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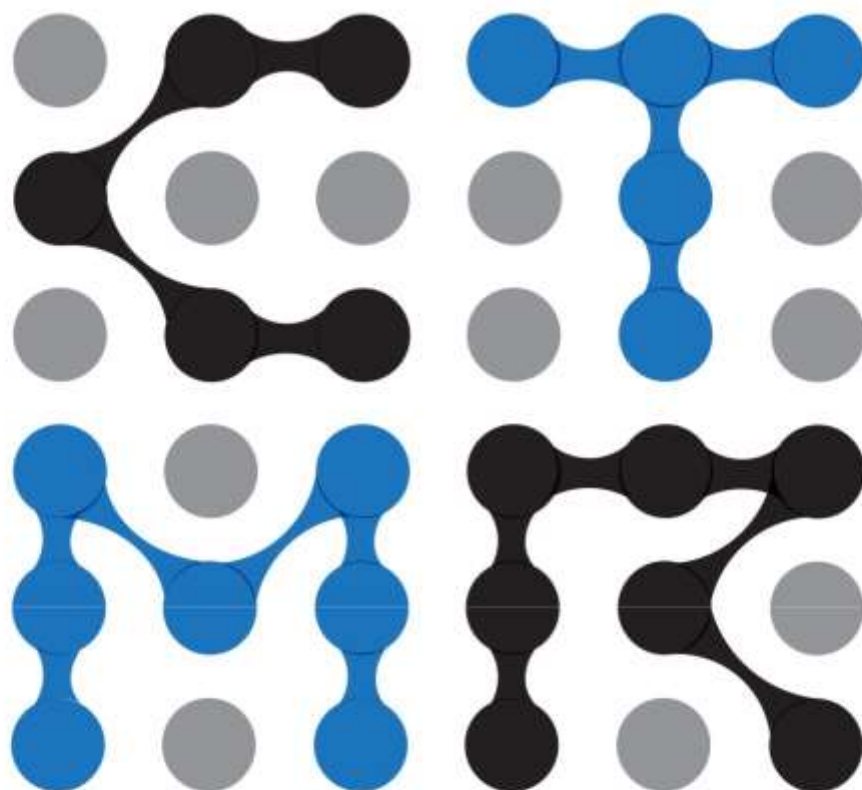
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ИССЛЕДОВАНИЕ СВОЙСТВА НЕТКАНЫХ МАТЕРИАЛОВ ИЗ ВТОРИЧНЫХ РЕСУРСОВ

С.У. Патхуллаев

***Аннотация.** Выявлена возможность использования вторичного сырья для повторной переработки и создания иглопробивных нетканых материалов различного назначения. Определены основные показатели свойств вторичного сырья и потребительских свойств иглопробивных нетканых материалов различного волокнистого состава, что позволяет выявить области их возможного применения для улучшения качества и расширения ассортимента.*

В современных условиях дефицита и постепенного истощения природных сырьевых ресурсов более актуальными становятся исследования, направленные на возможность переработки местного вторичного сырья (отходы швейной и других отраслей промышленности) и повторного его использования в производстве иглопробивных нетканых материалов различного назначения.

Комплексные исследования потребительских свойств иглопробивных нетканых материалов, установление количественного влияния различных факторов на формирование и оценку их потребительских свойств для повышения качества и расширения областей возможного их применения до сих пор остаются актуальными.

Развитие и применение иглопробивных нетканых материалов в различных отраслях промышленности (швейной, обувной, мебельной, строительной) ставит задачу оптимизации и прогнозирования их физико-механических свойств на стадии производства и эксплуатации изделий из них.

Поэтому изучение процессов, происходящих в них при эксплуатации, разработка математических моделей деформационных свойств, с помощью которых возможно прогнозировать их поведение в условиях эксплуатации, приобретает особую значимость.

В связи с этим экономное расходование сырья соответствует проблемам полной переработки отходов потребления и производства швейных, трикотажных, рыбодобывающих предприятий (вышедшие из эксплуатации канаты, сетная часть орудий лова и отходы при их производстве), что способствует созданию безотходных технологий, энергосбережению и экономии ресурсов, снижению затрат и одновременно позволяет решить экологическую проблему утилизации отходов.

Учитывая дефицит сырья, решались вопросы оптимизации различного волокнистого состава и структуры при создании новых видов иглопробивных нетканых материалов для рационального их использования в различных отраслях промышленности.

Вышеизложенные вопросы по разработке новых видов высокотехнологичных утепляющих и тепло-звукоизолирующих иглопробивных нетканых материалов для различных производств, формирование потребительских свойств и управление их качеством на основе комплексного использования вторичных ресурсов являются актуальными для развития экономики республики.

Из анализа литературных источников по текстильным материалам, в том числе нетканых материалов, установлено, что проблеме формирования потребительских свойств

посвящено недостаточное число работ, требуется подробное изучение иглопробивных нетканых материалов из вторичного сырья различного состава и структуры.

Особое внимание в данной работе уделено анализу современных методов по описанию деформационных свойств нетканых материалов. В зависимости от назначения иглопробивных нетканых материалов необходимо при проектировании текстильных изделий иметь исчерпывающую информацию об особенностях их механических характеристик, зависящих от целевого состава и структуры.

В нашем случае определяющую роль на потребительские свойства текстильных материалов оказывают волокнистый состав, структура и деформационные характеристики, которые возникают в процессе их эксплуатации. Для получения полной информации по особенностям деформационного процесса при разных режимах нагружения требуется проведение специальных опытов. Решению данной проблемы способствуют мировое увеличение производства нетканых материалов и расширение областей их применения, а предпосылками их интенсивного роста являются простота технологии, возможность использования вторичного сырья, низкая себестоимость продукции.

Производство нетканых материалов базируется на использовании больших запасов отходов потребления местной рыболовецкой отрасли (вышедшие из эксплуатации капроновые канаты и сетная часть орудий лова), отходов производства фабрик по изготовлению орудий лова при создании рыбопромыслового оборудования, а также швейных фабрик. Отходами производства орудий лова являются концевые части канатов, тралов, нестандартные сетные полотна и другие элементы, а швейных фабрик - лоскуты, обрезки.

Была проведена работа по расширению ассортимента и прогнозированию потребительских свойств нетканых материалов различного назначения. Из перечисленных видов сырья были выработаны опытные партии иглопробивных нетканых материалов различного волокнистого состава и структуры, которые явились объектами настоящего исследования.

Основными критериями выбора сырья стали низкая стоимость и достаточные ресурсы местного вторичного сырья, что позволит увеличить сырьевые запасы без дополнительных трудовых затрат при одновременном решении экологической задачи по утилизации отходов. В связи с тем что к нетканым материалам предъявляются разные требования, зависящие от условий эксплуатации и назначения, они должны обладать различными свойствами.

На базовом предприятии были выработаны 6 опытных вариантов одно-, двух- и трёхкомпонентных иглопробивных нетканых материалов различного волокнистого состава.

Опытные варианты 1, однокомпонентные - капрон 100%. Остальные опытные образцы двух- и трёхкомпонентные содержат в составе смесок капрон, шерсть и хлопок в различном процентном соотношении: варианты 2 - капрон и шерсть 75:25; варианты 3 - капрон и шерсть 50:50; варианты 4 капрон и шерсть 25:75; вариант 5 - капрон и хлопок 50:50; вариант 6 - капрон, хлопок и шерсть 40:30:30. Состав смесей для выработки опытных образцов нетканых полотен и характеристика их по основным показателям структуры даны в таблице.

Таблица

Состав смесок и структурные характеристики опытных ИНМ

Варианты ИНМ	Названия компонентов в составе			Поверхностная плотность g/m ²	Коэффициент неровности,%	Плотность образцов, kg/m ³	П ь, %
	смесок,%						
	Вторичный полиамидны й сырец	Восстановленные					
		Шерсть	Хлопок				
Вариант 1	100	-	-	324	6,1	81	92
Вариант 2	75	25	-	315	6,7	67	94
Вариант 3	50	50	-	309	6,7	68	94
Вариант 4	25	75	-	331	5,3	74	93
Вариант 5	50	-	50	417	5,1	160	92
Вариант 6	40	30	30	389	5,4	146	94

Экспериментально определены основные показатели свойств вторичного сырья и иглопробивных нетканых материалов разного волокнистого состава, что позволило установить возможные области их применения: утеплители для бытовой и специальной зимней одежды, обувные стелечные полотна, и теплоизоляционные строительные материалы.

В качестве компонентов смесок выбраны: сырье капроновое вторичное, восстановленные шерсть и хлопок. Указанные компоненты существенно различаются по химическому составу, строению и комплексу свойств. Использование капроновых, шерстяных и хлопковых волокон в составе смесок обусловлено следующими факторами: дешевизна, доступность местной сырьевой базы в связи с её территориальной близостью к предприятиям, производящим нетканые полотна. Вариация компонентов в различном процентном соотношении даст возможность выбора оптимального волокнистого состава смеси и прогнозирования свойств готовых изделий в зависимости от направлений их использования.

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THE ROLE OF UNIVERSITY SPORTS IN STUDENTS' SOCIALIZATION AND ACADEMIC PERFORMANCE

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Abstract This article examines the role of sports in universities as a social phenomenon and its impact on the student community and society as a whole. It analyzes aspects of socialization, the influence of sports on academic performance, personal development, and students' health. Special attention is given to the role of sports in shaping traditions and strengthening social ties. Government programs supporting student sports are also considered.

Keywords: sports, university, socialization, student health, academic performance, social development, student community.

Modern higher education includes not only academic learning but also active participation in sports. Universities are not just institutions for acquiring knowledge; they are environments where students develop social skills, leadership qualities, and a sense of belonging. Sports provide an essential platform for students to engage in structured physical activities that contribute to their overall well-being and academic success.

From a social science perspective, sports are considered an essential factor in socialization, identity formation, and youth health improvement. The participation of students in sports activities fosters discipline, teamwork, and self-motivation. Moreover, university sports programs help bridge gaps between students from different cultural and social backgrounds, making sports an effective tool for integration.

This article analyzes the impact of sports in universities on the student community and society in general, highlighting its role in socialization, academic performance, health, and overall social development.

Sports as a Means of Socialization

Sports play a significant role in the socialization process within the university environment. Universities bring together students from different cultural, social, and economic backgrounds. Sports create a common ground where students can interact, collaborate, and build strong social networks.

Joint training sessions, participation in competitions, and membership in sports clubs help form social connections and teamwork skills. The team-oriented nature of many sports activities teaches students how to cooperate, trust one another, and work toward shared goals. Studies show that students engaged in sports activities demonstrate a higher level of social adaptation and self-confidence.

Furthermore, sports events also promote intercultural communication, as teams often consist of representatives of various nationalities and social groups. International students, who may initially face challenges adapting to new environments, often find sports a valuable means of connecting with local students. Thus, sports serve as a tool for integration and strengthening social capital, fostering a more inclusive and dynamic campus environment.

The Impact of Sports on Academic Performance and Personal Development

Despite the common belief that sports may distract from studies, research indicates a positive effect of physical activity on cognitive functions and academic performance. Studies have shown that students who engage in regular physical activity tend to have better concentration, improved memory, and enhanced problem-solving skills. Physical exercise stimulates brain function, increases oxygen flow to the brain, and helps students manage stress effectively.

Regular sports participation also enhances self-discipline, goal-setting, and time management skills. Students who balance both academics and sports develop a strong work ethic that benefits them in their studies and future careers.

Additionally, sports cultivate qualities such as discipline, determination, and organization, which are beneficial not only in studies but also in future professional careers. Many employers value graduates with athletic experience, as it demonstrates their ability to work in a team, handle stress, and achieve goals. The leadership skills acquired through team sports also prepare students for managerial and leadership roles in their professional lives.

Sports and Student Health

One of the most critical aspects of sports development in universities is its impact on students' physical and mental health. A sedentary lifestyle, associated with prolonged study sessions and working on computers, negatively affects young people's physical condition. Many students suffer from poor posture, obesity, and other health issues due to a lack of physical activity. Regular training helps reduce the risk of cardiovascular diseases, strengthen the immune system, and improve overall well-being.

Physical activity also plays a crucial role in mental health. The academic environment can be highly stressful, with students experiencing anxiety, depression, and burnout. Sports provide a healthy outlet for stress relief, improving mood through the release of endorphins. Studies indicate that students who engage in regular sports activities report lower levels of anxiety and depression and higher levels of emotional resilience.

Additionally, sports help instill lifelong habits of fitness and well-being. Universities that promote active lifestyles encourage students to continue engaging in physical activities even after graduation, contributing to long-term public health benefits.

Sports as a Factor in Social Development

The sports culture in universities affects not only individual students but also society as a whole. University sports clubs and competitions create traditions, unite communities, and enhance the institution's positive image. Sporting events, such as intercollegiate tournaments, attract large audiences and bring together students, alumni, and faculty members, fostering a sense of pride and community.

The success of student teams in inter-university and international tournaments promotes a healthy lifestyle and encourages youth involvement in sports. Role models among student-athletes inspire younger students and help cultivate a culture of excellence both on and off the field.

Government support for student sports is also a crucial aspect of the education system's development. In many countries, programs provide funding for sports sections and scholarships for talented athletes. These scholarships enable students to pursue higher education while simultaneously excelling in their chosen sports. This contributes to the development of competitive sports professionals and strengthens national sports potential. Furthermore, investing in university sports can have positive economic implications, as strong university athletic programs can attract sponsorships and increase university visibility.

Prospects for the Development of University Sports

Today, the development of university sports remains an essential task for educational institutions and governments. Key areas include expanding access to sports facilities, implementing innovative training programs, and promoting an active lifestyle among young people. Universities should invest in modernizing sports infrastructure, providing access to high-quality training facilities, and employing professional coaches to support student-athletes.

Digitalization in sports should also be considered: modern technologies allow for the development of personalized training programs, monitoring students' physical conditions, and improving training efficiency. Wearable fitness technology, sports analytics, and virtual coaching platforms are revolutionizing the way student-athletes train and compete. By integrating technology into sports programs, universities can enhance student performance and optimize training schedules. Moreover, universities should encourage interdisciplinary research on sports science, nutrition, and mental health to develop evidence-based approaches to student-athlete training and well-being. Partnerships between universities and professional sports organizations can further advance opportunities for students in the field of sports management and sports medicine.

Conclusion

University sports play a vital role not only in students' lives but also in societal development. They promote socialization, improve academic performance, strengthen health, and develop leadership qualities. In the modern world, university sports are becoming a powerful tool for nurturing well-rounded individuals prepared for professional and social challenges.

Given the numerous benefits associated with university sports, it is crucial for educational institutions and policymakers to prioritize sports development. The integration of sports into university culture should be seen as an investment in both individual student success and broader societal well-being. Therefore, the development of sports programs in universities should remain a priority in educational policy.

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PHYSICAL CULTURE AS A TOOL FOR SOCIAL ADAPTATION OF FOREIGN STUDENTS IN UNIVERSITIES OF UZBEKISTAN

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ABSTRACT: In the modern world, education is becoming global, which leads to an increase in the number of foreign students in higher education institutions of Uzbekistan. One of the key factors in the successful social adaptation of foreign students is physical education. Regular sports and physical activity not only improve physical condition, but also help to integrate into a new socio-cultural environment. The article examines the mechanisms of the influence of physical education on the social adaptation of foreign students, analyzes the problems they face, and suggests ways to solve them. Particular attention is paid to the role of sports events and team training in strengthening intercultural ties.

Key words: physical education, social adaptation, foreign students, sports, higher education, Uzbekistan, intercultural interaction.

In recent years, there has been an increase in the number of foreign students studying at universities in Uzbekistan. This process is accompanied by a number of adaptation difficulties associated with the language barrier, cultural differences and social isolation. Foreign students face the need to adapt to new conditions of study, life and communication, which requires active support from educational institutions. One of the effective means of social adaptation is physical education, which promotes health, development of communication skills and integration into a new environment.

