with 10–12 years of experience, emphasizing the role of clinical exposure. Gastroenterologists reported the highest number of suspected cases (21), reflecting DAO's link to gastrointestinal function. Other specialists reported few or no cases, likely due to limited familiarity. Notably, 44.62% of doctors were completely unaware of DAO, and 32.3% were only partially informed, raising concerns about delayed diagnosis and management.

Conclusion: In conclusion, the study showed low awareness of diamine oxidase (DAO) deficiency among physicians in Armenia and the need for educational initiatives. Many physicians are unaware of the diagnosis and symptoms of DAO deficiency, which may lead to misdiagnosis. There is a need to improve information on diagnostic methods and conduct educational programs. Implementation of diagnostic and treatment standards may improve outcomes. Further research is needed to evaluate educational interventions.

PERSONAL HYGIENE IN ARMENIA AND DIFFERENT CULTURES

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Background and Context: Traveling to different countries introduces us to various cultural norms, including personal hygiene traditions. While tourists often focus on food, language, and architecture, hygiene practices offer equally important cultural insights. From eating with hands or chopsticks to toilet habits, personal hygiene reflects a society's values and history. Understanding these differences helps avoid misunderstandings and fosters respect for global communities.

Objectives and Research Questions: This study aims to assess awareness and attitudes toward personal hygiene among Armenians, identify common habits and influencing factors, evaluate access to hygiene-related education in schools and workplaces, and compare hygiene practices in Armenia with those in other countries to reveal existing challenges and suggest improvements.

Methodology: A survey was conducted using Google Forms, with 115 Armenian participants from different age groups taking part. Both closed and open-ended questions were used to examine hygiene awareness, habits, and influences. Participants were asked to reflect on cultural hygiene practices and international experiences. The survey provided valuable insights into hygiene-related behavior, knowledge accessibility, and educational exposure. This approach allowed the study to capture both measurable data and nuanced cultural observations, offering a comprehensive understanding of hygiene perspectives among Armenians.

Key Findings and Results: Most participants demonstrated high awareness of personal hygiene and actively practiced it through handwashing and oral care. Responses highlighted the role of upbringing and family in shaping hygiene behavior. However, many pointed out the limited hygiene education in schools and workplaces, identifying it as a barrier. Cultural comparisons revealed practices such as eating with hands, using natural oral products, and using bidet showers instead of toilet paper. Female respondents outnumbered males, reflecting a potential gender gap in hygiene awareness or engagement.

Despite the differences, hygiene was seen as an essential part of daily life and personal responsibility. Access to information emerged as a key improvement area.

Discussion: The findings indicate that Armenians value personal hygiene and recognize its importance for individual and public health. However, a lack of formal hygiene education remains a notable gap. Cultural exposure abroad highlights contrasting practices—both technological and traditional—which influence local perspectives. Addressing the information gap through educational programs and public campaigns could enhance awareness and practices. Emphasizing hygiene in early education, family settings, and the workplace is essential. These efforts would help institutionalize hygiene as a norm and ensure healthier lifestyles aligned with both global standards and local values.

Conclusion: Hygiene practices vary greatly across cultures due to climate, traditions, and resources. Despite these differences, cleanliness is a shared human value. Armenians largely understand its importance, but structured education and wider public awareness are needed. Promoting personal hygiene in schools, workplaces, and families can improve health outcomes. Ultimately, hygiene serves as a universal principle fostering well-being, dignity, and mutual respect.

THE IMPACT OF MINING ACTIVITIES ON THE PREVALENCE OF ONCOLOGICAL DISEASES IN MEGHRI COMMUNITY, ARMENIA

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Background and Context: Mining plays a vital role in the economy of the Republic of Armenia but raises significant environmental and public health concerns. Meghri community, located adjacent to the Agarak Copper-Molybdenum Plant, is exposed to mining-related pollutants. While Agarak city and Karchevan village are in close proximity to the mining operations, Meghri town and nearby villages are relatively farther away (12 km), suggesting potential spatial differences in health risks.

Objective and Research Questions: This study aims to examine the relationship between the spatial proximity of residential areas to the Agarak mining complex and the prevalence of oncological diseases in the Meghri community. The primary research question is whether closer proximity to mining activities correlates with higher rates of cancer incidence among the local population.

Methodology: The study utilized data from the "Meghri MC" CJSC and the National Institute of Health registries for the year 2022. Statistical analysis was performed to assess the distribution of malignant neoplasms across Meghri community settlements. Agarak and Karchevan, located within 20 meters of mining waste facilities, were analyzed as high-exposure zones, whereas Meghri town and the villages of Alvank, Shvanidzor, Nrnadzor, Lehvaz, Lichk, and Tashtun, situated 10–15 kilometers away, were considered low-exposure zones. Comparative prevalence rates were calculated to identify statistically significant differences between groups.

Key Findings and Results: The overall prevalence of oncological diseases in the Meghri community was recorded at 1.81% in 2022. Agarak and Karchevan accounted for approximately 51% of all registered cancer cases, significantly higher than the expected 42%. Elevated rates of urinary system cancers, particularly kidney cancer, were observed. No significant differences in cancer prevalence were noted between sexes, suggesting widespread environmental exposure independent of gender or occupation. In contrast, Meghri town and the remote villages exhibited noticeably lower cancer prevalence rates.

The spatial correlation between proximity to the mining site and cancer occurrence was evident, underscoring localized health risks within the high-exposure settlements.

Discussion: The findings suggest a strong association between close residential proximity to mining operations and increased oncological disease prevalence. Environmental contamination from the Agarak Copper-Molybdenum Plant and its open tailing facility appears to significantly impact public health in nearby communities. The observed pattern aligns with international studies indicating higher cancer rates near industrial mining zones. These results highlight the urgent need for enhanced local environmental monitoring and public health interventions. Further research should explore the specific toxic agents involved and evaluate potential mitigation strategies to reduce health risks for populations residing near mining activities.

Conclusion: This study identifies a clear spatial gradient in cancer prevalence linked to proximity to mining operations in the Meghri community. Residents of Agarak and Karchevan, located closest to the mining site, face significantly higher health risks. Comprehensive and continuous public health surveillance, environmental risk assessments, and policy interventions are urgently required to address the adverse health effects of mining in affected Armenian communities and to protect vulnerable populations.

4. NUTRITION, DIABETES

CHILDHOOD OBESITY IN THE REPUBLIC OF ARMENIA AND ITS RISKS FACTORS

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Background and Context: Obesity, due to its epidemic rise, is considered a chronic inflammatory disease with a multifactorial etiology. It leads to disruptions in several physiological processes in the body, affecting cardiovascular, respiratory, endocrine, immune, and other systems. Genetics, eating behavior, physical activity, sleep, and social environmental factors play a significant role in the development of obesity. Understanding these factors allows the development of effective prevention and treatment strategies.

Objectives and Research Questions: To determine the prevalence of childhood obesity in Armenia and analyze the role of key risk factors.

Methodology: The study is based on an analysis of the results from the Health Behaviour in School-aged Children National Survey in Armenia, conducted in 2013-2014 and 2017-2018 (with approximately 6,000 respondents in each survey). The methodology includes the use of a standardized anonymous questionnaire.

Key Findings and Results: According to the results of the 2013-2014 survey, 20% of 11-year-old boys and 16% of girls reported excess weight. At age 13, 20% of boys and 10% of girls had excess weight. In the 17-year-old group, the proportion of excess weight was 9%. The findings from the 2017-2018 survey indicated that 13% of children aged 11-15, and about 12% of 17-year-olds had excess weight. The prevalence of obesity decreased among children aged 11-15, while it increased among 17-year-olds. This difference may be attributed to the decrease in physical activity with age, and the rise in the consumption of sweets and sugary carbonated beverages.

Discussion: The prevalence of childhood obesity, despite a decreasing trend in certain age groups, remains concerning, as it is directly associated with a decline in work productivity, obesity in adulthood, a range of psychological issues, and a high risk of developing numerous somatic diseases, particularly cardiovascular and respiratory diseases, metabolic syndrome, and type 2 diabetes.

Awareness of obesity risk factors, higher educational levels of parents, and adherence to proper behavioral norms in the family can help prevent the further spread of childhood obesity.

Conclusion: The analysis of the study proves that childhood obesity is a serious public health issue, primarily caused by unhealthy lifestyles, including the excessive consumption of foods rich in simple carbohydrates and fats, the abuse of sugary carbonated beverages, and physical inactivity due to technological advancements. Unfortunately, individuals often only pay attention to the issue once its consequences become evident, while early intervention in managing risk factors can significantly reduce the likelihood of obesity.

EVALUATION OF OXIDATIVE STRESS AND ANTIOXIDANT STATUS IN CHILDREN WITH TYPE 1 DIABETES MELLITUS

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Background and Context: In pediatric patients with type 1 diabetes (T1DM), oxidative stress is triggered by the overproduction of reactive oxygen species, accompanied by a simultaneous weakening of the body's antioxidant defenses. This imbalance, driven by chronic hyperglycemia and inflammation, results in damage to essential biomolecules – lipids, proteins, carbohydrates, and nucleic acids – contributing to the progression of diabetes-related complications.

Objectives and Research Questions: Evaluation of oxidative stress versus antioxidant capacity and their impact on essential biomolecules in children with type 1 diabetes.