Physical education performs several key functions in the adaptation process. Firstly, it helps reduce the level of stress associated with adaptation difficulties due to regular physical activity. Secondly, sports activities create an environment for informal communication and expanding the circle of acquaintances, which contributes to the formation of a sense of belonging to the student community. Thirdly, participation in sports events contributes to the development of leadership qualities, self-confidence and social activity of students.

Physical education as a factor of social adaptation

Physical education plays an important role in the process of social adaptation of foreign students, offering a variety of opportunities to improve their general well-being and integration into a new socio-cultural environment. In addition to the obvious benefits for physical health, it has a significant impact on psychological state, social connections and the ability to adapt to new living conditions.

Moving to a new country to study is always a serious stress for an international student. A new language, a different culture, an unfamiliar environment, separation from family and friends - all this can cause feelings of anxiety, loneliness and depression. Physical activity is an effective tool for relieving psychological stress and improving emotional state. During exercise, the body produces endorphins, the so-called «happiness hormones», which have a positive effect on mood, self-esteem and overall psycho-emotional state. Regular exercise helps reduce the level of cortisol, the stress hormone, and improve the quality of sleep, which also helps improve the psychological state.

Sports activities create a unique informal atmosphere that helps to establish friendships and develop communication skills. Unlike the academic environment, where communication is often limited by formal frameworks, sports teams and groups provide opportunities for informal communication, sharing experiences and supporting each other. Joint training, games and competitions help to overcome language and cultural barriers, learn to work in a team and find common ground with people from different countries and cultures. Participation in sports activities helps to form a sense of belonging to a group and reduce feelings of loneliness and isolation, which is especially important for international students far from home.

Moving to Uzbekistan, a country with a unique climate and distinctive traditions, can be a serious challenge for foreigners. Adapting to new climate conditions, eating habits, and everyday life requires time and effort. Regular physical exercise helps foreign students better adapt to these changes. Physical exercise strengthens the immune system, increases the body's resistance to disease, and helps to more easily cope with the change of climate zones. In addition, sports contribute to the formation of healthy habits and proper nutrition, which is also important for adapting to new living conditions. Physical activity helps foreign students quickly adapt to a new daily routine, class schedule, and other features of life in Uzbekistan.

Finally, physical exercise helps to adapt to new living conditions and integrate into the student community, which contributes to their successful studies and a pleasant stay in Uzbekistan.

The role of universities in organizing physical activity

Higher education institutions in Uzbekistan are actively implementing programs to develop physical education among students. The organization of sports sections, competitions and mass events helps involve foreign students in the social life of the university. Many universities offer special adaptation programs that include sports activities aimed at involving students of different nationalities. Also, the creation of student sports clubs allows for the formation of friendly communities where foreign students can develop their sports skills and cultural interaction. In addition, the availability of sports facilities at universities, such as gyms, swimming pools and sports grounds, plays an important role in popularizing a healthy lifestyle among students.

Problems and solutions

The main problems include differences in students' physical fitness, lack of information about available sports sections, and language barriers. Many international students may have difficulty understanding the rules and organization of sports events due to language differences. The solution to these problems may be the creation of multilingual information platforms, introductory adaptation programs, and active involvement of students in sports events through mentoring. For example, introductory sports training with the participation of physical education teachers who speak foreign languages or senior student mentors who have already undergone adaptation can significantly facilitate the process of including international students in the university's sports life.

Another important issue is the lack of awareness among students about sports opportunities at the university. Posting information about sports events on social networks, university mobile applications and dormitory boards can help attract international students to an active lifestyle.

Physical education plays an important role in the adaptation process of foreign students, helping them overcome barriers and integrate into a new environment. Sports activities help improve health, reduce stress, improve emotional state and form intercultural ties. To improve the effectiveness of adaptation of foreign students through physical education, it is necessary to

continue to develop sports initiatives, expand access to physical activity and create favorable conditions for the participation of foreign students in the sports life of universities in Uzbekistan. In the future, it is important to develop joint international sports projects, organize student competitions with the participation of students of different nationalities and implement programs that promote the active involvement of foreign students in the sports life of universities. In addition, strengthening the interaction between universities and sports federations can contribute to the further development of sports infrastructure and the attraction of foreign students to mass sports.

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Annotation: Modern Issues in Children's Health. Children's health is a crucial aspect of society, as it directly influences the future well-being of individuals and communities. In recent years, various modern challenges have emerged that affect children's physical and mental health. Among the most pressing issues are childhood obesity, malnutrition, mental health disorders, and the impact of digital technology on children's development. One of the significant concerns is childhood obesity, which has been rising due to unhealthy dietary habits and a sedentary lifestyle. Poor nutrition, including both undernutrition and overnutrition, leads to developmental issues and chronic diseases. Mental health problems, such as anxiety, depression, and behavioral disorders, are also increasing among children due to social pressures, academic stress, and family-related factors. Additionally, excessive screen time and digital addiction have led to sleep disturbances, reduced physical activity, and impaired social skills. Addressing these challenges requires a multidisciplinary approach involving healthcare professionals, educators, policymakers, and parents. Promoting healthy lifestyles, ensuring access to quality healthcare, and raising awareness about mental well-being are essential steps in improving children's health. By implementing effective policies and fostering supportive environments, we can create a healthier future for the younger generation.

Keywords: Children's health, childhood obesity, malnutrition, mental health, digital addiction, screen time, sedentary lifestyle, physical activity, nutrition, well-being, developmental disorders, chronic diseases, healthcare access, pediatric care, behavioral disorders, social pressures, academic stress, family environment, sleep disturbances, lifestyle choices, preventive healthcare, emotional well-being, early intervention, educational policies, public health, physical development, cognitive development, digital technology impact.

Introduction.

Modern Issues in Children's Health. Children's health is a fundamental pillar of societal well-being, as it directly affects future generations' physical, mental, and social development. In the 21st century, rapid technological advancements, changing lifestyles, and environmental factors have led to new and complex health challenges for children. While medical science has made significant progress in improving child survival rates and combating infectious diseases, modern health concerns such as obesity, malnutrition, mental health disorders, and the negative effects of excessive digital exposure have emerged as pressing issues. One of the most alarming trends is the rise in childhood obesity, which is linked to poor dietary habits, lack of physical activity, and the widespread availability of unhealthy processed foods. At the same time, malnutrition remains a global issue, with many children suffering from either undernutrition or micronutrient deficiencies, leading to impaired growth and cognitive development. Mental health problems, including anxiety, depression, and attention disorders, have also increased significantly, often exacerbated by academic stress, social media influence, and family dynamics. Another major concern is the excessive use of digital devices, which has reshaped children's lifestyles, leading to reduced physical activity, sleep disturbances, and social isolation. While technology provides

educational benefits, unregulated screen time can contribute to behavioral problems, reduced attention spans, and developmental delays. Additionally, environmental factors such as pollution, climate change, and exposure to harmful chemicals further threaten children's long-term health. Addressing these challenges requires a multi-faceted approach involving parents, educators, healthcare professionals, and policymakers. By promoting healthy habits, ensuring access to quality healthcare, and implementing effective public health policies, society can work towards safeguarding children's well-being. Understanding and addressing these modern health issues is crucial to creating a healthier, more sustainable future for the next generation.

Main Body.

Modern Issues in Children's Health. Children's health is influenced by various factors, including genetics, lifestyle choices, environmental conditions, and access to healthcare. In recent years, several modern challenges have emerged, significantly impacting children's physical and mental well-being. The most pressing issues include childhood obesity, malnutrition, mental health disorders, the impact of digital technology, and environmental hazards. Addressing these concerns requires a comprehensive and multidisciplinary approach.

1. **Childhood Obesity and Sedentary Lifestyle.** One of the most alarming modern health concerns is childhood obesity. The increasing consumption of high-calorie, processed foods combined with a lack of physical activity has led to a rise in obesity rates among children. According to the World Health Organization (WHO), childhood obesity has nearly tripled over the past few decades, leading to an increase in chronic diseases such as type 2 diabetes, cardiovascular problems, and joint disorders. The modern lifestyle, characterized by excessive screen time and reduced outdoor activities, has further contributed to sedentary behavior among children. Many spend hours on digital devices, leading to decreased physical exercise and poor posture-related issues. Encouraging physical activity through school programs, parental involvement, and community initiatives is crucial to reversing this trend.

2. **Malnutrition and Nutritional Deficiencies.** While obesity is a growing problem, malnutrition remains a critical issue, particularly in low-income regions. Malnutrition includes both undernutrition, where children do not receive adequate nutrients, and overnutrition, which leads to obesity. Children suffering from undernutrition may experience stunted growth, weakened immune systems, and cognitive impairments. Micronutrient deficiencies, such as a lack of iron, vitamin A, and iodine, are common in many parts of the world, leading to developmental delays and increased susceptibility to infections. Governments and health organizations must focus on improving food security, promoting breastfeeding, and providing nutritional education to ensure children receive balanced diets essential for their growth and development.

3. **Mental Health Challenges in Children.** Mental health issues among children have become a growing concern in recent years. Anxiety, depression, attention-deficit hyperactivity disorder (ADHD), and other behavioral disorders are increasingly diagnosed in young populations. Factors such as academic pressure, family stress, bullying, and social media influence contribute to these mental health challenges. Many children struggle with emotional well-being due to the fast-paced modern lifestyle and the constant exposure to digital content. Social media, while offering connectivity, can also lead to cyberbullying, unrealistic self-image expectations, and anxiety. The lack of open discussions about mental health often prevents children from receiving the support they need. Schools and communities play a crucial role in addressing these issues by implementing mental health programs, providing counseling services, and fostering an environment where children feel safe discussing their emotions. Early intervention and awareness

campaigns can help reduce the stigma surrounding mental health and ensure children receive proper care.

4. The Impact of Digital Technology on Children's Development. The rapid advancement of technology has changed the way children interact, learn, and play. While digital devices provide access to education and information, excessive screen time has raised concerns regarding its impact on children's health. Studies have shown that prolonged exposure to screens can lead to sleep disturbances, eye strain, reduced attention spans, and decreased social interactions. Children who spend excessive time on smartphones, tablets, and computers may experience difficulties in developing essential life skills such as problem-solving, communication, and emotional regulation. The overuse of digital entertainment has also contributed to decreased outdoor play, negatively affecting physical health and social development. Parents and educators must establish balanced screen time guidelines, encourage outdoor activities, and promote interactive learning experiences that combine technology with traditional play-based education. Setting age-appropriate limits on digital consumption can help children develop healthy habits.

5. Environmental and Public Health Challenges. Environmental factors play a significant role in children's health. Air pollution, climate change, and exposure to harmful chemicals have led to an increase in respiratory diseases, allergies, and other health complications. Children are particularly vulnerable to environmental hazards due to their developing immune systems and higher exposure to pollutants. Urbanization and industrialization have increased pollution levels, affecting children's lung development and increasing the risk of asthma and other respiratory disorders. Additionally, unsafe drinking water and poor sanitation conditions in some regions contribute to the spread of infectious diseases. Addressing these challenges requires stricter environmental regulations, improved waste management systems, and increased awareness about sustainable living practices. Governments and communities must work together to reduce pollution and create healthier living conditions for children.

Conclusion:

Children's health is a crucial factor that determines the well-being of future generations. In today's world, modern challenges such as childhood obesity, malnutrition, mental health disorders, excessive digital exposure, and environmental hazards have significantly impacted children's overall development. These issues are interconnected and require a comprehensive approach to ensure the physical, emotional, and cognitive well-being of young individuals. Addressing childhood obesity and malnutrition requires a focus on balanced diets, regular physical activity, and public health initiatives that promote healthy lifestyles. Mental health support systems, including counseling and awareness programs, must be strengthened to help children cope with stress, anxiety, and social pressures. Additionally, regulating digital consumption and encouraging outdoor activities can mitigate the negative effects of excessive screen time on children's development.

Environmental factors such as pollution and climate change also pose serious health risks, requiring government policies and community efforts to create cleaner and safer environments for children. Healthcare accessibility, proper nutrition, and mental well-being should be prioritized to ensure that every child has the opportunity to grow and thrive in a supportive and healthy setting. Ultimately, safeguarding children's health is a collective responsibility that involves parents, educators, healthcare professionals, and policymakers. By taking proactive measures and implementing effective solutions, we can create a healthier and brighter future for the next generation.

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O'QITISHNING ZAMONAVIY YONDASHUVLARI: MATEMATIKA O'QITISH
METODIKASI MISOLIDA

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Annotatsiya: Ushbu maqolada matematika o’qitish metodikalarining zamonaviy yondashuvlari tahlil qilinadi. Maqolada interfaol o’qitish, loyihali o’qitish, kompyuter va onlayn resurslardan foydalanish, kollaborativ o’qitish, differensial o’qitish, kritik fikrlashni rivojlantirish va blended learning (aralash o’qitish) kabi zamonaviy metodlar va ularning matematikani o’qitishda samaradorligi ko’rib chiqiladi. Ushbu yondashuvlarning asosiy maqsadi o’quvchilarda faqat bilimlarni shakllantirish emas, balki kreativ fikrlash, mantiqiy tafakkur va amaliy ko’nikmalarni rivojlantirishdir. Maqola ta’lim tizimini yanada samarali qilish uchun zamonaviy metodlarni qo’llashning zarurligini ta’kidlaydi.

Kalit so’zlar: matematika o’qitish, zamonaviy metodlar, interfaol o’qitish, loyihali o’qitish, blended learning, kompyuter texnologiyalari, kollaborativ o’qitish, differensial o’qitish, kreativ fikrlash.

Аннотация: В статье анализируются современные подходы в методике преподавания математики. Рассматриваются такие методы, как интерактивное обучение, проектное обучение, использование компьютерных и онлайн-ресурсов, совместное обучение, дифференцированное обучение, развитие критического мышления и blended learning (смешанное обучение). Основная цель этих методов - не только формирование знаний у учеников, но и развитие креативного мышления, логического рассуждения и практических навыков. Статья подчеркивает необходимость применения современных методов для улучшения образовательного процесса.

Ключевые слова: преподавание математики, современные методы, интерактивное обучение, проектное обучение, blended learning, компьютерные технологии, совместное обучение, дифференцированное обучение, креативное мышление.

Abstract: This article analyzes modern approaches to mathematics teaching methodologies. The article discusses methods such as interactive learning, project-based learning, the use of computer and online resources, collaborative learning, differentiated learning, the development of critical thinking, and blended learning. The primary goal of these methods is not only to develop knowledge in students but also to foster creative thinking, logical reasoning, and practical skills. The article emphasizes the necessity of applying modern methods to enhance the effectiveness of the educational process.

Keywords: mathematics teaching, modern methods, interactive learning, project-based learning, blended learning, computer technologies, collaborative learning, differentiated learning, creative thinking.

Matematika o’qitish metodikalarining zamonaviy yondashuvlari matematika fanining o’quvchilarga samarali o’rgatilishi va amaliyotga tatbiq etilishida katta ahamiyat kasb etadi. Ta’limda metodlar, o’qitishning mazmuni va vositalari doimiy ravishda rivojlanib, yangi texnologiyalar, pedagogik metodologiyalar va zamonaviy talabalar ehtiyojlariga moslashtirilgan yondashuvlar yuzaga kelmoqda. Shu bois, matematika o’qitishning zamonaviy yondashuvlarini tahlil qilish o’quv jarayonining samaradorligini oshirishga yordam beradi.

1. *Interfaol o'qitish metodlari*

Zamonaviy ta'limda interfaol metodlar matematikani o'rgatishda muhim o'rin tutadi. Bu metodlar o'quvchilarni passiv tinglovchilardan faol ishtirokchilarga aylantiradi. Bunga misol sifatida guruhli ishlash, muammoli vazifalarni hal qilish, o'quvchilarning fikrlarini o'rganish va ko'rgazmali materiallardan foydalanish kabilar kiritiladi. Interfaol metodlar o'quvchilarga matematik tushunchalarni o'zlashtirishda faol ishtirok etishga imkon yaratadi va ularda tanqidiy fikrlash, muammolarni hal qilish ko'nikmalarini rivojlantiradi.