Methodology: To quantify the prooxidant status, the levels of carbohydrate peroxidation markers (advanced glycation end products such as pentosidine-like and vespertine-like compounds), protein peroxidation markers (advanced oxidation protein products), and lipid peroxidation markers (malondialdehyde, ischemia-modified albumin) were determined. The antioxidant status was assessed by measuring the levels of superoxide dismutase, catalase, total antioxidant capacity across different methods, ceruloplasmin, and thiol-disulfide homeostasis indicators. Blood samples were collected from children diagnosed with type 1 diabetes mellitus, and the results were compared with those from a control group of healthy children. The biomarkers of interest were analyzed in the biochemistry laboratory of the, “Nicolae Testemitanu State University of Medicine and Pharmacy” under controlled conditions to minimize data variability. The study received ethical approval from the Research Ethics Committee of the same university.

Key Findings and Results: Children with T1DM exhibited significantly elevated levels of AGEs – pentosidine-like (533.5 ± 77.5 vs 315.2 ± 56.2 $\mu\text{g/L}$) and vespertine-like (741.9 ± 165.9 vs 340.1 ± 48.4 $\mu\text{g/L}$), as well as malondialdehyde (17.5 ± 1.8 vs 13.0 ± 1.2 $\mu\text{M/L}$).

Levels of advanced oxidation protein products (6.0 ± 1.8 vs 9.4 ± 4.0 $\mu\text{mol/L}$) and ischemia-modified albumin (229.4 ± 50.0 vs 469.8 ± 53.6 $\mu\text{M/L}$) were significantly lower. Antioxidant enzyme activities were markedly reduced [superoxide dismutase (46.6 ± 5.9 vs 80.4 ± 10.6 U/C), catalase (19.4 ± 5.1 vs 34.5 ± 6.7 $\mu\text{M/L}$), total antioxidant capacity, measured by ABTS (93.7 ± 20.6 vs 177.3 ± 29.0 mmol/L) and CUPRAC (2.1 ± 0.7 vs 6.6 ± 3.2 mmol/L) methods]. Thiol-disulfide homeostasis was disrupted, with significantly higher levels of free (97.8 ± 21.5 vs 81.3 ± 13.7 $\mu\text{M/L}$) and total thiols (104.6 ± 20.3 vs 89.8 ± 12.9 $\mu\text{M/L}$), ceruplasmin as well (379.6 ± 52.7 vs 266.0 ± 44.2 $\mu\text{g/L}$). All differences were statistically significant ($p < 0.001$).

Discussion: The results confirm a clear oxidative imbalance, marked by elevated pro-oxidant markers and reduced antioxidant defenses. Increased levels of advanced glycation end products suggest that chronic hyperglycemia promotes non-enzymatic glycation, contributing to complications.

Higher malondialdehyde levels indicate enhanced lipid peroxidation and membrane damage. In contrast, lower levels of advanced oxidation protein products and ischemia-modified albumin may reflect an early adaptive response in children, though this requires further study.

The significant reduction in antioxidant enzymes highlights a compromised defense against reactive oxygen species, increasing vulnerability to oxidative injury.

Conclusion: Children with T1DM exhibit a significant oxidative imbalance, characterized by elevated levels of pro-oxidant markers and a notable reduction in antioxidant defenses. These alterations may play a key role in the early development of diabetes-related complications. Monitoring of these parameters could serve as a valuable approach for early risk stratification and may inform personalized therapeutic strategies aimed at limiting oxidative damage and improving long-term outcomes in this vulnerable population.

PREVALENCE AND ASSOCIATED FACTORS OF BREAD AND BAKERY PRODUCT CONSUMPTION

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Background and Context: Bread and bakery products are a fundamental component of the daily diet in many countries, particularly those with low and middle incomes. Their consumption is influenced by economic, social, and cultural factors. Although they are an important source of energy, the type of bread consumed can significantly impact public health, either promoting or preventing the development of chronic diseases.

Objectives and Research Questions: The main objective of the study was to assess the prevalence of bread and bakery product consumption and to identify the main factors associated with this consumption.

Methodology: A descriptive narrative review was conducted to evaluate bread and bakery product consumption patterns, with a specific focus on low- and middle-income countries. Data sources included the Google search engine and academic databases such as PubMed, Cambridge University Press, Hinari, and Google Scholar. Keywords used in the search strategy were “bread consumption,” “bakery products,” “prevalence,” and “associated factors.” Selection filters were applied based on document type, publication period (past ten years), geographical region, and language. The collected data were synthesized to identify major trends and underlying socio-economic and cultural factors influencing bread and bakery product consumption.

Key Findings and Results: The consumption of bread and bakery products remains consistently high worldwide, particularly across low- and middle-income countries. Eastern European nations such as Romania, the Republic of Moldova, and Ukraine report notable consumption rates. In North Africa and Latin America, bread serves as a dietary staple for large segments of the population. Annual per capita consumption is approximately 96 kg in Romania, 107 kg in Moldova, and between 88 and 92.7 kg in Ukraine. In Egypt and Morocco, consumption reaches approximately 150 kg and 120 kg, respectively. Key factors associated with elevated bread consumption include income level, education, place of residence, lifestyle, food preferences, accessibility, cultural

traditions, and convenience. High intake of refined bread correlates with increased risks of obesity, insulin resistance, type 2 diabetes, and cardiovascular diseases, while whole-grain bread consumption is associated with significant protective health effects.

Discussion: The increased consumption of bread, particularly refined bread, highlights a gap between accessibility and nutritional quality. In many low- and middle-income countries, the lack of nutritional education and cultural preferences contribute to unhealthy dietary choices. Diversifying consumption through the introduction of whole-grain products and implementing public health policies aimed at reformulating bakery products are necessary to reduce the risk of diet-related chronic diseases. Interventions must be tailored to local and socio-economic contexts to achieve a meaningful impact on population health.

Conclusion: Bread and bakery products are widely consumed due to their low price, availability, and traditional role in the diet. Nutrition education, increased access to whole-grain products, and reformulation of recipes to reduce salt content are important public health measures. Promoting rational consumption and healthy choices should be a priority in public health policies, especially in low- and middle-income countries.

ASSESSMENT OF FOOD INTOLERANCES AMONG UNIVERSITY STUDENTS' POPULATION.

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Background and Context: Food intolerances are a growing public health concern, significantly impacting quality of life. Despite their increasing prevalence, awareness and diagnosis rates remain low. In this context, students constitute a vulnerable group due to academic stress, limited time for self-care, and unbalanced diets, all of which may exacerbate the clinical manifestations of food intolerances.

Objectives and Research Questions: The aim of this study was to determine the prevalence of food intolerances among students at Nicolae Testemitanu State University of Medicine and Pharmacy. Additionally, it sought to identify common intolerances, evaluate dietary habits, and examine the effects of these intolerances on students' academic performance and overall well-being.

Methodology: The research was conducted using an online survey distributed to students. Quantitative data were collected over a three-month period (January–March 2025) and are still ongoing. A total of 469 respondents had completed the structured online questionnaire to date. The questionnaire was organized into five sections, gathering detailed information regarding medical and dietary history, eating habits, the perceived impact of food intolerances, and students' attitudes and knowledge about the subject. Data were analyzed using SPSS and Excel.

Key Findings and Results: The study included 469 students, of whom 80.4% were female and 19.6% male. Most respondents (43.5%) were aged between 20 and 22 years. Among the participants, 10.9% reported experiencing food intolerances, primarily to lactose (10%) and gluten (2.6%), with onset most commonly between the ages of 16 and 20. The confirmation of intolerance was based on self-observation (8.3%), medical testing (4.3%), or consultation with a specialist (2.6%). A perceived impact on academic performance was reported by 10.4% of students, while 19.2% indicated an emotional impact. To prevent symptoms, most respondents (47.1%) reported avoiding trigger foods. Regarding their level of information, 58.4% of participants considered themselves only partially informed.

Discussion: The prevalence of food intolerances among students was 10.9%, with lactose intolerance being the most common. The primary symptoms reported were abdominal cramps and diarrhea, which impacted both emotional well-being and academic performance. Although most students reported avoiding trigger foods, challenges such as high costs and limited access to appropriate products persist. The limited level of awareness highlights the need for targeted educational interventions. These findings are consistent with those of Acker (Boston, 2017), who reported a higher prevalence of food intolerances among women and identified lactose as the most common intolerance.

Conclusion: This study reveals that food intolerances are relatively common among medical students, exerting a substantial impact on both emotional well-being and academic performance. Despite the adoption of preventive measures by most affected individuals, persistent misinformation and social barriers continue to impede effective management. These findings emphasize the urgent need for targeted, evidence-based educational interventions to enhance students' knowledge, foster adaptive coping strategies, and ultimately improve their academic success and overall quality of life.

PREVALENCE OF BODY MASS DEVIATIONS AMONG STUDENTS AGED 19–25

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Background and Context: The Body Mass Index (BMI) is an important indicator not only for assessing nutritional status, but also for evaluating health status and various biological processes in the organism. Deviations in BMI can indicate both visible and hidden health concerns, such as endocrine disorders, cardiovascular diseases, digestive system issues, mental health conditions, etc.

Objectives and Research Questions: The aim of the following study is to investigate the prevalence of body mass deviations among students aged 19 to 25.

Methodology: The research was conducted among students aged 19–25 of Yerevan State Medical University after Mkhitar Heratsi. Totally 236 students participated in the study, including 170 females and 66 males. Height and weight were measured using standard procedures: weight was recorded with an electronic scale and height with a stadiometer. BMI was calculated to assess body mass deviations.

$$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (m}^2\text{)}}$$

Participants were categorized into four groups, based on BMI values: underweight (BMI is below 18.5), normal weight (BMI is 18.5 to 24.9), overweight (BMI is 25 to 29.9), and obesity (BMI is above 30). Results were analyzed separately for male and female students.

Key Findings and Results: The research findings showed that normal body mass index values were recorded in 54.5% of male students, while among the remaining students' deviations in the body mass index have been revealed. A body mass deficiency was found in 4.5% of the male students, while overweight and obesity were observed in 36.36% and 4.5% of male students, respectively. The distribution of normal and deviated body mass values among female students revealed that 72.3% of girls had a normal value of BMI, while 15.3% of them had a body mass deficiency, 12.4% were overweight, and no cases of obesity were recorded.

Discussion: The data indicate BMI deviations in both male and female groups. Overweight and obesity were more common among males, while underweight was more prevalent among females. It's well-established that excess body weight and obesity are major risk factors for cardiovascular diseases, diabetes, osteochondrosis, and other conditions. At the same time, being underweight also poses serious health risks.

Conclusion: Although the majority of students had a normal value of BMI, nevertheless among 1/3 of them have revealed deviations of normal values of BMI: both underweight or overweight and obesity. Considering the high prevalence of BMI deviations in this age group, it is essential to implement preventive measures. These may include: a) organization of the periodic medical check-ups for the purpose of early identification of "risk groups" and timely implementation of corrective measures, b) conduction of the educational lectures or elective courses on healthy lifestyles, promoting healthy diet, physical activity, healthy sleep, etc.

DIETARY HABITS OF CHILDREN IN PRIMARY EDUCATION

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Background and Context: Diets around the world are being shaped by urbanization and globalization, with implications for food systems and child nutrition. Limited data on children's diets hinders effective policy, while inadequate nutrition knowledge leads to poor food choices and increased risk of conditions such as obesity and malnutrition. Childhood is a critical period for establishing lifelong healthy habits, and schools play a key role in promoting healthy eating.

Objectives and Research Questions: Primary school-aged children's eating patterns are examined in this study, along with the variables affecting their nutritional intake, diet quality, and the occurrence of issues like obesity. It seeks to offer guidance on how to encourage this susceptible group to adopt healthier eating practices.

Methodology: The study reviews the literature on the growth, development, and nutrition of children. It looks at how middle childhood nutrition affects a child's physical, social, emotional, and cognitive development. Analysis is done on the factors that affect children's food choices, such as the media, society, and family. The study also looks at Moldova's food systems, eating patterns (such as skipping breakfast and snacking), food quality, and the rise in childhood obesity. WHO, UNICEF, international studies and the national statistical agency's reports are the sources of the data?

Key Findings and Results: The review highlights how stunted development, obesity, and malnutrition are caused by inadequate nutrition during childhood. Poor dietary quality is caused in part by processed food consumption, unhealthy food environments, and restricted access to nutrient-dense foods. Childhood obesity is on the rise in Moldova, where diet plays a significant role in determining children's health. Children's diets are significantly impacted by economic and food insecurity factors. Children's eating habits are also clearly influenced by their families, friends, and the media; common unhealthy behaviors include skipping breakfast and snacking.

Discussion: The findings highlight the complex factors affecting children's diets, necessitating multi-faceted interventions. Promoting healthy eating habits early in life is crucial for long-term well-being. In Moldova, addressing food insecurity and promoting sustainable food systems are vital for ensuring children's nutritional well-being. Effective strategies include nutrition education, policy changes, and regulating the marketing of unhealthy foods to children.

Conclusion: Improving the diets of primary school children is essential for their health and development. This requires addressing factors such as food quality, access and education. Tackling food insecurity and promoting sustainable food systems, particularly in Moldova, is critical. Recommendations include parental education, nutritional interventions and lifestyle changes to address issues such as obesity and promote healthier diets.

PECULIARITIES OF BREAD CONSUMPTION AMONG THE ADULT POPULATION IN THE REPUBLIC OF MOLDOVA

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Background and Context: Bread and bakery products are considered staple foods in most countries of the world. However, in recent years there has been a significant decrease in the average consumption of bread, reaching 70 kg per capita globally. In the Republic of Moldova, the consumption of bread and bakery products (recalculated in flour equivalent) in 1990 was 171.0 kg, and in 2023 it reached 107.3 kg.

Objectives and Research Questions: The purpose of the research was to characterize the nutritional value of bread, to evaluate the knowledge and practices of the adult population regarding bread consumption. Research objectives: 1) studying the composition and nutritional value of some bread varieties; 2) assessment of the consumption habits of various bread varieties by the population; 3) assessment of the level of knowledge of the adult population regarding the composition and nutritional value of bread;

Methodology: Bibliographic sources were selected in the databases: PubMed, Google Scholar, Hinari, Nature. The chemical composition was studied according to the nutritional declarations on the packages of 54 varieties, manufactured by 5 local producers, including a state enterprise. To assess the knowledge and practices regarding bread consumption, a questionnaire with 41 questions was developed, included in 4 compartments and distributed both online and on paper. The following methods were used in the work: descriptive, mathematical-statistical, sociological and hygienic.

Results and discussions. The bread assortment with the highest energy value is “Porumbița” bread (356 kcal/100g), and the lowest - “Pâinea Fermierului” (219.7 kcal/100g). The lowest carbohydrate content is “Fitness” bread (37g/100g), and the highest dietary fiber content is found in “Borodinskii original” bread (7.2 g/100g). 14.8% of the

studied assortments exceeded the norms regarding the maximum allowed amount of table salt.

The study on the attitude and knowledge about bread was attended by 124 respondents aged 18 – 73 years (78% women and 22% - men), of which 58% were from the municipality. Chisinau, 35% - from other cities or district centers and 7% - from rural areas. 90% of respondents had higher education, 9% - secondary education, and 1% incomplete secondary education. About 86% consult the inscriptions on the packages, but most of them are not interested in all the information, drawing attention, first of all, to the expiration date, then to the list of ingredients. The majority of respondents (54%) ate bread 1 – 2 times a day, at each meal - 44%, and 2% practically did not eat bread or ate it very rarely. The most popular is bread produced at the state enterprise and from 2 private companies. In the vast majority of cases, consumers choose their favorite bread, taking into account the type of flour and its proportion, a quarter draw attention to the amount of carbohydrates, 19% - to the amount of fiber and 18% - to the amount of table salt. Bread made from whole wheat flour is considered by 73% of respondents as a rich source of fiber, white bread – by 5%, rye bread – by 10%, and the rest consider that any kind of bread is rich in fiber. At the same time, only 42% of respondents consider fiber important for a healthy diet, 7% consider it, on the contrary, dangerous, and the rest did not have any opinions. Most respondents considered bread, in particular, as an important source of carbohydrates and calories. The importance of bread as a source of vitamins was appreciated by 13% of respondents, and minerals – by 8%. The decisive factors in choosing bread were the appearance of the bread, the name of the manufacturer and the hygienic marketing environment (95%), and for 5% - the friendliness of the seller. More than half of the respondents know that the effect of carbohydrates in bread on blood sugar depends on the type of flour. The vast majority believe that food additives extend the shelf life, but at the same time do not exclude the negative influence of some additives on health. Only 18% of respondents draw attention to the content of table salt, the majority considering that it does not exceed the norms. All respondents keep bread more at room temperature, but 44% also partially keep bread in the refrigerator.

Conclusions: 1) the assortment of bread is varied according to chemical composition and energy value; 2) the majority of respondents draw attention to the external appearance of the product, compliance with hygiene requirements and shelf life; 3) the majority of respondents believe that bread is an important source of carbohydrates and energy, and 42% consider the dietary fiber in bread beneficial for health.

5. MENTAL HEALTH, BEHAVIORAL RISKS

ACADEMIC BURNOUT AMONG UNIVERSITY STUDENTS: A COMPARATIVE STUDY

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Background and Context: Academic burnout can be defined as a negative emotional, physical, and mental response to prolonged studying, manifesting as exhaustion, disappointment, lack of motivation, and a limitation of abilities. Symptoms of academic emotional burnout include not only a feeling of fatigue that prevents students from attending classes but also real psychosomatic issues such as headaches, insomnia, and depression. Therefore, it is crucial to take preventive measures when the first signs appear.

Objectives and Research Questions: The study aims to assess and compare burnout levels among students of Yerevan State Medical University (YSMU) and Yerevan State University (YSU) and identify key factors contributing to emotional exhaustion in both student groups.

Methodology: The study was conducted among students of YSMU and YSU through an online survey. The questionnaire included questions aimed at gathering both general information (gender, academic year, employment status) and psycho-physiological data (feelings of apathy, physical and psychological fatigue, and disappointment). After the survey, statistical analysis was conducted based on the collected data. A total of 87 female and 13 male students from YSU participated in the survey, while 73 female and 27 male students from YSMU took part.

Key Findings and Results: Analysis of student distribution showed that nearly half of YSU respondents were first- and second-year students, while 44% were third- and fourth-year students. In contrast, most (72%) YSMU respondents were in their fourth to sixth year.

A noteworthy finding is that the proportion of working students was nearly identical in both universities (YSU – 44%, YSMU – 42%), indicating that employment did not significantly influence the comparison of burnout levels between the two groups.

The study suggests YSU students have a lower academic workload than YSMU students. Most YSU students reported never (27%) or rarely (52%) feeling isolated, whereas YSMU students mainly selected "Never," (36%) "Rarely," (30%) or "Sometimes." (26%). Regarding apathy, most YSU students responded "Rarely," (45%) while YSMU students' responses were mostly "Rarely" (41%) or "Sometimes." (20%).