2. *Loyihali o'qitish (Project-based learning)*

Loyihali o'qitish matematikani o'rganishda real hayotdagi masalalarni hal qilishga qaratilgan metod hisoblanadi. Bu metod orqali talabalar amaliy loyihalar ishlab chiqib, o'rganilgan nazariy bilimlarni amalda qo'llashadi. Misol uchun, matematika darsida talabalar muayyan mavzu bo'yicha loyiha ishlab chiqib, matematik modellarni yaratadilar, ularni tahlil qilib, haqiqiy hayotdagi masalalarni yechishda ishlatadilar. Loyihali o'qitish o'quvchilarda mas'uliyat hissini shakllantiradi va ularning kreativ fikrlash qobiliyatini rivojlantiradi.

3. *Kompyuter va onlayn resurslardan foydalanish*

Zamonaviy texnologiyalar, jumladan kompyuterlar va onlayn ta'lim platformalari matematikani o'rgatishda keng qo'llanilmoqda. Interaktiv dasturni yoki onlayn matematik platformalarini foydalanish orqali o'quvchilar uchun matematik masalalarni interfaol tarzda yechish imkoniyati yaratiladi. Bunday platformalar talabalar uchun o'qish materiallarini, testlarni, masalalar va amaliy mashg'ulotlarni onlayn shaklda taqdim etish imkonini beradi. Shu bilan birga, matematika fanini o'rgatishda simulyatsiya dasturlari, vizualizatsiya vositalari va animatsiyalardan foydalanish o'quvchilarning tushunishini osonlashtiradi.

4. *Kollaborativ o'qitish*

Kollaborativ o'qitish – bu o'quvchilarni guruhlariga ajratib, ularga birgalikda ishlash, muammolarni hal qilish imkoniyatini beruvchi metoddir. Bu yondashuv talabalar orasida hamkorlikni, jamoaviy ishlashni va bilimlarni baham ko'rishni rag'batlantiradi. Matematika darslarida kollaborativ yondashuvni qo'llash o'quvchilarning kommunikatsiya ko'nikmalarini oshiradi va ular bir-biridan o'rganish imkoniyatiga ega bo'lishadi. O'quvchilarga guruhda ishlash jarayonida birgalikda muammolarni yechishda yordam berish, masalalarni tahlil qilish va echimlarni muhokama qilish juda samarali.

5. *Differensial o'qitish*

Differensial o'qitish metodikasi o'quvchilarning individual ehtiyojlariga mos ravishda darsni tashkil qilishga asoslanadi. Bu yondashuv har bir o'quvchining o'ziga xos qobiliyatlari, bilim darajasi va o'rganishga bo'lgan motivatsiyasini inobatga oladi. Masalan, ba'zi talabalar uchun murakkab matematik masalalar ko'proq vaqt va e'tibor talab qilishi mumkin, boshqalari esa tezda echim topishlari mumkin. Shuning uchun darslar individual tarzda tashkil etilishi va o'quvchilarga moslashtirilgan topshiriqlar berilishi lozim. Bunday yondashuv o'quvchilarga o'z o'rganish tezligini boshqarish imkoniyatini beradi.

6. *Kritik fikrlashni rivojlantirish*

Zamonaviy metodikalar matematikani o'qitishda nafaqat bilim, balki tanqidiy fikrlashni rivojlantirishga ham katta e'tibor qaratadi. Matematik muammolarni hal qilishda talabalar faqat aniq javobni topish emas, balki ularni qanday qilib topish kerakligi haqida o'ylashlari va turli usullarni qo'llashlari kerak. Bu yondashuv o'quvchilarda mantiqiy tafakkur, analitik fikrlash va qaror qabul qilish ko'nikmalarini rivojlantiradi.

7. *Blended Learning (Aralash o'qitish)*

Blended learning – bu an'anaviy darslar bilan onlayn o'qitish usullarining kombinatsiyasidir. Talabalar darsning bir qismini onlayn tarzda o'rganadilar, boshqa qismini esa an'anaviy sinfda o'qituvchilari bilan o'rganadilar. Aralash o'qitish o'quvchilarga o'z vaqtini boshqarish imkonini beradi va ta'lim jarayonini yanada moslashuvchan va samarali qiladi. Matematikani o'rgatishda blended learning yondashuvi o'quvchilarga matematik kontentni yanada qiziqarli va interaktiv tarzda taqdim etadi.

Zamonaviy matematik o'qitish metodikalarining asosiy maqsadi o'quvchilarni faqatgina matematik bilim bilan ta'minlash emas, balki ularni kreativ, tanqidiy fikrlash, jamoada ishlash, texnologiyalarni qo'llash kabi ko'nikmalar bilan ham ta'minlashdir. Interfaol, loyihali o'qitish, kompyuter texnologiyalaridan foydalanish, kollaborativ o'qitish kabi zamonaviy yondashuvlar o'quvchilarni yanada faol, mustaqil va o'rganishga qiziqqan shaxslar sifatida rivojlantirishga xizmat qiladi. Shuning uchun, matematika o'qitishning zamonaviy metodologiyalari o'quvchilarning bilimini yanada chuqurlashtiradi va ularni amaliy hayotga tayyorlaydi.

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Maqsud Shayxzodaning “Jaloliddin Manguberdi” dramasiining jasoratining ifodalanishi**Boyxurozov Diyorbek Sherzod o‘gli**

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Annotasiya: Maqolada Maqsud Shayxzodaning “Jaloliddin Manguberdi” dramasiidagi Jaloliddinning jasorati, vatanga bo‘lgan muhabbati, shijoati, ifodalanishi haqida so‘z yuritilgan.

Bir kun paydo bo‘laman shu yurt, shu yerda,

Yurt shaydosi ko‘rinmas g‘urbatda – go‘rda.

Kim yurtdan yovni quvsa, mendurman o‘shal!

Ulug‘vor niyatlarga kor qilmas ajal.

Kalit so‘zlar: Jaloliddin Manguberdi, Mo‘g‘il, jasur sarkarda, dushman, Shayxzoda, o‘zbek, sahna asari, burnida xoli bor, xoldor, Xorazmshoh, burch, qo‘shin, Toshkent, shogird, Vatan ozodligi, Sulton Muhammad.

"Ulug‘vor niyatlarga kor qilmas ajal,

Kim yurtdan yovni quvsa, mendirman o‘shal".

Maqsud Shayxzoda.

Jaloliddin Manguberdi hayoti xavf ostida qolgan paytda xatto daxriy ham Ollohdan madad kutadi. Dushman sovet mamlakatlarining g‘arbiy chegaralarini bosib o‘tib, bir necha oy mobaynida Moskva ostonalariga yetib kelganida, taqdirlari katta xavf ostida qolgan davlat rahbarlari yozuvchilarni o‘tmishdagi mashhur sarkardalar haqida asar yozishga da‘vat etadi. Ularning fikriga ko‘ra bunday asarlar xalq va armiyani o‘tmishdagi jasur sarkardalardan, xalq qahramonlaridan ibrat olishga da‘vat etishi, ularni bu mashhur shaxslarning vatanparvarlik fazilatlari ruhida tarbiyalashi mumkin edi. Shunday ajoyib buyurtmani olgan Shayxzoda o‘zbek xalqining jasur farzandlaridan biri Jaloliddin haqida sahna asarini yozishga kirishdi. Taniqli adabiyotshunos **Naim Karimov**ning fikriga ko‘ra, urush yillarida hokimiyat vakillari yozuvchilarni o‘tmishdagi mashhur sarkardalar haqida asar yozishga da‘vat etishgan. Ular bunday asarlar xalq va armiyani o‘tmishdagi jasur sarkardalardan, xalq qahramonlaridan ibrat olishga da‘vat etishi, ularni bu mashhur shaxslarning vatanparvarlik fazilatlari ruhida tarbiyalashi mumkin degan qarashda bo‘lishgan.

Respublikaning o‘sha paytlardagi rahbari **Usmon Yusupov** shoirning asarini tezroq yakunlashi uchun uni yurtimizning xushmanzara maksanlaridan biri Farg‘ona viloyatiga yuboradi. “Boshqa ishlar bilan xayolingni bo‘lma. Xalq sendan Jaloliddin to‘g‘risidagi asarni intizorlik bilan kutmoqda. Vodilga borib, uni tezroq tugallab qayt!” deya rahbar shoirni ruhlantiradi. Shunday qilib, Maqsud Shayxzoda rafiqasi Sakinaxonim bilan Farg‘onaga borib, olti oy ichida tarixiy dramani yozadi.

Shoir Vodilga yetib borganida, erta bahor bo‘lgani tufayli bog‘bonlar ham boshqa kolxozchilar ham ko‘chat ekish bilan mashg‘ul edilar. Shayxzoda ijoddan xorigan soatlarida ular bilan suhbatlashib, o‘zi ham bir-ikki ko‘chat ekdi. Shunday “Ko‘chatxonlik” paytlarida manglayida o‘tgan yillar izi bo‘rtib turgan bir bog‘bon bilan tanishib, unga bag‘ishlab she‘r yozadi. Shoir vafotidan keyin e‘lon qilingan she‘r Garchan Jaloliddin mavzusiga bag‘ishlanmagan bo‘lsada uning usha paytlardagi ruxiy xayoti bilan tanishishimizga yordam beradi.

Mana usha she'r:

Peshonada qadim ajinlar,

Ko'zda ayon tuproqning siri.

Eshitmoqni bilgandan beri

Ariqlarning nag'masin tinglar.

Aslida, shoir xam bog'bondek bir gap. U daraxt ekmasa-da, asar yozadi. Bu asardan uning o'zi emas boshqalar baxramand bo'lishadi. May oyi bo'lsa kerak, Shayxzoda shogirdlaridan biriga ikki enlik xat yozadi. Xatda uning bir necha kitob olib, Vodilga birrov kelib-ketishi so'ralgan edi. Shogird Xorazmshohlar tarixiga doir bir-ikki tarixiy kitobni olib, Vodilga yetib boradi.. So'ngra uning iltimosi bilan Marg'ilonga borib, Xudoyorxon lashkarida xizmat qilgan keksa kishilarni surishtirib topadi va o'sha paytda qo'llangan qurol-arog'larning nomlarini aniqlab keladi. Shundan keyin ustoz shogirdni yetaklab, Xo'jandga boradi. Ular Sirdaryo bo'yidagi Xo'jand qal'asining mudofaa qo'rg'oniga borib, qadimiy istehkom vayronalarini, Jaloliddin va Temur Malikning izlari hali o'chmagan joylarni o'z ko'zlari bilan ko'radilar. Odatda shunday sayrlar chog'ida Jaloliddin yoki Temur Malikning qaysi yo'ldan yurib, Sirdaroning qaysi yoqasi orqali daroni kechib o'tganini "o'z ko'zi bilan ko'rgan" yo eshitgan kishilar uchrab qoladilar. Shayxzoda shunday "tirik guvohlar" bilan suhbatlashar ekan, ular bergan ma'lumotlar qanchalik to'g'ri yo noto'g'ri bo'lishidan qat'iy nazar, bu olis tarix bilan qiziquvchi kishilarni uchratganidan astoydil quvonar, ularni noto'g'ri ma'lumotlari uchun hijolatga qo'ymagan holda o'zi Jaloliddin Manguberdi va Temur Malik haqidagi tarixiy haqiqatni zavq bilan so'zlab berar edi.

Shayxzoda asar ustida ana shu tarzda berilib ishladi. Bundan yetti asr muqaddam ro'y bergan o'ta murakkab va dahshatli voqealarni ko'z oldiga yaqqol keltirgandan keyingina asarni yozib tugatdi.

"Jaloliddin Manguberdi dramasi"dan tashqari "Jaloliddin Manguberdi" filmi ham ishlangan. Bu filmni "Oltin qalam" davlat mukofoti sovrindori, taniqli rejissyor Hamid Qahramon tomonidan senary tuzib sur'atga olingan.

Buni qarangki, odamlar qalbida vatanparvarlik tuyg'usini jo'sh urdiruvchi, qahramonlik ruhida bu asar bugun ham o'z ahamiyatini yo'qotgani yo'q. Oradan ko'p yillar o'tsa ham Shayxzodaning asarlari o'z kuch-qudratini namoyon etib kelmoqda. Yaqinda shoir Botir Ergashevning aynan "Jaloliddin Manguberdi" dramasiidagi "Ulug'vor niyatlarga kor qilmas ajal, Kim yurtdan yovni quvsa, mendirman o'shal" misrasidan ilhomlanib yozgan she'ri Ozodbek Nazarbekov tomonidan maromiga yetkazib kuylanishi va bu qo'shiq xalqimiz ko'nglidan chuqur o'rin egallagani bunga yorqin misol.

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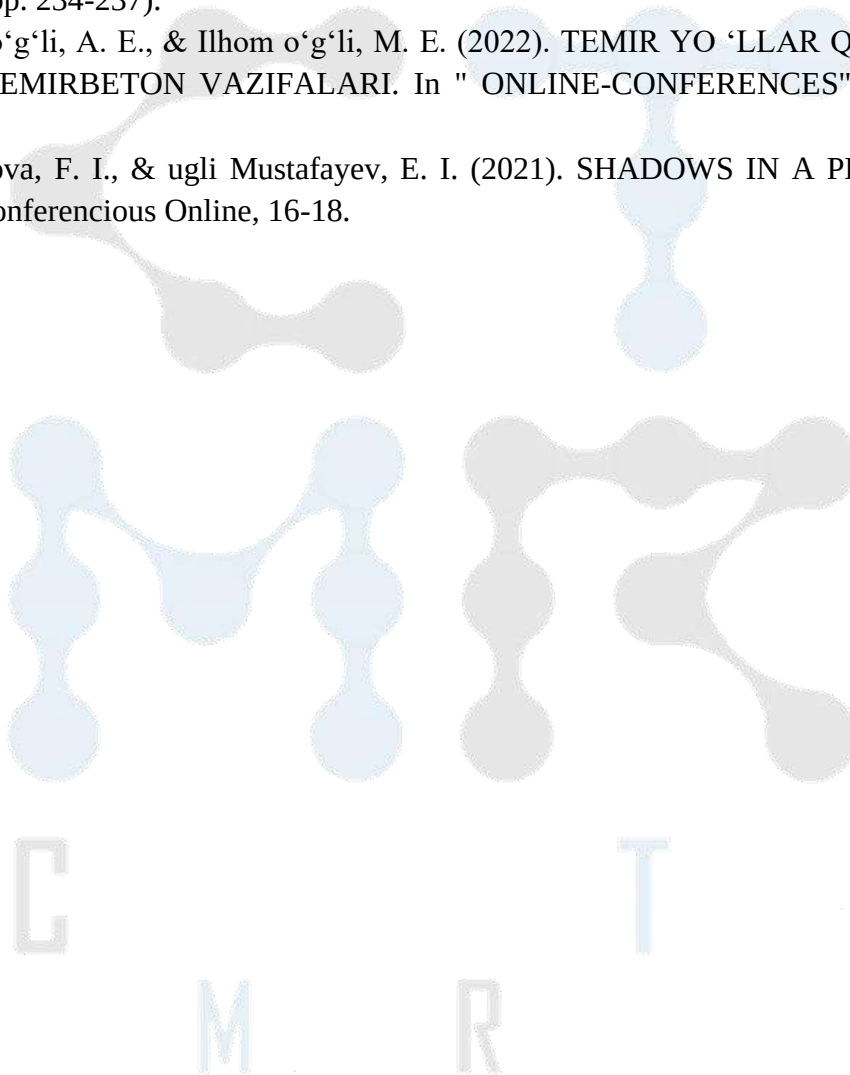
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ВЛИЯНИЕ ОБРАБОТКИ КОМПЛЕКСНЫМИ ПРЕПАРАТАМИ СЕМЯН И РАСТЕНИЙ ДЫНИ НА КАЧЕСТВЕННЫЕ ПОКАЗАТЕЛИ ПЛОДОВ

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Аннотация. В статье описывается влияние препаратов, применяемых для предпосевной подготовки семян дыни и опрыскивания растений в период вегетации на биохимический состав плодов. Результаты исследований показали, что обработка семян дыни перед посевом водорастворимым концентратом Нанокремний (0,1 г/л) и препаратом Максим XL 3,5% (5 мл/кг) в рекомендуемой норме, а также опрыскивание растений до цветения раствором оксида железа (Fe_2O_3 -1 г/л) положительно влияет на содержание водорастворимых сухих веществ, сахаров, аскорбиновой кислоты и нитратов в плодах.