Discussion: The study's results indicate that YSU students experience lower levels of academic burnout than YSMU students. This is likely due to the lower academic workload of YSU students, which reduces feelings of isolation and apathy. Additionally, the prevalence of physical and psychological fatigue is lower among YSU students. Despite similar proportions of working students in both universities, employment does not appear to be a significant factor contributing to academic burnout. These findings suggest that academic pressure and workload, rather than external factors like employment, play a major role in burnout levels.

Conclusion: In conclusion, YSU students face less academic burnout due to lighter academic workloads and fewer emotional and physical symptoms related to their studies. They are less likely to feel isolated or apathetic compared to YSMU students. Employment status does not significantly contribute to burnout, indicating that managing academic intensity and providing support systems are key to preventing burnout in university students.

THE IMPACT OF PHYSICAL ACTIVITY ON SLEEP QUALITY AND ACADEMIC PERFORMANCE

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Background and Context: Physical activity is any bodily movement produced by skeletal muscles that requires energy expenditure. It is an essential component of a healthy lifestyle, having a positive impact on both physical and mental health — especially among students, whose lives are often overwhelmed by academic demands, social responsibilities, and stress. Physical activity can help regulate sleep by positively influencing both its quality and duration, which in turn is one of the key factors for achieving high academic success.

Objectives and Research Questions: This study explores the positive impact of regular physical activity on students' sleep quality, sleep duration, and academic performance. It aims to highlight the importance of an active lifestyle in student life and provide reliable information, while suggesting preventive measures to support students' overall health and academic success.

Methodology: An anonymous questionnaire-based survey was conducted among university students in the Republic of Armenia, consisting of 11 questions. The survey was created using Google Forms and distributed online. It collected basic demographic information such as age and gender, along with details about the frequency, type, and duration of physical activity. Participants were also asked to evaluate their sleep quality, academic performance, and ability to concentrate. The target group included students aged 18–25 from various regions and cities across Armenia. A convenience sampling method was used, aiming to recruit at least 100 students to ensure reliable data for statistical analysis.

Key Findings and Results: A total of 216 university students participated in the survey, with 115 reporting regular physical activity and 101 not engaging in any. In both groups, the majority were females aged 18–21. Among active participants, walking and exercising with gym equipment were the most preferred activities, typically lasting 30–60 minutes daily. The findings revealed that physically active students reported better sleep duration, higher sleep quality, improved academic performance, and stronger concentration compared to non-active peers. Good sleep duration was reported by 53.9% of active

students versus 47.5% of non-active ones. Academic performance was rated as good by 57.4% of active participants, compared to 47.5% in the inactive group. Furthermore, 38.3% of active students reported good concentration, while only 22.8% of non-active peers did. Active students also studied more.

Discussion: The results indicate that physical activity has a significant positive impact on students' physical, mental, and psychological health. It reduces stress and anxiety, improves mood, and consequently decreases the likelihood of insomnia and fatigue contributing to academic performance.

It is also worth noting that although physically active students dedicate a certain amount of time during the day to exercise, they still tend to allocate more time to studying. This allows us to conclude that physical activity not only does not interfere with a student's academic responsibilities, but also contributes positively to their overall productivity.

Conclusion: Our research shows that university students who engage in physical activity have significantly higher percentages of optimal sleep duration, better sleep quality, and academic performance compared to inactive students. This confirms that physical activity is a cornerstone of a healthy lifestyle, positively affecting not only students' health but also their personal growth, academic progress, and social success. Therefore, educational institutions must actively support and promote physical activity, making it an essential and integrated part of the educational process.

LIFESTYLE CHOICES IMPACT ON LONG-TERM HEALTH AND PREVENTION STRATEGIES

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Background and Context: One of the common factors that has a long-term impact and consequences on human health is lifestyle choice. While health problems affect an individual's health, they develop unnoticed before causing visible consequences. In the 21st century, such issues are mainly stimulated by lifestyle choices made early in life, including technology use, dietary habits, and use of addictive substances. Without timely intervention, the resulting challenges have a continuous impact on both physical and mental well-being throughout life.

Objectives and Research Questions: This study addresses the question of how a person's lifestyle affects their health, with a particular focus on the types of Internet use among adolescents. The research sub-questions examine the relationship between digital device use and complaints and identify effective strategies to instill healthy lifestyles from a young age.

Methodology: The study used the well-known Kimberly Young test, to which we added questions on health complaints. The survey was conducted among 15-17-year-olds at the Ayb Educational Hub, YSMU, and Yerevan State College of Informatics. The data contained information on Internet usage patterns and related health complaints among adolescents, including headaches, visual impairment, fatigue, and sleep disorders. Questions on student academic progress were added to the questionnaire to examine possible links with the intensity of Internet use. Quantitative results were summarized by combining "test scores" and the number of reported health complaints, allowing for the analysis of patterns between the degree of Internet use and physical/mental health.

Key Findings and Results: The survey results made it possible to draw parallels between health problems and excessive Internet use, revealing not only their coincidence but also their connection. 41.3% of students reported headaches, 34.8% reported blurred vision, 34% reported eye strain, and approximately 30% reported sleep problems. A direct

correlation was found between the intensity of Internet use and the number of health complaints, with students who reported Internet addiction reporting five or more different health problems. Although academic performance varied with no clear pattern associated with Internet use, the study found that extensive Internet access contributed to the development of physical and mental health problems that worsened over time.

Discussion: The study results show that health problems that may seem minor at first glance can develop into serious long-term illnesses that affect both physical and mental health. For example, sleep disorders can lead to irritability and inability to concentrate, which in turn negatively affects academic performance and interpersonal relationships. The study highlights the importance of preventive approaches that emphasize family communication strategies that are based on respect, listening, and understanding, rather than simply prohibiting phone use. The influence of the social environment, especially peer relationships, has been identified as a key factor influencing children's developmental trajectory, suggesting that effective interventions should simultaneously address the social context and individual behavior.

Conclusion: Adolescent lifestyle has a significant long-term impact on health, with consequences for both physical and mental well-being. Early intervention is crucial, as these patterns form during adolescence and become increasingly difficult to change over time. Effective preventive strategies should emphasize parent-child communication, environmental awareness, and educational programs aimed at managing addictive behaviors.

FACTORS CONTRIBUTING TO THE DEVELOPMENT OF ACNE

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Background and Context: Acne is one of the most common dermatological conditions, associated with hyperactivity of the sebaceous glands and the accumulation of secretions within them. The most vulnerable group to this disease consists of adolescents and young adults. Acne can have serious consequences, leading to various psychological issues such as depression, anxiety, body dysmorphic disorder, a sense of social inadequacy, and in some cases, complete social isolation. Even after treatment, this pathology may result in cosmetic defects.

Objectives and Research Questions: The aim of this study is to identify both external and internal factors that contribute to the development of acne, as well as potential preventive measures that could reduce the likelihood of acne occurrence or lessen its severity.

Methodology: The study was conducted using a questionnaire designed via Google Forms, which was completed by young individuals aged 14 to 25. The questionnaire consisted of 16 questions.

Key Findings and Results: Among 105 respondents, 7.6% were aged 14–16, 8.6% were 23–

25, 31.4% were 17–19, and 52.4% were 20–22. Gender distribution: 8.6% male and 91.4% female. Dietary Habits: 5% maintained a regular diet; 50.5% occasionally consumed fast food, sweets, and carbonated beverages; 32.4% consumed them frequently; and 12.4% noticed no connection between diet and skin condition. Stress Levels: 5.7% reported no stress, 14.3% low, 56.2% moderate, and 23.8% high stress. Cosmetic Use: 14.3% did not use makeup; 42.9% used it daily. Sunscreen Usage: 22.9% never used it; 28.6% used it rarely; 29.5% used it during summer or when the sun was strong; and 19% used it daily. Hormonal Influence: 38.5% indicated hormonal fluctuations aggravated acne.

Dairy Consumption: 9.6% noticed a slight effect; 3.8% experienced worsening of acne due to dairy consumption

Discussion: The study revealed that an improper diet, stress, consumption of dairy

products, frequent use of cosmetics, insufficient facial skin care, and hormonal changes all play a significant role in the development of acne. Notably, many respondents were unaware of the importance of regular skin cleansing and the use of sunscreen, which indicates the necessity of carrying out sanitary-educational prevention and informing young people about their importance. Overall, the results of this study are consistent with those of another research. Some unexpected responses may be due to the influence of additional factors, individual genetic predispositions, and certain limitations of the study—such as self-completion of questionnaires, a limited range of choices, and gender imbalance—which may have led to certain deviations in the results.

Conclusion: In summary, the study confirms that acne is a multifactorial disease influenced by both external and internal factors. Therefore, treatment should not be limited to medication alone, but should involve a comprehensive approach that minimizes all potential negative contributing factors and takes into account the physiological and psycho-emotional characteristics of the patient. It is also essential to educate young people about preventive measures in order to reduce the likelihood of acne in the future.

THE IMPACT OF CONTINUOUS INFORMATION FLOW ON ATTENTION SPAN AND MENTAL HEALTH

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Background and Context: In today's digital era, constant exposure to rapidly streaming and unfiltered information has become inescapable. Individuals, especially the younger generation, are immersed in digital content to an extent that affects cognitive and emotional health. Phenomena like ADHD, fragmented thinking, and information fatigue syndrome are now seen not only in children but also in adults, prompting concerns about long-term mental resilience and attentional capacity.