Ключевые слова: дыня, семена, растения, препараты, плоды, аскорбиновая кислота, водорастворимое сухое вещество, общее содержание сахара, нитраты.

Введение. В различных странах мира в 2023 году дыни возделывались на площади 1 092 354 гектара, и было произведено 29,5 млн тонн продукции. В мировом масштабе объемы выращивания дынь в странах Европы составили в общей сложности 6,5%, в Америке - 13%, в Африке - 4,4%, в Океании - 0,8%, а в странах Азии - наибольшую долю, 75,4%.[1]. В список стран, экспортировавших наибольшее количество дынь в 2024 году вошли Казахстан (6,2 тыс.т.), Кыргызстан (7,2 тыс.т.), Россия (5,9 тыс.т.), Латвия (1,3 тыс.т.) и Германия (0,8 тыс.т.). При этом Узбекистан за январь-июль 2024 года экспортировал за рубеж 24,3 тыс.т. дынь на 10,8 млн. долларов США [2].

На сегодняшний день нанотехнологии считаются перспективным подходом для улучшения сельскохозяйственного производства и очистки загрязненных почв и подземных вод. Исследователи обнаружили, что использование наноматериалов улучшило качество окружающей среды и помогло выявить и устранить загрязненные участки, однако лишь небольшое количество наноматериалов проявило потенциально токсичные эффекты [3].

Учеными Научно-исследовательского института Овоще-бахчевых культур и картофеля были испытаны различные средства для обеззараживания семян овощных культур (томата и лука). Установлено, что при предпосевной обработке семян томата и лука микробиологическими и химическими препаратами повышается всхожесть семян, улучшается рост растений, возрастает их устойчивость к заболеваниям в ранний период развития и в конечном итоге увеличивается урожайность [4].

Метод исследования. На экспериментальном поле Научно-исследовательского института Овоще-бахчевых культур и картофеля в 2023-2024 г.г. были проведены полевые опыты на районированном в республике сорте дыни Олтин тепа. Изучалось влияние различных

препаратов на качество плодов дыни с учетом двух факторов. Первый фактор – предварительная предпосевная обработка семян дыни Нанокремнием в норме 0,1 г/л, исследованы 5 вариантов: 1. *Контроль* (замачивание семян в воде); 2. Нанокремний + двукратное опрыскивание растений водой перед цветением; 3. Нанокремний + Bio удобрение - 1 г/л (двукратное опрыскивание растений NPK + микроэлементами); 4. Нанокремний + MnO_2 - 1 г/л (двукратное опрыскивание растений диоксидом марганца перед цветением); 5. Нанокремний + Fe_2O_3 - 1 г/л (двукратное опрыскивание растений оксидом железа перед цветением).

Закладка опытов с учётом второго фактора: предварительная предпосевная обработка семян дыни препаратом Максим XL 3,5% в норме 5 мл/кг, исследованы 5 вариантов: 1. *Контроль* (замачивание семян в воде); 2. Максим XL + двукратное опрыскивание растений водой перед цветением; 3. Максим XL + Bio удобрение, 1 г/л (двукратное опрыскивание растений раствором биоудобрения); 4. Максим XL + MnO_2 - 1 г/л (двукратное опрыскивание растений диоксидом марганца перед цветением); 5. Максим XL + Fe_2O_3 - 1 г/л (двукратное опрыскивание растений оксидом железа перед цветением).

Экологически чистый препарат Нанокремний и препарат Максим XL 3,5%, Bio удобрение и растворы микроэлементов сравнивали с контролем (семена, замоченные в воде) и изучали их влияние на биохимический состав плодов. При этом содержание водорастворимых сухих веществ в плодах определяли с помощью рефрактометра (%), содержание сахара - методом Бертрона (%) [5], аскорбиновую кислоту (витамин C) - методом Мурри, мг %, содержание нитратов – методом “дисульфифенола” [6].

Результаты исследований. В 2023-2024 г.г. дыни сорта Олтин тепа выращивались на экспериментальном участке института, отбирались плоды для анализа и действие различных препаратов на биохимический состав плодов. Анализы проводились в Агрохимической лаборатории Научно-исследовательского института Овоще-бахчевых культур и картофеля (рис. 1).

При определении биохимического состава плодов дыни с учётом первого фактора – применения Нанокремния для предпосевной обработки семян дыни с последующим двукратным опрыскиванием растений перед цветением установлено увеличение содержания водорастворимого сухого вещества на 0,3% (14,7%), общего сахара на 0,9% (10,2%), аскорбиновой кислоты в среднем на 1,2 мг/% (23,7 мг/%), а содержание нитратов уменьшилось на 0,5 мг/кг (14,7 мг/кг) по сравнению с контролем (14,4%).

Таблица 1

Влияние различных препаратов на биохимические свойства плодов дыни сорта Олтин тепа, 2023-2024 гг.

Опыт варианты	Водорастворимое сухое вещество, %	Общее содержание сахара, %	Аскорбино-вая кислота, мг/%	N- NO_3 мг/кг
Первый фактор				
<i>Контроль</i> (замочка семян в воде)	14,4	9,3	22,5	15,2
<i>Нанокремний</i> 0,1 г/л (замочка семян)	14,7	10,2	23,7	14,7

Нанокремний 0,1 г/л + Bio удобрение-1 г/л	14,9	10,3	24,3	13,8
Нанокремний 0,1 г/л + MnO ₂ - 1 г/л	14,9	10,2	24,7	13,9
Нанокремний 0,1 г/л + Fe ₂ O ₃ - 1 г/л	15,4	11,1	26,1	12,9

При обработке семян дыни Нанокремнием и двукратном опрыскивании растений перед цветением Bio удобрением - 1 г/л (NPK + микроэлементы) и диоксидом марганца (MnO₂ - 1 г/л) наблюдалось увеличение содержания водорастворимых сухих веществ в плодах на 0,5% (14,9%), по сравнению с контролем, общего сахара на 0,9-1,0% (10,2-10,3%), аскорбиновой кислоты на 1,8-2,2 мг/% (24,3-24,7%), а содержание нитратов была она 1,3-1,4 мг/кг (13,8-13,9 мг/кг) меньше по сравнению с контролем (табл. 1).

Самый лучший показатель в эксперименте первого фактора был достигнут при обработке семян дыни Нанокремнием и двукратном опрыскивании растений оксидом железа (Fe₂O₃ - 1 г/л) до цветения. В результате, по сравнению с контролем, в плодах увеличилось содержание водорастворимых сухих веществ на 1,0 % (15,4%), общего сахара на 1,8 % (11,1%), аскорбиновой кислоты на 3,6 мг/% (26,1 мг/%), а содержание нитратов уменьшилось на 2,3 мг/кг (12,9 мг/кг).

В вариантах при втором факторе экспериментов с предпосевной обработкой семян дыни препаратом Максим XL 3,5%, в норме 5 мл/кг содержание водорастворимых сухих веществ в плодах увеличилось на 0,4% (13,2%), общее содержание сахара - на 0,4% (10,3%), содержание аскорбиновой кислоты - на 0,6 мг/% (19,8 мг/%), а содержание нитратов уменьшилось на 0,1 мг/кг (14,7 мг/кг) по сравнению с контролем (табл. 2).

Таблица 2

Влияние различных препаратов на биохимические свойства плодов дыни сорта Олтин тепа, 2023-2024 гг.

Опыт варианты	Водораствор- имое сухое вещество, %	Общее содержание сахара, %	Аскорбино-вая кислота, мг/%	N-NO ₃ мг/кг
Второй фактор				
Контроль (замочка семян в воде)	12,8	9,9	19,2	14,6
Максим XL, 3,5% 5 мл/кг (замочка семян)	13,2	10,3	19,8	14,7
Максим XL, 3,5% 5 мл/кг +Bio удобрением-1 г/л	13,9	10,5	20,5	14,2
Максим XL, 3,5% 5 мл/кг + MnO ₂ -1г/л	13,4	10,0	19,8	14,5
Максим XL, 3,5% 5 мл/кг + Fe ₂ O ₃ -1 г/л	14,5	11,0	21,3	13,9

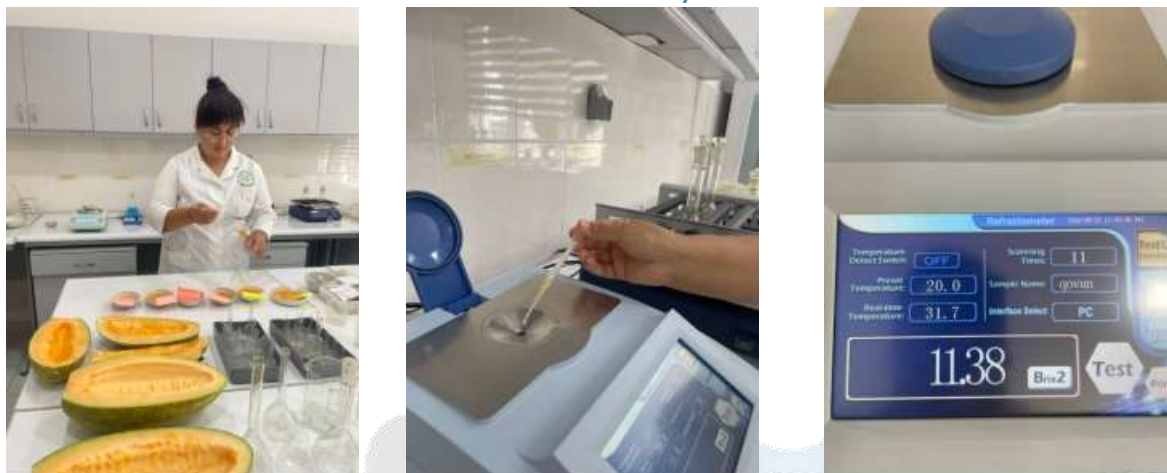


Рис. 1. Процесс анализа плодов дыни в агрохимической лаборатории.

При обработке семян дыни препаратом Максим XL и двукратном опрыскивании растений перед цветением Bio удобрением - 1 г/л (NPK+микроэлементы), диоксидом марганца (MnO_2 - 1 г/л) и оксидом железа (Fe_2O_3 - 1 г/л), по сравнению с контролем наблюдалось увеличение содержания водорастворимых сухих веществ в плодах на 0,6-1,7% (13,4-14,5%), общего сахара на 0,1-1,1% (10,0-11,0%), аскорбиновой кислоты на 0,6-2,1 мг/% (19,8-21,3 мг/%), а содержание нитратов уменьшилось на 0,1-0,7 мг/кг по сравнению с контролем (14,5-13,9 мг/кг).

При воздействии обоих факторов установлено, что по сравнению с контролем (замочка семян в воде), в плодах увеличилось содержание водорастворимых сухих веществ на 1,0-1,7%, общего содержания сахара на 1,1-1,8%, аскорбиновой кислоты на 2,1-3,6 мг/%, а содержание нитратов уменьшилось на 0,7-2,3 мг/кг.

Выводы. При применении различных препаратов для предпосевной обработки семян и опрыскивании растений во время вегетации дыни наблюдалось положительное влияние на качество плодов. Лучшие результаты были получены при предпосевной обработке семян дыни Нанокремнием (0,1 г/л) и Максим XL 3,5% (5 мл/кг), с последующим двукратным опрыскиванием растений раствором оксида железа (Fe_2O_3 - 1 г/л) до цветения. При сравнении двух факторов применения комплекса препаратов наилучшие показатели выявлены при использовании экологически чистого препарата Нанокремния.

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THE CURRENT STATE AND PROSPECTS FOR THE DEVELOPMENT OF SOCIAL COMPETENCIES OF GENERAL SECONDARY EDUCATION LEADERS IN UZBEKISTAN**Ziyoviddinova Pokiza Sadriddinovna****Master's student at Navoi state university**ziyoviddinovap@gmail.com

This article examines the current condition and future prospects of developing social competencies among general secondary education leaders in Uzbekistan. As global educational paradigms shift toward more human-centered and collaborative approaches, the role of school leadership is expanding beyond administrative functions to include strong social, emotional, and communicative competencies. The study analyzes the key components of social competence—such as empathy, interpersonal communication, conflict resolution, and cultural sensitivity—and their relevance in school leadership. Through a combination of theoretical review and empirical observation, the research highlights the strengths and gaps in the existing leadership preparation programs in Uzbekistan. The findings show that while many school principals and administrators possess technical and organizational skills, there is a notable lack of structured training in social competencies, which limits their effectiveness in managing pedagogical teams, engaging with parents, and fostering a positive school climate. The article also presents comparative insights from international models where social-emotional learning and leadership are integrated into educational policy and practice. Based on these insights, several recommendations are proposed for Uzbekistan's education system, including the development of targeted professional development programs, mentorship systems, and context-specific competency frameworks. Ultimately, the paper argues that strengthening social competencies among school leaders is essential for ensuring sustainable educational quality, teacher motivation, and inclusive school environments.

Keywords: Uzbekistan, educational leadership, social competence, school principals, communication skills, educational reform, professional development, emotional intelligence, conflict resolution, inclusive education.

Introduction

In the modern era of rapid educational transformation, the role of school leaders has evolved significantly, especially within the context of general secondary education. Leadership is no longer confined to administrative tasks and regulatory compliance; rather, it encompasses the ability to manage human relationships, build trust, foster collaboration, and create psychologically safe and inclusive environments. These requirements underscore the growing importance of social competencies—a set of interpersonal, emotional, and communicative skills that enable leaders to effectively engage with teachers, students, parents, and the broader educational community. In Uzbekistan, ongoing educational reforms emphasize the decentralization of school governance, greater autonomy for school principals, and the need for innovative, student-centered approaches to teaching and learning. While these policy shifts are commendable, their successful implementation largely depends on the social and emotional readiness of school leaders. However, despite recognition of the need for strong leadership, the professional development of principals and other educational administrators continues to focus predominantly on

administrative and organizational skills, often neglecting the essential social dimensions of leadership. Globally, countries such as Finland, Canada, and Singapore have integrated social-emotional learning and leadership development into their national education strategies. These models demonstrate that school leaders who possess high levels of social competence are more successful in building strong school cultures, motivating staff, resolving conflicts constructively, and maintaining high levels of teacher and student engagement. This paper aims to explore the current state of social competencies among school leaders in Uzbekistan's general secondary education system, identify existing gaps, and propose strategic directions for development. By combining theoretical analysis with empirical evidence, the study seeks to provide a clear understanding of the challenges and opportunities in fostering socially competent educational leadership in the Uzbek context.

Topicality of the Study

In the 21st century, the success of educational institutions depends not only on the quality of teaching and learning processes but also on the effectiveness of school leadership. The role of school leaders has become increasingly complex, requiring them to navigate a dynamic environment marked by educational reforms, social transformation, and increasing expectations from society. In this context, social competencies—which include emotional intelligence, interpersonal communication, empathy, and conflict resolution—have become essential components of effective educational leadership. In Uzbekistan, the modernization of the education system is one of the national priorities, as reflected in strategic documents such as the National Development Strategy and the Presidential Decree on improving the quality of general secondary education. However, while these reforms place strong emphasis on innovation, decentralization, and professional responsibility, they often underestimate the **human factor** in educational leadership. Many school principals and administrators continue to be selected and evaluated based primarily on technical qualifications and administrative experience, rather than their ability to build strong, trust-based relationships with staff, students, and parents.