Objective and Research Questions: The study aims to assess the prevalence of informational dependency and the ability to filter data across different age groups, to raise public awareness, and to explore potential preventive strategies. A hypothesis was formed linking intergenerational conflict to distinct methods of information intake and differences in synaptic development.

Methodology: Three age groups (15–20, 20–40, and 40–60 years) were surveyed to examine correlations between digital exposure and mental/physical well-being. A total of 193 participants completed an online questionnaire: 79 were aged 15–20, 57 aged 20–40, and 57 aged 40–60. Participants represented diverse professions and had regular digital engagement. Key areas investigated included internet usage duration, sleep quality, fatigue levels, emotional fluctuations, and physiological complaints. The survey assessed behavioral and cognitive consequences of information overload and aimed to uncover trends that may explain generational disparities in information processing and memory retention.

Key Findings and Results: Among participants under 40, 50.9–54.4% spent 4–10 hours daily online, while 11.4% of those aged 15–20 exceeded 10 hours. Sleep disturbances were universally reported: those under 40 faced difficulties waking up; those over 40 reported frequent nightmares and episodic, restless sleep. Fatigue levels were highest in the 15–20 group (75.9%), surpassing older participants (66.7%). According to a 2014 Microsoft study, attention span decreased to 8 seconds—less than that of a goldfish (9 seconds). This reduction, along with the brain's inability to distinguish essential from trivial information,

leads to memory degradation. These cognitive shifts offer insight into generational conflicts and underscore the consequences of unchecked digital saturation.

Discussion: The study identified clear links between digital content exposure and psychological or physiological issues. Adults immersed in constant newsfeeds suffer from insomnia and recurrent nightmares, while teenagers prolonged virtual immersion results in social withdrawal and loss of life motivation. Unexpectedly, stress and depressive symptoms peaked among the 20–40 age group. All cohorts reported reduced attention span and difficulty maintaining focus. These findings led to a proposed “information hygiene” strategy, including sleep regulation, physical activity, digital detox practices, and bibliotherapy, designed to mitigate the impact of information overload and foster better mental equilibrium.

Conclusion: “Informational overload” is a growing phenomenon demanding deeper investigation. Its impact on society—especially youth—is undeniable and necessitates immediate preventive and corrective action. This study also helps explain a source of intergenerational conflict: beyond divergent values and goals, our brains process, store, and recall information differently. Recognizing this cognitive gap is essential for fostering understanding and cooperation between generations in an increasingly digital world.

PREVALENCE AND PERCEPTIONS OF E-CIGARETTE USE AMONG YOUTH

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Background and Context: Electronic cigarettes were developed as a supposedly less harmful alternative to traditional tobacco smoking. E-cigarettes contain nicotine salts, various carcinogens (such as acetaldehyde, formaldehyde, and acrolein), metallic nanoparticles, propylene glycol, and glycerin. Nicotine salts are absorbed more rapidly and cause stronger addiction compared to the freebase nicotine found in traditional cigarettes. However, the effects of the acids used in these salts on the human body are not yet fully understood. To provide flavor, e-cigarettes include aromatic substances of natural, artificial, or organic origin.

Objectives and Research Questions: The aim of this research is to identify the main age group of electronic cigarette users, the manifestation of side effects, their primary motivation for use, and their level of awareness regarding the associated health risks.

Methodology: The research was conducted using a quantitative method through an online survey via Google Forms. The questionnaire consisted of 16 questions, including 9 closed-ended questions and 7 semi-closed-ended questions, as well as multiple-choice questions that allowed participants to select more than one answer in order to obtain more accurate data. The questions were targeted and aimed at uncovering the main issues addressed in the study. A total of 101 participants took part in the survey, and anonymity was ensured. The collected responses were analyzed using percentage distribution. In some cases, since multiple answers could be selected, the total percentage exceeded 100%.

Key Findings and Results: As a result of the survey, it becomes clear that the primary target group falling victim to the marketing campaign is 15–20-year-olds (79.2% of respondents first tried smoking at that age). More than 60% of participants reported that no awareness-raising activities had been carried out in their educational institutions. Among respondents, 30.4% said they use e-cigarettes 1–4 times per day, almost 20% use them 5–10 times daily, and 27.7% use them 11–15 times daily. On the other hand, more than half of those surveyed have successfully quit using e-cigarettes. It should also be noted that an overwhelming majority (98%) have never consulted a specialist to help them stop

smoking. The main side effects experienced during e-cigarette use, according to respondents, are:

- Cough
- Dizziness
- Headache
- Difficulty concentrating
- Nausea
- Vomiting
- Shortness of breath
- Heart palpitations
- Insomnia
- Excessive mucus (saliva) production

Only 1% reported experiencing no side effects. As for their reasons for using e-cigarettes, 66% said it is “stylish” and 36% said it is “safe.” Finally, 74.3% of respondents stated that they are aware of the harmful consequences that can arise from e-cigarette use.

Discussion: The results of the survey revealed several concerning trends. Marketing campaigns promoting e-cigarettes as safe and fashionable appear to have a substantial psychological impact on adolescents, encouraging them to align with their peers and adopt vaping behaviors. Additionally, the appealing flavors of these products serve as an immediate attraction for young users. The focus on adolescents is deliberate, as the majority of respondents indicated that they began smoking during their teenage years. Many participants believed they could easily quit at any time, demonstrating a lack of awareness regarding the complexity of nicotine addiction. Furthermore, very few sought assistances from healthcare professionals to cease smoking.

When comparing our findings to the results of two other research studies there is notable consistency: many participants were drawn to e-cigarettes due to perceptions of greater safety, more pleasant flavors, and enhanced stylistic appeal. I would like to add that, according to the current legislation of the Republic of Armenia, it is prohibited to sell or otherwise distribute tobacco products, their accessories, substitutes, or imitations to persons under the age of 18.

Conclusion: E-cigarettes represent one of the greatest public health threats of our time. Their widespread use presents new challenges for public health organizers. The long-term harms resulting from prolonged use have not yet been fully elucidated. There is a critical need for new research, particularly aimed at thoroughly identifying the full range of effects associated with their chemical components. More active public health education campaigns must be organized, and stricter enforcement of existing legislation should be ensured.

FROM SCREEN TO DOPAMINE: THE EFFECTS OF EXCESSIVE GADGET USAGE ON COGNITIVE FUNCTION AND MOTIVATION AMONG YOUNG ADULTS

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Background and Context: The rapid global expansion of internet usage has transformed information exchange, with approximately 5.56 billion individuals, accounting for 67.9% of the global population, currently accessing the internet. A substantial proportion of this demographic consists of young adults under the age of 25. As internet penetration increases, emerging issues such as diminished academic performance, neglect of familial obligations, and impaired social interactions have been attributed to excessive internet use.

Objectives and Research Questions: This study aims to investigate the relationship between gadget overuse and its potential effects on cognitive functions and motivation among young adults aged 18-25. Additionally, it seeks to understand the influence of varying levels of screen exposure on concentration, time management, sleep duration, and sleep quality.

Methodology: Data were collected through a structured online questionnaire developed using Google Forms. The survey comprised multiple-choice and closed-ended questions assessing device preference, purpose of gadget use, duration of screen exposure, utilization of screen-time limiting applications, and perceived impacts on daily cognitive functioning and overall well-being. A total of 132 participants aged between 18 and 25 completed the survey. This straightforward yet informative approach facilitated the identification of usage patterns and their associated impacts.

Key Findings and Results: Smartphones emerged as the preferred device for 89.1% of respondents, with 61.7% primarily using them for social media. A majority (82.2%) did not utilize applications designed to limit screen time. Notably, 92.1% reported using gadgets prior to bedtime; half of these respondents engaged in screen usage for 30 to 60 minutes, 16% for 2-3 hours, and 7.4% for over 4 hours. While 50.5% indicated no adverse effects on sleep quality from pre-sleep gadget use, 30.3% reported reduced sleep duration, and 18.2% experienced restless sleep. The following day, 54.5% observed no noticeable

impact on productivity, whereas the remaining 45.5% reported adverse outcomes including fatigue (28.7%), drowsiness (30.7%), diminished concentration (24.8%), mood deterioration (21.8%), and headaches (17.8%). Moreover, daytime excessive and purposeless gadget use correlated with concentration difficulties (40.6%), decreased motivation (41.2%), fatigue (28.7%), and no perceived effects for an equivalent proportion of participants.

Discussion: Numerous studies have shown that digital scrolling significantly increases dopamine secretion, activating the brain's reward pathways, and thus fostering internet dependency. According to this study, 50.5% of respondents reported no impact on their sleep quality, and 54.5% noted no decline in productivity the following day. This may be explained by the fact that 67% of respondents do not exceed 1 hour of phone usage. However, 49.5% mention a decrease in sleep duration (31.3%) and restless sleep (18.2%).

Conclusion: This research identifies a presumable correlation between excessive gadget use and impairments in cognitive functioning, decreased sleep duration and quality, reduced concentration and productivity, and lowered motivational states among young adults. The blue light emitted from screens emerges as a significant disruptor of sleep patterns. As technology continues to advance, it is essential to address these challenges proactively to mitigate both social and physiological health risks. Further research in this field is required, employing validated questionnaires and objective assessments to evaluate both sleep quality and productivity.

THE EFFECTS OF VITAMIN D LEVELS ON MENTAL HEALTH AND MOOD DISORDERS IN YOUNG ADULTS

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Background and Context: Vitamin D, commonly known for its role in bone health, has also emerged as a modulator with potential influence on mental health. The distribution of vitamin D receptors in brain regions associated with mood regulation, alongside its involvement in neurochemical processes, suggests that deficiency may contribute to mood and cognitive disorders. Widespread global vitamin D deficiency has prompted further investigation into its mental health implications.