The relevance of this topic is further reinforced by the increasing need to create supportive school environments where collaboration, inclusiveness, and psychological safety are prioritized. Without sufficient social competencies, school leaders may face difficulties in motivating teachers, managing conflicts, building effective teams, and sustaining a positive school culture. Moreover, as the global education agenda shifts towards whole-child development and inclusive schooling, the demand for socially competent leadership is more urgent than ever. Thus, studying the current level of social competencies among general secondary education leaders in Uzbekistan, identifying existing barriers, and exploring strategies for development is not only timely but also essential for ensuring the success of ongoing educational reforms. The findings of such research can help inform policy decisions, improve leadership training programs, and contribute to the creation of a more resilient and human-centered education system.

Discussion

The findings of this study underscore the growing importance of social competencies in the professional activities of school leaders in Uzbekistan's general secondary education system. As education becomes more learner-centered and relationship-driven, the role of the school leader evolves from that of a mere administrator to a mentor, facilitator, and mediator capable of fostering a healthy and inclusive school climate. This transformation, however, is not without its challenges—particularly in a system where leadership development has traditionally prioritized administrative efficiency over emotional and social intelligence. The data suggest that while

school leaders in Uzbekistan are often well-versed in regulatory frameworks, curriculum standards, and organizational logistics, they are frequently underprepared for the human dimensions of leadership. Many school principals report difficulties in building trust with staff, mediating interpersonal conflicts, or engaging parents in a meaningful and empathetic manner. These shortcomings are not necessarily due to a lack of motivation, but rather reflect the absence of structured training programs focused on communication, emotional regulation, and relationship-building. Furthermore, the study reveals that existing professional development programs for educational administrators tend to focus heavily on compliance, performance metrics, and procedural knowledge, while offering limited or no coverage of soft skills essential to effective leadership. This disconnect has implications for the overall school climate, as leaders lacking in social competence may unintentionally foster environments marked by low morale, resistance to change, and weakened collaboration.

In contrast, countries with more developed education systems have recognized the centrality of social-emotional learning in leadership. In Finland, for instance, school leaders receive specialized training in coaching, empathy, and collaborative leadership. In Canada, mentorship programs pair new principals with experienced leaders to help develop social awareness and conflict resolution strategies. These approaches have yielded positive outcomes, including improved teacher retention, stronger school cultures, and better student performance. For Uzbekistan, the implications are clear: the sustainable improvement of educational quality is not possible without addressing the social and emotional readiness of school leaders. In addition to administrative reforms and curriculum updates, there is a need for systemic investment in leadership development programs that integrate modules on social intelligence, ethical leadership, emotional resilience, and interpersonal communication. Moreover, the digital transformation of education—accelerated by the COVID-19 pandemic—has added a new layer of complexity to school leadership. Leading in virtual or hybrid environments demands advanced communication skills, digital empathy, and the ability to build social cohesion in non-traditional settings. School leaders must be equipped to manage remote teams, support teachers' well-being from a distance, and maintain student engagement through virtual platforms. In conclusion, strengthening social competencies among educational leaders in Uzbekistan is both a practical necessity and a strategic investment in the future of education. Without this foundation, even the most progressive reforms may fall short of their intended impact. Thus, future leadership training models should be reoriented to develop the full range of competencies required for effective, human-centered, and socially responsive school leadership.

Conclusion

The development of social competencies among school leaders has emerged as a key priority for ensuring the effectiveness and sustainability of educational reforms in Uzbekistan. As the responsibilities of school administrators expand to include not only managerial tasks but also interpersonal and emotional leadership, the ability to communicate effectively, manage relationships, and resolve conflicts constructively becomes increasingly essential. This study has shown that while many school leaders possess strong organizational and technical skills, there is a noticeable gap in their training and preparedness in terms of social and emotional competencies. This gap poses challenges in fostering positive school climates, maintaining teacher motivation, engaging parents, and building collaborative school cultures. Moreover, the limited attention to social competencies in current leadership development programs suggests an urgent need for reform in how educational leaders are trained and supported.

International experience provides valuable lessons. In countries where social-emotional leadership development is systematically integrated into policy and practice, school leaders demonstrate higher levels of engagement, resilience, and adaptability. These examples underscore the potential benefits of adopting similar approaches in the Uzbek context—tailored, of course, to local cultural and institutional realities. In order to build a future-ready and inclusive education system, Uzbekistan must prioritize the development of holistic leadership models that integrate social competencies alongside technical expertise. This includes investing in ongoing professional development programs, mentorship networks, and assessment tools that help identify and strengthen the social dimensions of school leadership. Ultimately, educational change is driven by people—not just by systems or policies. Strengthening the social competencies of school leaders will enable them to inspire their teams, support teacher well-being, enhance student outcomes, and build schools that are not only well-managed, but also caring, inclusive, and community-oriented.

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KOMMUNAL MAISHIY CHIQINDILARNI SARALASHDA XULQ-ATVORNI O'ZGARTIRISH NAZARIYALARINI QO'LLASH.

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Kirish

Atrof-muhit muhofazasi global dolzarb masalaga aylanib borayotgan bir paytda, kommunal maishiy chiqindilar (KMCh) bilan bog'liq muammolarni hal qilishda aholining faol ishtiroki muhim ahamiyatga ega. Chiqindilarni saralash faqat texnik yoki institutsional yondashuvlar bilan emas, balki inson xulq-atvorini chuqur tushunish va boshqarish orqali ham muvaffaqiyatli amalga oshiriladi. Bu borada psixologik nazariyalar – xususan, rejalashtirilgan xatti-harakat nazariyasi, o'zgarish bosqichlari modeli va ijtimoiy kognitiv nazariya – asosiy vosita bo'lib xizmat qiladi.

1. Rejalashtirilgan xatti-harakat nazariyasi (Theory of Planned Behavior – TPB). Ajzen (1991) tomonidan ishlab chiqilgan TPB modeliga ko'ra, insonlarning muayyan harakatni bajarish niyati quyidagi uchta asosiy omilga bog'liq:

Shaxsiy qarashlar (attitudes) – chiqindilarni saralash foydali deb hisoblanadimi?

Subyektiv norma (subjective norms) – ijtimoiy bosim yoki atrofdagilarning fikri qanday?

Nazorat hissi (perceived behavioral control) – odam bu ishni qila olishiga ishonadimi?

Chiqindilarni saralashga oid kampaniyalar bu omillarni hisobga olib ishlab chiqilsa, ularning samaradorligi yuqori bo'ladi.[1]

2. O'zgarish bosqichlari modeli (Transtheoretical Model)

Prochaska va DiClemente (1983) tomonidan ishlab chiqilgan modelga ko'ra, insonlar xatti-harakatni o'zgartirishda besh bosqichdan o'tadi:

Precontemplation – muammoni tan olmaydi,

Contemplation – muammoni tan oladi, ammo harakat qilmaydi,

Preparation – harakat qilishga tayyor,

Action – yangi xatti-harakatni boshlaydi,

Maintenance – barqaror tarzda davom ettiradi.

Chiqindilarni saralash borasida bu bosqichlarga mos ravishda aralashuv choralari ishlab chiqilishi zarur.[2]

3. Ijtimoiy kognitiv nazariya (Social Cognitive Theory)

Bandura (1986) tomonidan ilgari surilgan bu nazariyaga ko'ra, inson xulq-atvori uch asosiy omilning o'zaro ta'siri natijasida shakllanadi:

Shaxsiy omillar (bilim, motivatsiya, self-efficacy),

Xulq-atvor (oldingi tajriba va odatlar),

Atrof-muhit omillari (ijtimoiy o'rnak, tashqi sharoitlar).

Misol uchun, boshqa fuqarolar chiqindilarni ajratib tashlayotganini ko'rgan odamda o'xshash harakat qilish ehtimoli ortadi.[3,6]

4. Siyosiy va institutsional asos

O'zbekiston Respublikasi Prezidentining **PQ-178-sonli qarori (2023-yil 10-iyun)** chiqindilarni boshqarish tizimini takomillashtirishga qaratilgan bo'lib, unda chiqindilarni saralash, qayta

ishlash va ekologik madaniyatni oshirish choralari belgilangan. Ushbu siyosiy hujjat xatti-harakat o'zgarishlari uchun me'yoriy asos yaratadi.[4,5]

5. Global tajriba: BMT Yevropa atrof-muhit dasturi (UNEP)

UNEP (2020) tomonidan e'lon qilingan qo'llanmada siyosat ishlab chiquvchilar uchun xulq-atvorni o'zgartirish bo'yicha aniq tavsiyalar berilgan:

Ijtimoiy normalarni shakllantirish,

Ruxsat beruvchi infratuzilmani yaratish,

Rag'batlantirish mexanizmlarini joriy etish,

Maqsadli kommunikatsiyalar orqali ta'sir ko'rsatish.[5]

Xulosa

Chiqindilarni saralash borasidagi muammolarni hal qilishda faqatgina texnik yoki huquqiy choralar yetarli emas. Fuqarolarning ushbu jarayondagi xatti-harakatlarini o'zgartirish, yuqorida keltirilgan nazariyalar asosida samarali strategiyalarni ishlab chiqishni talab qiladi. TPB, o'zgarish bosqichlari modeli va ijtimoiy kognitiv nazariya yordamida aholi xulq-atvorini chuqur tahlil qilish va unga ta'sir ko'rsatish imkoniyati mavjud.

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PHYSICAL CULTURE AND THE FIGHT AGAINST HYPODYNAMIA AND OBESITY
AMONG STUDENTS OF UZBEKISTAN**Ruzieva Mahliyo Kayumovna,**

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ABSTRACT: This article examines the critical role of physical education in addressing the growing problems of physical inactivity and obesity among university students in Uzbekistan. Due to increasingly sedentary lifestyles due to academic demands and changing social habits, students are at risk of developing various health problems. This article examines the prevalence of physical inactivity and obesity among Uzbek university students, analyzes the factors contributing to it, and proposes strategies for implementing and promoting effective physical education programs to combat these problems. Particular attention is paid to integrating enjoyable and accessible types of physical activity into students' daily lives, creating a favorable campus atmosphere, and promoting healthy lifestyles to form long-term beneficial habits.

Key words: Physical education, physical inactivity, obesity, university students, Uzbekistan, sedentary lifestyle, health promotion, physical activity, campus environment, health education.

In recent years, physical inactivity and obesity have been on the rise among students in Uzbekistan. University life, which is often characterized by long study hours, limited physical activity, and the availability of processed foods, contributes to a sedentary lifestyle. Physical inactivity, or lack of physical activity, leads to a range of health problems, including weight gain, cardiovascular disease, type 2 diabetes, and mental health issues. Obesity, a direct consequence of energy imbalance, further exacerbates these risks. Addressing these issues through targeted interventions is critical to promoting the health and well-being of Uzbek university students and ensuring a healthy and productive future generation.

Prevalence and contributing factors

Data suggests that a significant proportion of university students in Uzbekistan are physically inactive and overweight, sometimes to the point of obesity. This worrying trend arises from a complex interaction of factors related to the academic environment and wider societal influences. Due to the high academic demands placed on students, they often feel overwhelmed and time-constrained, leading to a perceived lack of opportunities for regular physical activity. The pursuit of academic success often takes precedence over concerns for their own well-being, leading students to sacrifice exercise and active pursuits in favour of studying and completing assignments. This sedentary lifestyle is also fuelled by the long hours that students spend studying, often in a sedentary position, which further minimises movement and reduces energy expenditure. Prolonged inactivity disrupts metabolic processes and increases the risk of weight gain and associated complications.

Unhealthy eating habits also play a major role in the rise of physical inactivity and obesity. The availability and low cost of processed foods and drinks high in sugar on college campuses and in the surrounding areas contribute to poor food choices. These easily accessible foods often contain empty calories and lack essential nutrients, leading to an imbalance between energy intake and energy expenditure. A lack of nutrition information and guidance further compounds the problem,

leaving students unable to make informed decisions about their diets. Adding to these factors is a lack of awareness among students about the importance of physical activity and healthy eating. Many students may not fully understand the long-term effects of a sedentary lifestyle or underestimate the impact of regular exercise on their physical and mental health. Lack of awareness may lead to decreased motivation to develop healthier habits.

Additionally, some universities, particularly those with limited resources or infrastructure, may have limited access to adequate sports facilities and opportunities for physical activity. This lack of access can be a significant barrier for students who want to engage in physical activity but lack the means to do so. Finally, cultural factors may also play a role, as traditional cultural norms do not always prioritize physical activity, particularly for female students. These cultural norms may create social pressures that discourage women from participating in sports and other physical activities, leading to differences in physical activity levels between the sexes.

Strategies for the promotion of physical education

To effectively combat physical inactivity and obesity among university students in Uzbekistan, a comprehensive and multifaceted strategy is needed that addresses all aspects of campus life and promotes a culture of health and well-being. Central to this strategy is the integration of physical activity into the university's core curriculum. Compulsory physical education courses should be introduced so that all students, regardless of their major, have access to structured and supervised physical activity programs. These courses should not be seen as just an additional requirement, but as an integral part of a comprehensive education that provides students with the knowledge, skills, and motivation to lead a healthy lifestyle throughout their lives.

Beyond compulsory courses, it is vital to encourage active transport. Having students walk or cycle to and from campus will significantly increase their daily physical activity levels. This can be achieved by investing in safe and convenient infrastructure such as dedicated bike lanes, well-lit footpaths and secure bike parking. Universities should also actively encourage the use of public transport and explore initiatives such as car sharing to reduce reliance on private vehicles and encourage more active travel.

Creating a positive campus environment is also of paramount importance. Accessible and affordable sports facilities, such as well-equipped gyms, swimming pools and sports fields, should be located in close proximity to university campuses. These facilities should be designed to accommodate a wide range of interests and abilities, ensuring that all students feel comfortable and safe. Universities should also consider extending working hours and flexible working hours to meet the needs of students with busy academic schedules.

To further enhance engagement, a variety of physical activities should be offered to suit a wide range of interests and skill levels. In addition to traditional team sports such as football, basketball, and volleyball, universities should offer individual sports such as running, swimming, and weightlifting, as well as alternative activities such as dance classes, yoga, and martial arts. This variety will help all students find activities that they enjoy and that motivate them to engage.

Promoting healthy lifestyles is another critical component of a successful strategy. Integrating comprehensive healthy lifestyle programs into the curriculum can increase students' awareness of the importance of physical activity, healthy eating habits, and the risks associated with physical inactivity and obesity. These programs should provide students with practical information and skills they can use to make informed decisions about their health and well-being.

Strategic use of technology can also play a major role in promoting physical activity. Fitness apps, online workout resources, and wearable activity trackers can provide students with personalized

workout plans, track their progress, and motivate them to stay active. Universities can partner with tech companies to provide students with access to these resources at reduced prices, or develop their own apps tailored to the specific needs of the university community.

Organizing regular campus events that promote physical activity can also be an effective way to engage students and build a sense of community. Fun runs, sports tournaments, fitness competitions, and other events can create a fun and social atmosphere that encourages students to engage in physical activity. These events should be well publicized and accessible to all students, regardless of their fitness level.

Engaging student leaders as advocates for physical activity can also be very effective. Student leaders can serve as role models, organize campus events, and promote healthy lifestyles among their peers. By empowering students to take charge of their own health, universities can create a sustainable culture of well-being.

Finally, collaborating with health professionals can provide students with access to valuable health screenings, nutritional counseling, and personalized exercise recommendations. Health professionals can also host seminars and workshops on campus to educate students about health-related topics and provide guidance on how to develop healthy habits. By collaborating with health professionals, universities can provide students with the support they need to make informed decisions about their health and well-being.