Objectives and Research Questions: This study explores the association between serum vitamin D levels and the prevalence of mental health and mood disorders in young adults. It aims to determine whether vitamin D deficiency contributes to the emergence of mental health symptoms or not, and to better understand its potential impact on psychological well-being.

Methodology: A cross-sectional study was conducted using a structured Google Forms questionnaire shared with individuals aged 18–26. The questionnaire collected data on demographics, vitamin D testing history, levels, and diagnosis of vitamin D deficiency from a healthcare professional, supplement use, time spent in direct sunlight, diet, fatigue frequency, professional mental health evaluations, and comorbid chronic illnesses. A total of 147 responses were analyzed, with 81% of respondents being female and 19% being male. Descriptive statistics were used to analyze trends and explore potential associations between vitamin D-related behaviors or test results and psychological symptoms, particularly fatigue, mood disorders, and seasonal affective symptoms.

Key Findings and Results: Among the 147 respondents, 41.4 % of individuals had a confirmed or probable vitamin D deficiency. Of these, 24.5% of participants reported at least one diagnosed mental health disorder: anxiety disorder (18%), depression (13.1%), and seasonal affective disorder (SAD) (8.1%). Moreover, 4.9% of respondents with low vitamin D levels reported comorbid irritable bowel disease (IBD), highlighting a potential gut-immune-mental health interaction. Fatigue was reported by 49.1% of the subgroup, while low energy was reported by 73.7%. Notably, 52.4% of them reported spending 30+

minutes in sunlight daily, suggesting that deficiency might seem more from absorption/metabolism issues or poor dietary intake rather than inadequate sunlight exposure alone.

Discussion: Findings suggest a correlation between low Vitamin D levels and reported mood disturbances, with anxiety and depression being the most prevalent, particularly in young females. While only a quarter of the deficient group had a formal psychiatric diagnosis, symptoms like fatigue and low energy were widely reported, indicating possible underdiagnosis. Notably, many deficient individuals had adequate sun exposure, pointing toward absorption or dietary issues as contributing factors. These results support the theory that Vitamin D may influence mood through its modulatory role in neurotransmitter regulation. Limitations include reliance on self-reported data and lack of clinical confirmation for Vitamin D levels in some cases.

Conclusion: There appears to be a notable association between low or unmonitored vitamin D levels and mood disturbances in young adults. Seasonal affective changes, anxiety and fatigue were especially prevalent. Public health interventions focusing on screening, supplementation, and lifestyle modifications may be beneficial. Further studies with controlled variables and biochemical testing are necessary to deepen the understanding of this link.

HEADACHE MANAGEMENT PRACTICES AMONG THE POPULATION OF ARMENIA: SELF-MEDICATION AND UTILIZATION OF HEALTHCARE SERVICES

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Background and Context: Headache (G43-44) is a common symptom in nervous system disorders and a leading cause of pain, doctor visits, and missed work. It affects 48.9% of the general population. Headaches are divided into primary (tension-type, migraine, trigeminal autonomic cephalalgias) and secondary types. Primary headaches are more frequent between ages 20 and 50. Early diagnosis is essential to avoid missing red flags and to prevent medication-overuse headache caused by frequent or improper use of pain relievers.

Objective and Research Question: This study aims to evaluate headache management practices among Armenian population, focusing on self-medication and healthcare utilization. It explores the frequency of self-treatment and the role of professional guidance in headache management, providing insights into common practices and their potential impact on health outcomes.

Methodology: This cross-sectional study aimed to gather descriptive and analytical data from 1308 customers across various pharmacy networks in Armenia. Participants were randomly selected, and all 1308 completed questionnaires were returned, resulting in a 98.2% response rate. The study's questionnaires were approved by the Ethics Committee of Yerevan State Medical University (YSMU) on 17.06.2021. In line with the Declaration of Helsinki, participants' confidentiality was strictly maintained, and their responses were anonymous. The sample size was calculated using the Cochran method with a 97% confidence level and a 3% margin of error. Data were analyzed using SPSS 23.0, with descriptive statistics applied. Statistical significance was set at $P < 0.05$.

Key Findings and Results: The statistical analysis showed that most respondents were from the 30–35 (16%) and 24–29 (16%) age groups. Regarding education, 36% held a

master's degree, 30% had vocational education, 10% had secondary education, 9% had a bachelor's degree, 8% had postgraduate education, and 7% were students.

Health data revealed that 41.4% of respondents had physician-diagnosed conditions, while 58.6% did not. Additionally, 58.9% had not visited a doctor in the past month, 25.6% had visited once, 9.6% twice, and 5.8% three or more times.

In headache management, 44.5% self-medicated, 21.4% consulted pharmacy staff, 16.7% sought a hospital physician, 9% visited a primary care physician, 7.3% used online sources, and 3.3% were influenced by advertisements. In total, 25.7% sought medical advice for headache management.

Discussion: The data indicates that self-medication is common when managing headaches. Despite 41.4% having physician-diagnosed health conditions, 58.9% did not visit a doctor in the past month, suggesting underuse of healthcare services or a preference for self-treatment. However, 25.7% sought medical advice, showing some use of professional help, though it's not the primary method. Additionally, 44.5% of participants choose medication independently, confirming the prevalence of self-medication. While 25.7% prefer consulting a doctor, the frequency is lower than ideal, emphasizing the need for more professional guidance in headache management.

Conclusion: Self-medication for headaches is common among participants, with many choosing to manage their condition without medical advice. While some consult healthcare professionals, it occurs less frequently than recommended. The study highlights the risks of self-medication for headaches and the importance of professional guidance. Improving access to healthcare services and promoting appropriate medical advice can help bridge the gap between self-treatment and professional care, leading to better outcomes for individuals managing headaches.

EVALUATING PHARMACISTS' AWARENESS AND PRACTICES IN PHARMACOVIGILANCE IN ARMENIA

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Background and Context: Adverse drug reactions (ADRs) are unexpected and harmful effects occurring at normal therapeutic doses, posing serious risks to patient safety and increasing healthcare costs globally. ADRs contribute to significant morbidity and mortality, emphasizing the need for strong pharmacovigilance systems. Healthcare professionals, especially pharmacists, play a key role in detecting, reporting, and managing ADRs. Promoting awareness, education, and training on ADR reporting enhances drug safety, improves treatment outcomes, and supports the rational and effective use of medicines.

Objectives and Research Questions: This study aims to assess community pharmacists' knowledge, attitudes, and practices toward pharmacovigilance.

The research question is: What are the current gaps and barriers in adverse drug reaction (ADR) reporting among community pharmacists?

Findings will help enhance ADR management and promote patient safety in community pharmacy settings.

Methodology: This cross-sectional study assessed the knowledge, attitudes, and practices of Armenian community pharmacists regarding pharmacovigilance and ADR reporting. Using Cochran's formula, a sample size of 597 was calculated with a 97% confidence level and a 3% margin of error. A structured questionnaire, developed based on a literature review, included demographic and practice-related questions. Its reliability was confirmed with Cronbach's alpha values of 0.80, 0.78, and 0.82 for knowledge, attitudes, and practices, respectively. Data were collected using random sampling and analysed with SPSS 23.0. Ethical approval was granted by the Yerevan State Medical University Ethics Committee (Protocol No. 10, 17.06.2021).

Key Findings and Results: The findings revealed significant gaps in pharmacovigilance knowledge and practice among respondents. Specifically, 71.4% were unfamiliar with the

concept of pharmacovigilance, and 64.4% lacked knowledge on how to report adverse drug reactions (ADRs). A large majority (89.8%) could not correctly identify serious ADRs. Awareness of the World Health Organization's role was low (84.2%), and 87.3% were unaware that prescription drugs are monitored. Only 21.7% believed pharmacists should encourage patient-reported ADRs. While 55.3% emphasized patient confidentiality and 60% recognized the safety benefits of reporting, 90.7% admitted to not reporting all ADRs. Most respondents (89.8%) avoided reporting uncertain ADRs, and 90.2% had no pharmacovigilance training. Furthermore, 88.6% did not educate patients. Pharmacists mainly relied on the internet (52%), whereas technicians valued labels (49%).

Discussion: The study reveals a significant lack of knowledge and awareness about pharmacovigilance and ADR reporting among Armenian pharmacy staff. Notably, 71.4% were unfamiliar with the concept of pharmacovigilance, and 64.4% did not know how to report ADRs. Attitudes were also concerning—69% did not see the necessity of reporting all ADRs, and 78.3% did not support educating patients about ADRs. Only 9.3% regularly reported ADRs. The majority had not received training and relied on unreliable information sources like the internet. These findings highlight the urgent need for targeted education, accessible guidelines, and systematic improvements to enhance pharmacovigilance practices in Armenia.

Conclusion: This study emphasizes the need for better education and awareness in pharmacovigilance and ADR reporting to enhance drug safety. Challenges like reluctance to report ADRs and confidentiality concerns are noted, but the importance of reporting is highlighted. Improving education and policies can enhance pharmacovigilance effectiveness and health outcomes. Understanding the information preferences of pharmacy employees can help provide better resources to improve pharmacovigilance education and practice in pharmacy.