Problems and Considerations

Successful implementation of the above strategies to promote physical activity and combat physical inactivity and obesity among Uzbek university students depends on overcoming a number of potential challenges and carefully considering key factors. First and foremost, these include budgetary constraints that may prevent some universities from allocating sufficient resources to support comprehensive physical activity programmes and state-of-the-art facilities. Ensuring adequate funding for these initiatives requires strong support from university leadership that demonstrates the long-term benefits of investing in student health and well-being. Innovative funding models, such as partnerships with private sector organisations or grant applications to government agencies and philanthropic foundations, should be actively explored to supplement existing university budgets.

In addition, incorporating required physical education courses into an existing curriculum may require significant curriculum reform. This process may be resisted by faculty or academic departments who feel that it takes up valuable instructional time or detracts from core academic subjects. A collaborative approach involving open dialogue and compromise among university administrators, faculty, and students is needed to successfully address this issue. Demonstrating the importance of physical education to overall academic success, emphasizing its positive impact on cognitive function and stress reduction, and demonstrating innovative curricular models that seamlessly integrate physical activity into existing courses can help build support for this reform. Effectively engaging students in physical activity programs is another important consideration. Students often face competing demands on their time and energy, juggling academic responsibilities, extracurricular activities, and social commitments. Motivating students to prioritize physical activity in the face of these competing priorities requires creative and engaging approaches that take into account their diverse interests and preferences. Gamification strategies, peer-led activities, incentives and rewards, and technology integration can be used to increase student engagement and make physical activity more appealing .

Finally, cultural sensitivity should be a guiding principle in the design and implementation of physical activity programmes. Uzbekistan has a rich and diverse cultural heritage, and it is important that physical activity programmes take into account traditional norms and customs. Programmes should be inclusive and accessible to students of all backgrounds, genders and abilities, taking into account cultural preferences and sensitivities regarding dress codes, participation in gender-specific activities and the types of activities offered. Involving local community leaders and cultural experts in the planning and implementation process can help ensure that programmes are culturally appropriate and successfully received by students. By carefully considering these issues and cultural sensitivities, Uzbek universities can create effective and sustainable physical education programmes that promote the health and well-being of all students.

Conclusion:

Combating physical inactivity and obesity among university students in Uzbekistan requires concerted efforts from university administrations, faculty, students, and health professionals. By integrating physical activity into the curriculum, creating a supportive campus environment, promoting health education, and addressing related issues, Uzbek universities can play an important role in promoting the health and well-being of their students and shaping a healthier future for the country. Further research is needed to evaluate the effectiveness of various interventions and identify best practices in promoting physical activity among university students in Uzbekistan.

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PHYSICAL CULTURE AND INCLUSIVE EDUCATION IN UNIVERSITIES OF
UZBEKISTAN: SOCIAL ADAPTATION OF STUDENTS WITH DISABILITIES*Kozlova Galina Gennadievna**Fergana State University, Senior Lecturer**asd68galina@gmail.com +998902915576**ORCID ID: 0009-0006-4216-6836*

ABSTRACT: This article examines the critical role of physical education and adapted physical activity programs in promoting social integration of students with disabilities (SWDs) within the inclusive higher education system in Uzbekistan. The article argues that well-designed and implemented physical activity initiatives can significantly improve SWDs' social integration, self-esteem, and overall well-being, contributing to a more equitable and inclusive learning environment. The article reviews the current state of inclusive education in Uzbek universities, as well as the existing opportunities and challenges associated with SWDs' participation in physical education classes. It then proposes practical strategies for developing and implementing effective adapted physical activity programs that promote social integration and enable people with disabilities to fully participate in university life.

Key words: Physical education, adapted physical activity, inclusive education, students with disabilities (SWD), social adaptation, accessibility.

The Republic of Uzbekistan strives to create an inclusive society in which all citizens, including people with disabilities, have equal rights and opportunities to participate in all spheres of life, including higher education. Inclusive education is a fundamental principle aimed at integrating people with disabilities into the general educational environment and providing them with the necessary support and resources to succeed. However, successful integration is not limited to the academic sphere and requires attention to the social adaptation of people with disabilities, which allows them to build meaningful relationships, develop a sense of belonging and fully participate in the social life of the university community. Physical education and adapted physical activity programs are an effective means of promoting social adaptation, strengthening self-confidence and improving overall well-being.

The Importance of Physical Culture for Social Adaptation

Physical activity has long been recognised as a valuable tool for promoting physical and mental health. However, its benefits extend far beyond these individual benefits. For people with disabilities, participation in physical activity can be particularly beneficial, promoting social inclusion and boosting self-esteem.

- **Establishing social connections:** Adapted physical activity programs provide a structured and supportive environment for individuals with disabilities to interact with their peers, both with and without disabilities. Such interactions can lead to the development of friendships, a sense of belonging, and a reduction in social isolation.

- **Increased self-esteem and confidence:** Achieving success in physical activity, regardless of the level of participation, can significantly increase self-esteem and confidence. Adapted programs are designed to provide people with disabilities with the opportunity to succeed by developing a sense of competence and self-confidence.

- **Improved physical and mental health:** Regular physical activity can improve physical health, reduce stress levels, and increase overall mental well-being. For people with disabilities, these benefits are especially important because they may face unique physical and mental health challenges.

- **Challenging stereotypes and promoting inclusion:** When people with disabilities participate in physical activities on an equal basis with their non-disabled peers, it challenges stereotypes and helps create a more inclusive and accepting environment. This can lead to a better understanding and appreciation of diversity within the university community.

Challenges and Opportunities in Universities of Uzbekistan

Despite Uzbekistan's commendable progress in developing inclusive education, significant challenges remain in ensuring equal access to physical education for students with disabilities (SWDs) at universities. One of the main barriers is the lack of adapted spaces and specialized equipment needed for SWDs to participate in physical activity programmes. Many educational institutions lack accessible gyms, modified sports equipment, and adapted training grounds, which hinders SWDs' participation and limits the range of activities available to them. In addition, the limited number of physical education teachers with specialized training in adaptive physical activity is a major barrier. Lack of experience limits the ability of instructors to effectively support people with disabilities, develop appropriate programmes, and adapt exercises to individual needs. In addition to infrastructural and training limitations, barriers related to attitudes towards people with disabilities pose a significant challenge. Negative attitudes and prevailing stereotypes towards people with disabilities can create a hostile environment, hindering their participation in physical activity and exacerbating social exclusion. These biases may be due to a lack of awareness, fear of the unknown, or ingrained prejudices. Finally, there is a pressing need to raise awareness among university administrators, faculty, and students about the many benefits of adapted physical activity for people with disabilities. These benefits extend beyond physical health to include improved social integration, self-esteem, and overall well-being.

However, despite these challenges, there is significant scope for Uzbek universities to expand and improve physical education programs for people with disabilities. First and foremost is the unwavering commitment of the Government of Uzbekistan to the principles of inclusive education. This commitment provides a solid foundation for the development and implementation of adapted physical activity initiatives, demonstrating that inclusivity in education is of paramount importance. In addition, there is a growing influx of resources from international organizations and non-governmental organizations that support inclusive education initiatives in Uzbekistan. These organizations offer financial assistance, technical support, and professional development programs that help universities create more accessible and supportive learning environments for people with disabilities. Another promising development is the emergence of specialists in Uzbekistan who are increasingly being trained and certified in the field of adaptive physical activity. These specialists have the knowledge and skills needed to design and implement effective programs that meet the unique needs of people with disabilities. Finally, technological advances have enormous potential to revolutionize the approach to physical activity for people with disabilities. Innovations such as adaptive sports equipment, virtual reality training programs and assistive technologies are opening up new opportunities to create engaging and accessible physical activity experiences for people with a wide range of disabilities.

Strategies for Developing Effective Adapted Physical Activity Programs

To fully realize the potential of physical education in promoting social adaptation of students with disabilities (SWD) in Uzbek universities, a strategic and multifaceted approach is needed. Universities should prioritize the implementation of the following strategies:

- First and foremost, conducting a comprehensive needs assessment is paramount. This assessment should go beyond simply determining the number of students with disabilities enrolled at the university and consider their specific needs, interests, and preferences for physical activity. This may include surveys, interviews, focus groups, and consultation with disability organizations to gain a holistic understanding of the barriers students with disabilities face and what programs they find most interesting and useful. The assessment should also consider the wide range of disabilities represented in the student population to ensure that programs meet the unique needs of those with mobility impairments, sensory impairments, cognitive impairments, and other conditions.
- Based on a needs assessment, universities should develop specialized, adapted physical activity curricula. These programs should not simply modify existing classes, but create entirely new programs specifically designed to promote social interaction, enhance self-esteem, and improve the physical fitness of people with disabilities. Curricula should include a variety of activities, from individual exercise to team sports, to accommodate a variety of interests and abilities. Particular attention should be paid to creating a supportive and inclusive environment in which people with disabilities feel comfortable and can challenge themselves. In addition, curricula should be adaptable and flexible so that teachers can modify assignments based on individual needs and student progress.
- Investment in adapted facilities and equipment is another important element of a successful adaptive physical activity programme. This may include building or renovating existing sports facilities to ensure accessibility for people with disabilities, including through facilities such as ramps, accessible toilets and adapted changing rooms. In addition, universities should invest in the purchase of specialised adaptive sports equipment such as sports wheelchairs, adaptive bicycles and modified weights to enable people with disabilities to participate in a wide range of activities. The equipment should be of good quality, in good working order and accessible to all students who need it.
- To ensure effective and safe implementation of programs, comprehensive training for adaptive physical education instructors is necessary. Such training should cover topics such as disability awareness, adapted training methods, communication strategies, and strategies for creating an inclusive learning environment. Instructors should also be trained in how to assess the individual needs of individuals with disabilities and develop individualized training plans. In addition, universities should provide instructors with ongoing professional development opportunities to keep them up to date with the latest research and best practices in the field of adaptive physical education.
- Developing peer mentoring and support programs can greatly improve the social integration of students with disabilities. These programs connect students with disabilities with students without disabilities who can provide support, advice, and friendship. Peer mentors can help students with disabilities navigate campus, participate in social events, and connect with other students. Not only do these programs benefit students with disabilities, but they also provide peer mentors with valuable opportunities to develop leadership skills and empathy.
- Conducting comprehensive information campaigns is crucial to creating a more inclusive and accepting campus environment. These campaigns should aim to educate the university

community about the benefits of adapted physical activity for people with disabilities, as well as combat negative stereotypes and misconceptions associated with disabilities. Campaigns can use a variety of channels to reach a wide audience, such as social media, posters, presentations, and campus events. Campaigns should also highlight the achievements of people with disabilities in sports and other physical activities, showcasing their abilities and inspiring others to participate.

- Finally, to gain access to expertise, resources, and support, it is important to develop strong partnerships with local and international disability organizations. These organizations can provide valuable guidance on programming, training, and advocacy. They can also help universities connect with potential sponsors and partners. By partnering with disability organizations, universities can ensure that their adapted physical activity programs are aligned with best practices and the needs of the disabled people they serve.

Conclusion:

Physical education and adapted physical activity programs can be a powerful tool to promote social adaptation of students with disabilities within the inclusive higher education system of Uzbekistan. By addressing existing challenges, seizing new opportunities, and implementing the strategies described in this article, Uzbek universities can create a more equitable and inclusive environment in which all students, regardless of their abilities, can develop and reach their full potential. Further research is needed to evaluate the effectiveness of various adapted physical activity programs and identify best practices to promote social adaptation of students with disabilities in Uzbek universities.

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COMORBID INFECTIONS IN YOUNG CHILDREN: CLINICAL FEATURES AND ANALYSIS OF OBSERVATIONS

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Background: Comorbid infections significantly complicate clinical outcomes and prognosis in pediatric populations. In young children, the coexistence of multiple infectious diseases can pose unique diagnostic and therapeutic challenges, impacting morbidity and mortality rates.

Objective: To analyze clinical features and observational data of comorbid infections in young children, identifying common patterns and complications associated with simultaneous infectious diseases.

Methods: This observational study included children aged 1 month to 5 years, hospitalized with confirmed multiple infectious diseases. Clinical presentations, laboratory data, hospitalization duration, complications, and treatment outcomes were analyzed retrospectively.

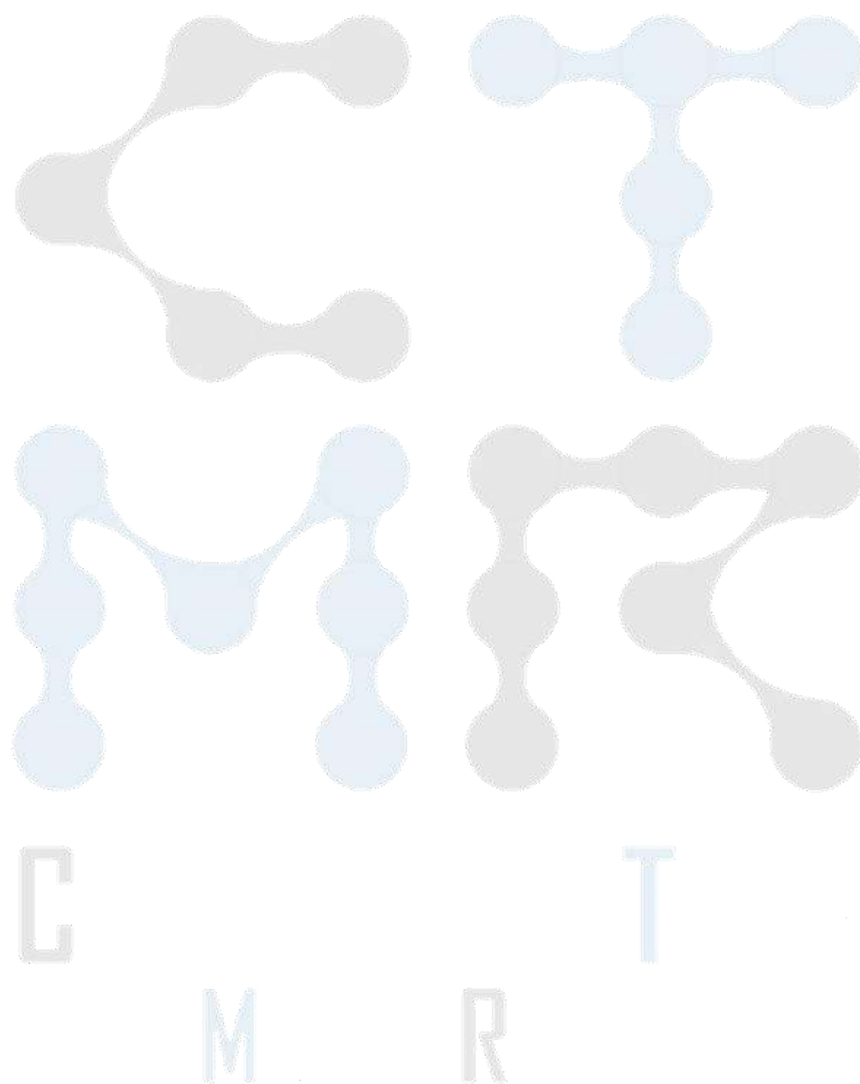
Results: A total of 120 young children with confirmed comorbid infections were included. The most common co-infections observed were respiratory syncytial virus (RSV) and bacterial pneumonia (45%), influenza and otitis media (30%), and gastroenteritis combined with rotavirus and bacterial pathogens (25%). Clinically, patients exhibited prolonged fever (85%), respiratory distress (70%), and dehydration (60%). Laboratory findings frequently showed elevated leukocyte counts (75%), elevated CRP levels (68%), and electrolyte imbalances (50%). Complications included severe pneumonia (40%), acute otitis media with perforation (15%), and significant electrolyte disturbances requiring intravenous correction (25%).

Conclusion: Comorbid infections in young children frequently present with severe clinical symptoms, necessitating prolonged hospital stays and aggressive therapeutic interventions. Early recognition and comprehensive management are critical to improving patient outcomes and minimizing complications.

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YURAK ISHEMIK KASALLIKLARI ASORATLANGANDA DAVOLASH TAKTIKASI

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Annotatsiya:

Yurak ishemik kasalligi (YIK) — bu yurak mushagining kislorod bilan ta'minlanishi yetishmovchiligi tufayli kelib chiqadigan surunkali yoki o'tkir holat bo'lib, rivojlangan va rivojlanayotgan mamlakatlarda o'limning yetakchi sabablaridan biridir. Jahon sog'liqni saqlash tashkiloti (JSST) ma'lumotlariga ko'ra, har yili 17 milliondan ortiq kishi yurak-qon tomir kasalliklari, xususan YIK sababli hayotdan ko'z yumadi. Ayniqsa, YIK asoratlari — miokard infarkti, aritmiyalar, yurak yetishmovchiligi, kardiogen shok kabi holatlar vujudga kelganda, bemorning hayotiga tahdid keskin ortadi. Bunday hollarda tezkor, individual va bosqichli davolash taktikasi muhim ahamiyat kasb etadi. Statistik ma'lumotlarga ko'ra, O'zbekistonda yurak ishemik kasalliklari umumiy o'lim sabablarining 35–40 foizini tashkil qiladi. Shu boisdan bu kasalliklarni erta aniqlash va asoratlar paytida to'g'ri davolash strategiyasi dolzarb masala bo'lib qolmoqda.

Kalit so'zlar Yurak ishemik kasalligi, miokard infarkti, aritmiya, yurak yetishmovchiligi, kardiogen shok, davolash taktikasi, antikoagulyantlar, stentlash, reabilitatsiya.

1. Miokard infarkti

Miokard infarkti — YIKning eng og'ir va keng tarqalgan asoratidir. Odatda koronar arteriyaning tromboz bilan to'silishi natijasida yuzaga keladi. Davolashning asosiy bosqichlari:

- Dorivor davo: aspirin, klopidoqrel, heparin, morfin, nitratlar, beta-blokatorlar.
- Intervensiya: koronar angiografiya asosida perkutan koronar intervensiya (PCI), ya'ni stentlash.
- Trombolitik davo (PCI imkon bo'lmasa): alteplaza, streptokinaza.

Davolash algoritmi:
Bemor shikoyatlari → EKG → Biomarkerlar → STEMI/Non-STEMI aniqlash →
→ Trombolitik davo yoki PCI → Antitrombotsitar terapiya → Monitoring va reabilitatsiya.

2. Yurak yetishmovchiligi

YIK fonida yurakning nasos funksiyasi pasayib, o'tkir yoki surunkali yurak yetishmovchiligi rivojlanadi.

Bunday holatda:

- AYaP inhibitorlari (enalapril, ramipril)
- Beta-blokatorlar (bisoprolol, metoprolol)
- Diuretiklar (furosemid, spironolakton)
- ARNI preparatlari (sakubitril/valsartan — zamonaviy yondashuvda)
- Kislorod terapiyasi va suyuqlik cheklovi qo'llaniladi.

3. Aritmiyalar

Yurakning ritm buzilishlari, xususan ventrikulyar taxikardiya yoki fibrillyatsiya hayot uchun xavfli bo'lishi mumkin. Davolash:

- Antiaritmiklar: amiodaron, lidokain

- Elektroimpuls terapiya (EIT) — ventrikulyar fibrillyatsiya bo'lsa.

4. Kardiogen shok

Bu holat yurak chiqaruvchi funksiyaning keskin pasayishi bilan kechadi. Davolash zudlik bilan reanimatsion choralarni talab qiladi:

- Inotrop davo: dopamin, dobutamin
- Vazopressorlar: norepinefrin
- Mexanik yordam: intraaortal ballonli kontrapulsatsiya, LVAD (kam hollarda)
- Sun'iy nafas oldirish – hipoksiya bo'lsa.

5. Reabilitatsiya va ikkilamchi profilaktika

Miokard infarktidan so'ng reabilitatsiya jarayoni yurak mushagini tiklash va yangi asoratlarni oldini olishda muhim hisoblanadi:

- Individual jismoniy yuklama dasturi
- Psixologik qo'llab-quvvatlash
- Antilipid preparatlar (statinlar)
- Qayta yurakni baholash va dozani moslashtirish
- Sog'lom turmush tarzini rag'batlantirish

1. Miokard infarkti davolash algoritmi

Shikoyatlar + **EKG** + **Biomarkerlar** →
 → **STEMI** aniqlansa → **Tezkor PCI** →
 → **Stentlash** + **Antitrombotsitar terapiya** →
 → **Monitoring** → **Reabilitatsiya**

2. Yurak yetishmovchiligi bosqichma-bosqich davo yondashuvi

I daraja: **ACEI** yoki **ARB** →
II daraja: + **Beta-blokator** →
III daraja: + **Diuretik** + **Spironolakton** →
IV daraja: + **ARNI** yoki **yurak transplantatsiya ko'rib chiqiladi**

Shuningdek, amaliyotda ishlatilayotgan zamonaviy texnologiyalar – masalan, 3D mapping tizimi bilan aritmiya ablyatsiyasi yoki uzoq muddatli stentlar – yurak-qon tomir asoratlarini samarali boshqarishda keng imkoniyatlar yaratmoqda.

Xulosa

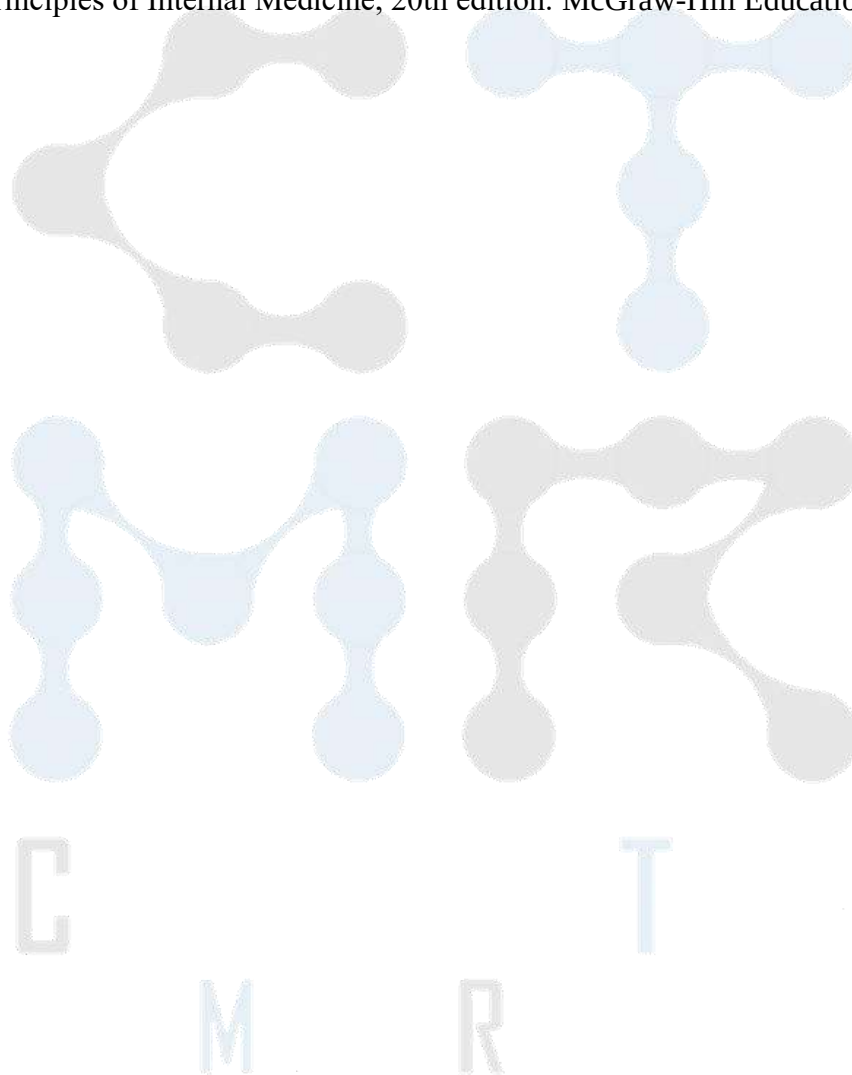
Yurak ishemik kasalligi asoratlenganda to'g'ri va o'z vaqtida tanlangan davolash taktikasi bemorning hayotini saqlab qolishda muhim rol o'ynaydi. Har bir asoratning o'ziga xos klinik manzarasi va patofiziologiyasi borligi sababli, unga nisbatan individual yondashuv zarur. Dorivor terapiya, intervensiya usullari va reabilitatsiya birgalikda olib borilgandagina maksimal natijaga erishish mumkin. Barcha bemorlarda hayot tarzini o'zgartirish (parhez, jismoniy faollik, stressni kamaytirish) profilaktikaning ajralmas qismi bo'lib qoladi.

Shuningdek, zamonaviy klinik protokollarni bilish, shoshilinch holatlarda tezkor qaror qabul qilish va multidisiplinar yondashuvni qo'llash — davolovchi shifokorlar oldidagi asosiy

vazifalardandir. Bu borada yosh mutaxassislarning yetarli bilim va malakaga ega bo'lishi kelajakdagi yurak-qon tomir kasalliklari bilan kurashda hal qiluvchi omil bo'lib xizmat qiladi.

Foydalanilgan adabiyotlar:

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TAQLID SO‘ZLARNING SHAKLIY-STRUKTUR TAHLILI
(SIX CHAPTERS EXPLANATORY DICTIONARY OF THE LANGUAGE IS AN
EXAMPLE)

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Annotation. In this article, words included in the “Explanatory Dictionary of the Uzbek Language” published in 2023 were studied without any reference to the category and words belonging to the category of onomatopoeic words were selected from among them. Based on the interpretation of words, illustrative examples and common meaning, explanations of the part of speech of imitation were given, illustrated based on examples and a list was provided for inclusion as a part of speech of imitation in subsequent editions of explanatory dictionaries with a special reference. Based on the data and conclusions obtained from the analysis of onomatopoeic words included without links in the 2023 edition, additional information and recommendations for subsequent editions of the explanatory dictionary were provided.

Keywords. Imitation words, repeated imitation words, imitation of sound, imitation of situation, illustrative example, explanation, difference.

Purpose of research

The emergence and development of languages, as well as their manifestation in different forms in different segments of society, necessitated the creation of dictionaries. A number of innovations in the field of lexicography have also stimulated the development of Uzbek linguistics. Our linguists are creating encyclopedic and linguistic, as well as monolingual and multilingual dictionaries containing various descriptions of words, which are constantly being updated.

The great changes taking place in all spheres of life of our republic, the strengthening of relations with many developed countries, have had a significant impact on the development of the Uzbek language, in particular, its lexicon, in a short period of time. Under the influence of such factors, in connection with serious changes in the vocabulary of the Uzbek language, work is underway to compile and publish a multi-volume explanatory dictionary of the Uzbek language that meets the requirements of the time.

Onomatopoeic words are of great importance in our language. These words are significant because they reflect sounds and states emanating from all categories of objects and physical phenomena through human speech organs. The use of onomatopoeic words in written literature and colloquial speech shows the attractiveness of the text, its attractiveness, realism, originality and the limitless possibilities of our language. Currently, a number of achievements related to onomatopoeic words have been made in existing explanatory dictionaries. In particular, we can acknowledge that a significant number of onomatopoeic words are actively used in our language, that they are in tune with the times, that there are onomatopoeic words related to the literary language, as well as dialects, that many onomatopoeic words are given illustrative examples with a clear source. But due to the constant change of words, their connection with social life, the need to constantly introduce innovations into them will always remain. When new variants of some

words appear, changes occur in the meaning of some words. All this is a phenomenon connected with social life.

To date, comprehensive scientific research has been conducted and is being studied on the topic of onomatopoeic words, however, onomatopoeic words included in the “Explanatory Dictionaries of the Uzbek Language” have not been comparatively studied in the lexicographical aspect and scientific research on the semantization of onomatopoeic words has not been published.

The purpose of the research is to study the words belonging to the part of the original onomatopoeic word, included without a special reference in the explanatory dictionary published in 2023 and to develop recommendations for subsequent editions of the explanatory dictionary.

Research methods

When we studied the analysis of onomatopoeic words in explanatory dictionaries, we noticed the need for further improvement of lexicographic descriptions. When presenting onomatopoeic words in dictionaries, paying more attention to the situation and place of their use, as well as the presentation of excerpts from texts containing onomatopoeic words, ensures the purity of speech, facilitates the understanding of onomatopoeic words and increases the perfection of dictionaries.

In this article, a list of words belonging to the original onomatopoeic word class, included without a special reference in the “Explanatory Dictionary of the Uzbek Language” published in 2023, was formed and they were analyzed in statistical, semantic and comparative aspects. For example, **AR-AR** To wail, to weep loudly. In the 2023 edition, this word is limited to a compound explanation. No synonyms or illustrative examples included. This word is widely used in the common language to denote the process of capriciousness caused by the inability of young children to control themselves.

BEZ-BEZ To get sick. *Turay deymen, oyog'im bez-bez qilib, turolmayman.* H.Nazar. Yonar dunyo. *Bu boshning zirqirashi haroratniki emas, tosh tegib zaharlangandek, allaqanday bez-bez qilmoqda.* S.Abdulla, Soyalar. *Ulfatlari yuz o'girdi, qoldi yolg'iz, ota-ona yuraklari qilar bez-bez.* The simple form of this lexeme belongs to the noun and expresses the meaning of objectivity. Most nouns are directly repeated and transition into adverbs. However, the fact that the lexeme **bez-bez** expresses imitation of mental, agonizing, painful situations through illustrative examples can be the basis for evaluating it not as an adverb, but as an imitative part of speech.

BILANG-BILANG To twitch. *Baliqday bilang-bilang qilib, goh unisi o'zib ketadi, goh bunisi.* H.Nazir, Yonar daryo. From the description given to the lexeme, it is difficult to understand its meaning; in the illustrative example, it is connected with the verb and expresses the manner of action. In this respect, it resembles the adverb of the state. However, it is correct to consider imitation as a part of speech, since it is named by imitation in the style of **bilang-bilang**, denoting the attractive, wavy state of fish when swimming, as well as because it is close to the category of imitative words such as **lik-lik, likang-likang, lapang-lapang**.

BILJING-BILJING To make a fuss. To talk too much, to chatter, to exaggerate inappropriate words. *Bir bedavo ezma, chakagiga suyangan ekan, Zuhraning uyidagi ahvoli, mashg'ulotini surishtirib, biljing-biljing qiladi.* A.Muhiddin, Aybsiz aybdor. This lexeme is rarely used in the general population, its meaning and place of occurrence are unfamiliar to many. It is observed in written sources, works of art, or in some dialects. Since the meaning expresses imitation of the situation when talking nonsense, it is advisable to consider imitation as a word.

GUPPA 1 With force. [Nodir] *Bir nafas ko'ksini ochib, ayvon panjarasiga o'tirdi va to'satdan shu qadar bo'shashib ketdiki, yerga guppa yiqilib, o'lib qoladigandek bo'ldi. Haqiqatan ham guppa yiqildi...* Sh.Xolmirzayev, Hayot abadiy.

2 To pound, to thunder. *Palovning bug'i, shirin hidi guppa uradi.* Oybek, Tanlangan asarlar. The word **guppa** is interpreted as a homonym in the 2023 edition. Illustrative examples are also given according to their meanings. In the first sense, the adverb is a part of speech because it is similar in meaning to the words immediately is an instant and in the second sense, it refers to the meaning expressed by imitation of the situation, so its presentation as an imitative part of speech would be the basis for distinguishing the meanings of words from each other.

GURRA *gur Alijonning ikki oyog'i osmonda charxpalak bo'lib, yerga tushdi. Hatto yer changib ketdi. Davrada gurra qiyqiriq ko'tarildi.* Mirmuhsin, Chiniqish. *Yigit-qizlar raisning mashinasi ko'rinishi bilan gurra qo'zg'alishdi.* E.Usmonov, Yolqin.