EVALUATING CONSUMER TRUST AND PHARMACY PRACTICES IN OVER-THE-COUNTER MEDICINE USE IN THE REPUBLIC OF ARMENIA

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Background and Context: The global rise in self-medication with over-the-counter (OTC) drugs raises significant concerns regarding inappropriate medicine use and patient safety. In Armenia, where healthcare reforms are underway and access to OTC medicines is increasing, the lack of standardized pharmaceutical care presents additional challenges. Understanding consumer behavior, levels of trust in pharmacy employees, and the quality of counselling provided is essential to guide health policy, strengthen pharmaceutical services, and promote the rational and safe use of medicines at the community level.

Objectives and Research Questions: This study aimed to examine self-medication behaviors among Armenian consumers and assess the quality of pharmaceutical care provided by pharmacy employees. It focused on how consumers select over-the-counter medicines, whether they follow pharmacy advice, whether symptoms are assessed before dispensing, and if referral to a physician occurs when needed.

Methodology: A cross-sectional, anonymous survey was conducted from March 2020 to November 2021, involving 1308 pharmacy consumers across Armenia. Data collection tools were adapted from World Health Organization questionnaires and refined through a pilot study. Participants were randomly selected. Data analysis was performed using SPSS version 23.0, employing descriptive statistics and association tests with p-values to assess significance. Ethical clearance was obtained, and strict confidentiality protocols were maintained throughout the research process.

Key Findings and Results: The study involved 1308 respondents of varying ages and educational backgrounds. Self-medication was prevalent, with 49.5% choosing over-the-counter (OTC) medicines based on prior experience. A total of 59.8% reported never following pharmacy employees' advice when selecting OTC medicines, mainly due to

previous negative experiences (38%) or distrust (31%). Nearly half of the consumers stated that pharmacy employees neither assessed their health status nor inquired about symptoms before dispensing OTC medicines. Only 19.8% recalled being advised to consult a doctor in case of alarming symptoms, while 52.9% had never received such advice. Just 30.6% were fully satisfied with responses to medicine-related questions; 48.7% said answers were only sometimes complete, and 20.7% were not satisfied at all.

Discussion: The study highlights critical deficiencies in pharmaceutical care within Armenian community pharmacies. The high prevalence of self-medication and low adherence to pharmacy advice indicate limited consumer trust, primarily due to past negative experiences and lack of effective communication. Inadequate symptom assessment and insufficient referral to physicians suggest that pharmacy staff often fail to perform essential patient safety functions. Moreover, low satisfaction with counselling further reflects gaps in service quality. These findings underscore the urgent need to improve pharmacy staff training, standardize counselling protocols, and rebuild public trust in pharmaceutical services.

Conclusion: Improving pharmaceutical care and raising public awareness in Armenia are essential to promoting safe self-medication practices. Strengthening the training, communication skills, and accountability of pharmacy staff alongside rebuilding public trust in professional healthcare advice is critical for enhancing national healthcare quality. These efforts are necessary to align with international standards and ensure the safe, rational use of medicines at the community level.

DIARRHEA MANAGEMENT IN COMMUNITY PHARMACIES: GAPS IN KNOWLEDGE AND COUNSELLING AMONG ARMENIAN PHARMACY EMPLOYEES

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Background and Context. Diarrhea is a common condition frequently managed through self-medication, especially in low- and middle-income countries where access to healthcare may be limited. In Armenia, pharmacy employees play a critical role in guiding consumers, yet their knowledge and counselling practices vary significantly. Inappropriate dispensing and limited recognition of danger signs may compromise patient safety and delay necessary medical intervention, highlighting the need to evaluate the quality of pharmaceutical care in this context.

Objectives and Research Questions. This study aimed to assess pharmacy employees' knowledge, practices, and patient counselling related to diarrhea management in Armenia. It explored how frequently diarrhea medicines are dispensed, how well staff identify causes and symptoms requiring referral, and whether appropriate usage instructions and side-effect warnings are provided to consumers.

Methodology. A cross-sectional, anonymous survey was conducted from 2020 to 2021 among 597 pharmacy employees in Yerevan. The sample size was calculated using a 97% confidence level and a 3% margin of error, based on the total number of 1096 registered pharmacies in Yerevan. The questionnaire was developed using WHO standard tools, the WHO manual on diarrhea treatment, and U.S. gastroenterology guidelines, adapted to the Armenian pharmaceutical context. Data analysis was performed using SPSS version 23.0. Ethical approval was obtained, and confidentiality was strictly ensured throughout the research process.

Key Findings and Results. The majority of the 597 surveyed pharmacy employees (52.4%) were pharmacy technicians. In response to diarrhea-related complaints, 38.6% reported dispensing medicines 6–7 times per day based on their own recommendations, 28.7% up to 3 times, and 26.3% between 4–5 times. The most frequently selected causes

of diarrhea were improper food (38.9%), infections (29.8%), colds (22.6%), while only 21.6% recognized poisoning as a possible cause. When asked to identify symptoms requiring physician consultation, participants most often selected blood in the stool (28.4%), followed by high fever (23.6%), prolonged diarrhea (18.4%), general severe condition (19.7%), and signs of dehydration (12.8%). Although 60% reported that they usually explain medicine instructions to consumers, 24% admitted they never do, and only 34% provided information on possible side effects.

Discussion. The findings reveal substantial gaps in pharmacy employees' knowledge and practice related to diarrhea management. Although diarrhea medicines are frequently dispensed, many staff employees lack awareness of all potential causes and severe symptoms. Notably, poisoning—a serious but under-recognized cause—was identified by only 21.6% of respondents. Similarly, key symptoms requiring physician referral, such as dehydration and prolonged diarrhea, were not consistently acknowledged. Furthermore, nearly one-quarter of pharmacy employees do not provide usage instructions, and only a third warn about side effects. These shortcomings highlight the need for targeted training and standardized counselling practices in community pharmacies.

Conclusion. This study demonstrates that despite the high volume of diarrhea-related consultations, pharmacy employees often lack comprehensive knowledge and do not consistently provide adequate pharmaceutical care. Insufficient counselling, limited recognition of danger signs, and underreporting of medication risks raise concerns about patient safety. Strengthening professional training and implementing clear pharmacy service standards are essential to improving care quality and health outcomes.

THE EFFECT OF FATIGUE ON MEMORY

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Background and Context: In today's fast-paced world, fatigue has become a widespread issue, affecting students, professionals, and active individuals. High demands, chronic stress, and poor sleep contribute to both physical and mental exhaustion, impairing memory, concentration, and learning. This research explores how fatigue influences short-term and long-term memory, with the aim of informing strategies to reduce its cognitive impact and enhance overall productivity and well-being.

Objectives and Research Questions: Our purpose is to examine the effects of fatigue on short-term and long-term memory, to assess the impact of fatigue on cognitive performance, particularly memory retention, to propose interventions to minimize the effects of fatigue on memory functions. And to understand How does fatigue affect short-term memory performance. In what ways does fatigue impair long-term memory consolidation and recall. And what interventions can reduce the cognitive impact of fatigue on memory.

Methodology: This study employs a mixed-methods approach, combining quantitative and qualitative techniques. First, participants will complete the Fatigue Assessment Scale (FAS-10) to assess fatigue levels. Memory performance will be evaluated through a series of cognitive tasks designed to test both short-term and long-term memory recall. Participants will be divided into two groups: fatigued and non-fatigued. A comparison will be made to observe the differences in memory performance between the groups. Additionally, qualitative interviews will be conducted to gather subjective experiences of fatigue's impact on memory. Data will be analyzed using statistical methods to determine correlations between fatigue and memory deterioration.

Key Findings and Results: 133 participants took part in the survey, including 83 students and 50 pupils. The study revealed that fatigue significantly impairs both short-term and long-term memory performance. Participants experiencing high levels of fatigue showed a notable decline in their ability to encode, consolidate, and retrieve information, with memory recall decreasing by up to 40% compared to the non-fatigued group. Specifically,

fatigued individuals struggled with attention, concentration, and the retention of newly acquired information. Additionally, the analysis of FAS-10 scores indicated that higher fatigue levels correlated with greater memory deficits. Qualitative data highlighted that participants reported heightened difficulty in concentrating and recalling previously learned material, especially during cognitive overload or academic stress. These findings confirm the detrimental effects of fatigue on cognitive functioning.

Discussion: The findings of this study emphasize the negative impact of fatigue on memory, particularly under conditions of high cognitive load, such as academic and professional stress. Fatigue not only impairs short-term memory but also disrupts long-term memory consolidation, affecting recall and retention. These results align with previous research indicating that fatigue diminishes cognitive efficiency. Understanding the connection between fatigue and memory can help in developing strategies to mitigate its effects, such as better sleep management, stress reduction, and improved time management techniques, ultimately enhancing memory performance and overall cognitive function.

Conclusion: Fatigue significantly affects memory performance, impairing both short-term and long-term memory functions. This study highlights the importance of addressing fatigue in academic and professional settings to preserve cognitive function. Future interventions should focus on improving sleep, managing stress, and optimizing workload to enhance memory retention and overall cognitive performance, ultimately promoting better productivity and well-being.

ASSESSING THE ADDICTION FROM GADGETS AROUND STUDENTS

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Background and Context: In 21-st century, Gadgets and especially/particularly internet, are the vital part of modern life. Albeit, it possesses numerous benefits such as quick accessibility of information, the communication with society, however the negative effects dominate. Some part of people assumes, that they are able to control themselves and avoid the addiction, yet they do not even hesitate, that the phone itself starts to control their brain through the time.

Objectives and Research Questions: The main goals of research are discovering the negative effect of gadgets on education, the average statistics of overusing smartphones, estimating further health risks and exhibiting a few offers for possibly avoiding to face up with both physical and psychological problems.

Methodology: An Online questionnaire was used, which is composed from 15 questions based on guidelines of The Preferred Reporting Items for Systematic Reviews and Meta Analyses.

Questions are made specifically to take into account the age, sexual differences, to assess the presence of nomophobia and its connection with the phone addiction, risk factors etc. The questionnaire also involves questions about the educational processes and usage of phone in 24 hours, the students' preference between learning the information online or offline. Besides, two questions estimate the subjective opinion of students about their condition relating to the overusing gadgets.

Key Findings and Results: Results are compared with internationally approved websites, such as PubMed, Medscape etc. The research involves 350 students, where the most part of participants is female and 17–20-year-old. Around 40 % provides more than 4 hours to the usage of phone in 24 hours.

90% of participants tend to be involved in social media while using gadgets, besides more than 70% mention a few cases that they failed the learning process just because of the phone. Students themselves assess their addiction from phone between 6-8 in 10 score scale. 66% of students are inclined to nomophobia, as they feel anxiety while going out

from the house without their phone.

Discussion: From the results it's possible to assume, that not only students already have addiction, but also there is a plentiful basis on which nomophobia can occur, which in its turn can dramatically affect the education. Most of participant's mention, that the phone usage surpasses 4hours, yet the maximum allowed time is 2 hours for the adult during a day. Besides, the concentration of the brain is disturbed during the usage of phone and it is required minimum of 20 minutes for the brain to fully get restored and function at its highest rate.

Conclusion: The research results prove, that gadgets are overused among students, which mostly relates to social media or games. Such situation can lead to terrible circumstances both in educational and professional fields. Thus, it's recommended to reduce the usage of phone up to 1 hour a day and while being online mostly to be involved in reading books or articles, as it will not affect the brain as much as it happens while playing online games.

BURNOUT SYNDROME AMONG YSMU STUDENTS

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Background and Context: Burnout syndrome is characterized by a combination of psychological, social, and somatic symptoms. It typically develops in professionals who are directly involved in people's lives and destinies—such as doctors, rescuers, and teachers. It is also present among medical university students, due to the demanding lifestyle and heavy workloads, as the academic material is quite extensive.

Burnout is expressed through five groups of symptoms:

- Physical (exhaustion, insomnia)
- Emotional (apathy, depression)
- Behavioral (fatigue, aggression)
- Intellectual (disinterest in innovation)
- Social (isolation)

Objectives and Research Questions: To study the prevalence of burnout syndrome among students at YSMU, identify the underlying causes, and suggest preventive measures.

Methodology: The study was conducted through a questionnaire distributed among YSMU students. A total of 100 students participated: 78% were female and 22% were male. The participants were aged between 18 and 24. The majority of respondents were 3rd and 4th-year students (ages 21–22), accounting for 79.7% of the total sample. The questionnaire consisted of 14 questions.

Results and Discussion: The results of our study show that burnout syndrome is prevalent among YSMU students. 67.8% of participants often feel tired due to academic demands. A decrease in motivation to attend or engage in classes was observed in about two-thirds of students. Only 15.3% of students reported that they always feel successful in their studies, which is a relatively low percentage. Only 21.1% of students are consistently able to balance their education with personal time and self-care, which is mainly due to excessive workload. Among physical symptoms, 50% of participants reported fatigue. Half

of the respondents feel overwhelmed by the study process. Due to academic stress, 39.3% of students avoid spending time with friends or family, preferring isolation instead.

Conclusion: Burnout syndrome is widespread among medical students, making preventive measures essential. Strategies such as proper time management, incorporating hobbies into daily routines, and avoiding the constant pursuit of perfection can help. As future doctors, they will face even greater risks of burnout due to the intense and sleepless nature of their work. Therefore, during their student years, it is crucial to develop personal traits such as empathy, tolerance for uncertainty, and resilience in the face of failure.

THE EFFECTS OF AIR POLLUTION ON HUMAN HEALTH

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Abstract

Introduction: Air pollution remains a major global environmental and public health issue. As a key component of the ecosystem, human health is significantly affected by air quality. Exposure to air pollutants is associated with various adverse health outcomes, particularly impacting the cardiovascular, respiratory, and nervous systems. Vulnerable populations—including children, the elderly, and individuals with chronic diseases—are disproportionately affected. Therefore, monitoring, prevention, and mitigation of air pollution are essential components of public health strategies.

Objective: This study aims to evaluate the relationship between air pollution and its effects on human organ systems, primarily the nervous, cardiovascular, and respiratory systems. By examining environmental pollutant data alongside self-reported health indicators, the study seeks to elucidate the public health implications of air quality in urban and semi-urban environments.

Methods: The investigation focused on three cities in Armenia—Yerevan, Goris, and Ararat—selected for their varying levels of air pollution, influenced by factors like climate, vegetation, and industrial activity. Air quality data for 2023 were obtained from the “HayHydromet” SNCO, specifically analyzing the concentrations of suspended particulate matter (dust), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and ground-level ozone (O₃). While annual average concentrations remained below national thresholds, episodic exceedances of daily limits were observed, particularly in Yerevan. Residents completed a 12-item questionnaire assessing self-perceived health status, the emergence of new symptoms potentially related to air pollution, and local environmental conditions.

Results: Analysis revealed a higher prevalence of symptoms associated with the nervous system, such as headaches (53.3%), drowsiness (46%), cognitive difficulties (40.1%), and memory impairments (39.4%), in areas with pollutant concentrations nearing permissible limits. Cardiovascular symptoms, including chest discomfort (27%), dyspnea (21.2%), and chest pain (19%), were also reported. Respiratory symptoms, particularly coughing and shortness of breath, affected 48.9% of respondents. Dermatological manifestations, notably hair loss (52.6%), as well as pruritus (19%) and rashes (18.2%), were also recorded, although 39.4% of participants did not report any skin-related symptoms. No statistically significant associations were found between symptom prevalence and environmental factors such as green space availability or waste management practices.

Discussion: Findings suggest a substantive association between elevated air pollutant exposure and the incidence of neurological, cardiovascular, and respiratory complaints. Pollution sources varied by region. Notably, urban centers with higher industrial and vehicular emissions, such as Yerevan and Ararat, demonstrated greater symptom burden among residents, including headaches, shortness of breath, chest pain, drowsiness, and skin irritation. These data underscore the multifaceted health risks posed by air pollution and the importance of implementing localized, evidence-based strategies to mitigate exposure.

Conclusion: Air pollution constitutes a pressing environmental determinant of health, contributing to an increased burden of disease across multiple physiological systems. The present study highlights a consistent pattern of health effects corresponding to higher ambient pollution levels, particularly in urban-industrial regions. These findings reinforce the imperative to prioritize air quality control measures within national public health frameworks, especially in communities subject to elevated environmental risk.

EMOTIONAL BURNOUT AMONG PHYSICIANS

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Abstract: Burnout is a psychological syndrome resulting from chronic workplace stress, particularly prevalent in high-responsibility professions like medicine. Physicians often face emotional exhaustion, depersonalization, and reduced personal accomplishment, which can negatively affect their well-being and quality of patient care. Investigating burnout among physicians is essential for developing effective preventive strategies and improving healthcare system resilience.

Objective: The objective of this study is to evaluate the prevalence and severity of burnout among physicians and to identify associated risk factors. What is the level of burnout among physicians? Which demographic or professional factors are linked to higher burnout rates?

Methods: A quantitative descriptive study was conducted to assess the prevalence and characteristics of burnout among healthcare professionals. Data were collected using an anonymous questionnaire based on the Maslach Burnout Inventory (MBI), which evaluates three dimensions: emotional exhaustion, depersonalization, and personal accomplishment. The survey was distributed among physicians working in various departments of hospitals based in Yerevan. Participation was voluntary and confidential. The collected data were statistically analyzed using SPSS software to identify burnout levels and their correlation with demographic and professional factors such as age, gender, years of experience, and work schedule. Ethical approval was obtained prior to the study.

Results: Based on the survey conducted among healthcare professionals, key findings indicate varying degrees of emotional exhaustion across different age groups, specialties, and workplaces. Over 60% of respondents reported experiencing emotional exhaustion at least "sometimes," with 35% indicating they feel it "often" or "very often." Nearly 50% reported having sleep-related issues due to work, and 38% admitted to frequently thinking about quitting their job. Emotional detachment from patients was noted by 28% of participants. Burnout symptoms were more common among professionals aged 25–35 and those working in public hospitals. Additionally, 42% of those doing night shifts reported

high levels of emotional exhaustion. The findings highlight the need for targeted mental health support and organizational interventions.

Discussion: The findings highlight a critical need for systemic changes within healthcare settings to address emotional burnout. Prolonged exposure to stress, lack of institutional support, and overwhelming responsibilities contribute to mental exhaustion among healthcare workers. This not only affects their well-being but also the quality of care provided to patients. The strong correlation between burnout and mental health issues emphasizes the urgency of implementing preventive strategies. Interventions such as resilience training, mental health programs, and improved working conditions could significantly reduce burnout rates. Future research should explore the long-term effectiveness of such interventions across different healthcare systems.

Conclusion: Emotional burnout is a significant issue among healthcare professionals, impacting both their mental health and professional efficiency. The study emphasizes the importance of early detection, institutional support, and stress management strategies. Addressing burnout is essential not only for the well-being of medical workers but also for ensuring high-quality patient care. Continued research and targeted interventions are crucial for long-term improvements.

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