The word “**gurra**” is usually associated with a verb. In such cases, it gives the meaning immediately, instantly and leads to the assumption that the adverb is a part of speech. But if you pay close attention to the sentences containing the word **gurra**, you can understand that the lexeme is a word named in imitation of a process that occurred suddenly, instantly. It should not be overlooked that the word **gurra** is formed from the word *gur* by the phenomenon of germination.

HIL-HIL To ripen and become soft. *Hil-hil pishgan yumshoq kabobni piyoz qo'shib yeya boshladi.* Oybek, Ulug' yo'l. *Chanqab ketgan Haydar qovunni egarga urib, ikkiga bo'ldi-yu, shoshganicha hil-hil pishgan bosvoldining suvini shimirdi.* Sh.Rashidov, Quدراتli to'lqin. The word “**hil-hil**” refers to a uniformly boiled, softly cooked dish. The simple variant of this word is not found in the Uzbek language. In the repeated case, the imitation corresponds to the word, since it is formed from an imitation of the process.

HILP-HILP to flutter. In the 2008 edition, this word is given only the interpretation of waving. There is no description of when, with which words it comes together and how it is used in practice. Also, an illustrative example with the participation of a lexeme is not given. In the common language, this lexeme is rarely used. It can be said that it is on the verge of depreciation. Students who do not know the meaning of the lexeme or users of a foreign language cannot obtain sufficient information through the explanation in the dictionary. This lexeme expresses an imitation of dresses with long hems or fabrics hanging from top to bottom moving in the wind. The 2023 edition includes an illustrative example. *Shunda beshikyopg'ich shamolda hilp-hilp etdi. Hilp-hilp eta-eta beshik ketilab uchib tushdi.* T.Murod, Otamdan qolgan dalalar.

JAVDIR-JAVDIR to glance, to look. *Ko'zlarini javdiratmoq. Atrofga javdir-javdir boqib, qayerdan turib gapirishni mo'ljallarkan, shovqin-so'ron avj oldi.* A.Muxtor, Tug'ilish. The lexeme “**javdir-javdir**” is rarely used in the common language. The lexeme expresses the content created by imitating the state of looking around with a questioning gaze, with hope, with some purpose. The meaning of the lexeme can also be synonymous with the word **mo'lt-mo'lt**. the word “**mo'lt-mo'lt**” is used more widely. The meaning of **javdir-javdir** should be included with the reference *taql.s.* since it expresses an imitation of the eye position.

LASH-LUSH 1 s.t. All sorts of trifles. *Lash-lushlarimni ko'tarib, Madalixon madrasasidan bir hujra olib, shunda tura boshladim.* M.Muhammadjonov, Turmush urinishlari. *Chol qovog'i soliq holda lash-lushlarini aravadan oldi.* Oybek, Bolalik.

2 s.t Skulls and intestines of slaughtered sheep or cattle. In the “Explanatory Dictionary of the Uzbek Language” (6 volumes), the lexeme “**lash-lush**” is described in two ways. Information

about which genus it belongs to is not provided. Through the explanation of the second meaning, it is understood that it belongs to the noun part of speech. The first meaning was interpreted as various small things. The lexeme denotes the name of things that are not of significant importance or the meaning named in imitation of the state of a pile of small things. Since it does not represent an object belonging to a specific type, it is correct to include it in dictionaries not as a noun, but as an imitative word.

PO'NG s.t. impure. *Aziza shu vaqtgacha qamchisidan qon tomib, so'zidan ilon po'st tashlagan dadasining ichi po'ng ekanini endi tushundi.* Shuhrat, Oltin zanglamas. The lexeme **po'ng** is rarely encountered in the common language. It is rarely seen in some dialects or written sources. The reflection of such lexemes in dictionaries is, of course, positive. Providing explanations and illustrative examples within a lexeme facilitates easy understanding of the content. In the explanation, it is emphasized that it is synonymous with the lexeme **po'k**. Since the main meaning of the lexeme **po'k** is known to many as an imitation of the sound produced by the light touch of objects, this word can be easily understood. In the illustrative example, the word **po'ng** expresses a figurative meaning. From this, it can be assumed that **po'ng** creates synonymy with the figurative form of the lexeme **po'k**.

PO'M bol. They stopped talking to each other, got into an argument; resentful. *Biz u bilan po'mmiz.* This word was formed by observers naming the situation when children were upset with each other. Since it is formed from the imitation of the process, the fact that this word is given as an imitative part of speech indicates that this word was named after imitation of children's speech.

QIR 1 hill. **2** edge. **3** building material. **4** qir(r) *taql.s.* It refers to the sound produced by friction between uneven or sticky objects. *Savag'ich qalamni "qirr" etib yurgizmoq. Mumlangan ipni "qirr" etib tortmoq.* In the 2023 edition, it is described that the lexeme **qir** can appear in four different places. In three places, it is understood that the place is a noun and the thing is a noun. In its fourth meaning, it is identified with the word **qirr**. The lexeme **qirr** expresses the sound produced by the friction of uneven or sticky objects against each other. This lexeme is given in the dictionary with the reference *taql.s.* This lexeme expresses a stronger sound than the word **qir**. There is also a slight difference in the content of the lexemes. In future explanatory dictionaries, a separate description and illustrative example of the word **qir** will be given, which will make it even more convenient for students.

VISIR-VISIR shv. Whisper. *Ular "Yoqut boshqorong'i, Qodirjondan bolasi barga o'xshaydi", degan visir-visirni quloqdan quloqqa o'tkazib yuborishdi.* A.Abduvaliyev, Bizning yo'limiz. The word **visir-visir** in the meaning of gossip is similar to a noun and in naming it is similar to an imitative word in relation to an incomprehensible, low-pitched conversation process in speech. In the explanatory dictionary, the words **shivir-shivir** is cited as synonyms of this word, as well as in the illustrative example, it is correct to give this lexeme with the reference *taql.s.* since it expresses a name in relation to a low-toned speech sound.

G'IP to strangle tightly. *Hoy, menga qara! - dedi u burun kataklari pirpirab, - yoqangdan g'ip bo'g'ib, zo'ravonlik qilayotganda, derazadan ko'rib turganman.* O.Yoqubov, Larza. *Erining to'zg'igan sochlariga tikilib o'tiribdi-yu, lekin negadir ichidagini to'kib solishdan hayiqyapti. Bu hayiqish alami esa tomog'ini g'ip bo'g'moqda go'yo.* J.Abdullaxonov, To'fon. The lexeme **g'ip** usually forms a combination with a verb and according to this feature, it is close to the adverbial participle. However, the fact that this word is formed by imitating a quick, unexpected

and hard manner of action, embodying the process, indicates that the features of the part of speech imitating are higher.

G'ULT ayn. qult. *Ovqat uning tomog'idan, quvurdan o'tayotgan suvdek, g'ult-g'ult qilib o'tardi*¹. Shuhrat, Shinelli yillar. In the explanatory dictionary, the lexeme **g'ult** is identical in content to the lexeme qult. In the illustrative example, a repetitive example, a repetitive version is given. The word “**g'ult**” is somewhat outdated in terms of common usage and can be found in some dialects. Understanding the meaning of this word at first glance is a complex phenomenon. However, the meaning of the word can be fully understood through the description and illustrative example. The word **qult** is widely used. The sound produced by the word “**g'ult**” is weaker than the word “**qult**”. For this reason, a separate description of this lexeme, an example and the inclusion of the link *taql.s.* will make the meaning of the word clearer.

Results

In the explanatory dictionary, there are many words that express the meaning of imitation of a state or sound, fully representing the sign of an imitative part of speech. However, the category has not been clarified. Knowing the part of speech of a word is of great importance in understanding its meaning. Most users of the dictionary, if they are not aware of the science of linguistics, encounter a number of confusions in understanding the content of these lexemes. In the and, they almost do not use the word, not understanding the degree of significance and value of this word. The following list of lexemes belonging to the category of onomatopoeic words, but given without a special mark in the explanatory dictionary published in 2023, was formed.

1-

picture.

<i>ar-ar</i>	<i>baqir-buqur</i>	<i>bag'ir-bug'ur</i>	<i>bez-bez</i>	<i>bilang-bilang</i>	<i>biljing-biljing</i>
<i>biqir-biqir</i>	<i>dang</i>	<i>dangir-dungur</i>	<i>dang'ir-dung'ur</i>	<i>dikang-dikang</i>	<i>dik-dik</i>
<i>dikong-dikong</i>	<i>dikir-dikir</i>	<i>ding'ir-ding'ir</i>	<i>dir-dir</i>	<i>duv-duv</i>	<i>dud-dud</i>
<i>duk-duk</i>	<i>dukur-dukur</i>	<i>dup-dup</i>	<i>dupur-dupur</i>	<i>do'p-do'p</i>	<i>do'pir-do'pir</i>
<i>do'qir-do'qir</i>	<i>do'q-do'q</i>	<i>ding</i>	<i>gup-gup</i>	<i>guppa</i>	<i>guppa-guppa</i>
<i>gur</i>	<i>gurra</i>	<i>gusur-gusur</i>	<i>hap-hap</i>	<i>hilp-hilp</i>	<i>hil-hil</i>
<i>hingir-hingir</i>	<i>huv</i>	<i>javdir-javdir</i>	<i>jaz-buz</i>	<i>jaz-jaz</i>	<i>jaz-juz</i>
<i>jarang-jurung</i>	<i>jiz-jiz</i>	<i>jiz</i>	<i>jiz-biz</i>	<i>jimir</i>	<i>jimir-jimir</i>
<i>jing</i>	<i>jingir-jingir</i>	<i>jiq-jiq</i>	<i>kappa-kappa</i>	<i>kasir-kasir</i>	<i>lash-lush</i>
<i>laq-luq</i>	<i>lik-lik</i>	<i>lik</i>	<i>lip</i>	<i>lip-lip</i>	<i>lippa</i>
<i>liq</i>	<i>lo'k-lo'k</i>	<i>lo'p</i>	<i>lo'q</i>	<i>lo'q-lo'q</i>	<i>papaq</i>
<i>parr-parr</i>	<i>patir-patir</i>	<i>pil-pil</i>	<i>pir-pir</i>	<i>pirq-pirq</i>	<i>pis-pis</i>
<i>pitpiliq</i>	<i>pitpildiq</i>	<i>pichir</i>	<i>pichir-pichir</i>	<i>piqir-piqir</i>	<i>piq-piq</i>
<i>pov-pov</i>	<i>pop-pop</i>	<i>po'k-po'k</i>	<i>po'ng</i>	<i>po'm</i>	<i>qaldir-quldur</i>

¹ O'zbek tilining izohli lug'ati. 6 jildli. – Toshkent: “G'afur G'ulom” nashriyoti, 2023.

<i>qalt-qalt</i>	<i>qasira-qusur</i>	<i>qasir-qusur</i>	<i>qaqir-ququr</i>	<i>qah-qah</i>	<i>qiy-chuv</i>
<i>qilt</i>	<i>qimir</i>	<i>qimir-qimir</i>	<i>qir</i>	<i>qirt-qirt</i>	<i>qirs-qirs</i>
<i>qir-qir</i>	<i>qisir-qisir</i>	<i>qitir-qitir</i>	<i>qiqir-qiqir</i>	<i>qult-qult</i>	<i>qulq-qulq</i>
<i>qur-qur</i>	<i>quq-quq</i>	<i>tapira-tupur</i>	<i>tap-tap</i>	<i>tap-tup</i>	<i>tasira-tusur</i>
<i>taq-tuq</i>	<i>ting'ir-ting'ir</i>	<i>ting'-ting'</i>	<i>tipir-tipir</i>	<i>tiq-tiq</i>	<i>tors</i>
<i>tors-tors</i>	<i>vang-vang</i>	<i>visir-visir</i>	<i>yilt</i>	<i>yal-yal</i>	<i>zip</i>
<i>zir-zir</i>	<i>zirq-zirq</i>	<i>g'iyh</i>	<i>g'iyq</i>	<i>g'ilq</i>	<i>g'ing'ir-g'ing'ir</i>
<i>g'ing'-g'ing'</i>	<i>g'ip</i>	<i>g'ippa</i>	<i>g'it</i>	<i>g'irch</i>	<i>g'ichir</i>
<i>g'ich-g'ich</i>	<i>g'ir-g'ir</i>	<i>g'ult</i>	<i>g'o'ldir-g'o'ldir</i>	<i>shaldir-shuldir</i>	<i>shap</i>
<i>sharaq-sharaq</i>	<i>sharaq-shuruq</i>	<i>sharr</i>	<i>shart-shurt</i>	<i>sharq</i>	<i>shatira-shutur</i>
<i>shaqir-shuqur</i>	<i>shaq-shuq</i>	<i>shilp</i>	<i>shirq</i>	<i>shig'</i>	<i>shiqir</i>
<i>shov-shuv</i>	<i>sho'p</i>	<i>chak-chak</i>	<i>chalp-chalp</i>	<i>chalp-chulp</i>	<i>chap</i>
<i>chap-chap</i>	<i>charaq-charaq</i>	<i>chars-chars</i>	<i>chars-churs</i>	<i>chag'-chug'</i>	<i>chip-chip</i>
<i>chir</i>	<i>chirk-chirk</i>	<i>chirs-chirs</i>	<i>chirt-chirt</i>	<i>chirq-chirq</i>	<i>chir-chir</i>
<i>chitir-chitir</i>	<i>chiqir-chiqir</i>	<i>chiq-chiq</i>	<i>chig'-chig'</i>	<i>chuvur</i>	<i>chuvur-chuvur</i>
<i>chuv-chuv</i>	<i>churq</i>	<i>chug'ur-chug'ur</i>	<i>cho'lp-cho'lp²</i>		

1-picture. Lexemes given without special link in the explanatory dictionary published in 2023. The content of the above-mentioned words, the illustrative examples given to them, show that they belong to the category of onomatopoeic words. Also, most of them are repeated onomatopoeic words. In some places, the simple form of these words is included as an imitative part of speech. However, this repetitive type also does not lead to the conclusion that it belongs to the part of speech of onomatopoeia. The reason is that in some repetitive types of imitations, there are cases when a noun or adverb is transferred to a part of speech. In subsequent editions of explanatory dictionaries, it is necessary to pay attention to the inclusion of the above onomatopoeic words with a special onomatopoeic reference.

Conclusion

The constant renewal of dictionaries, the expansion of their lexical composition and the improvement of their usability are a requirement of the times. An important task is to clarify the categories of words belonging to the Uzbek language, a critical approach and an assessment of their current activities. When we observed the explanatory dictionaries published during the years of independence, including the explanatory dictionary published in 2023, we witnessed that the description of onomatopoeic words or illustrative examples are not given in themselves, but are directed at words with similar meanings or are included incompletely. It is necessary to clarify not only onomatopoeic words, but also other parts of speech. Expanding the number of

² O'zbek tilining izohli lug'ati. 6 jildli. – Toshkent: "G'afur G'ulom" nashriyoti, 2023.

onomatopoeic words in explanatory dictionaries based on the study of the national language, dialects and literary works will become the basis for increasing the possibility of using onomatopoeic words in the future and the development of the literary language.

In the explanatory dictionary published in 2023, the total number of onomatopoeic words with link is **269/47%**, while the total number of onomatopoeic words without link is **298/53%**. In explanatory dictionaries, words that are not included in the form of onomatopoeic word and fully reflect its features, are more numerous than words included with a special link. In subsequent editions of the explanatory dictionary, a link to these words should also be included. Onomatopoeic words without a link were given as a recommendation.

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Abstract: Business plan makers are faced with the task of selecting available communication channels. This article discusses the two types of communication channels: personal communication channels and non-personal communication channels, and how to properly organize marketing through these channels.

Keywords: expert, evaluation channel, social-consumer channel, target buyers, high-value, high-risk, product.

КОММУНИКАЦИЯ В МАРКЕТИНГЕ

Аннотация: Составители бизнес-планов сталкиваются с задачей выбора доступных каналов коммуникации. В этой статье всесторонне рассматриваются два типа каналов коммуникации: каналы личной коммуникации и каналы неличной коммуникации, а также правильная организация маркетинга через эти каналы.

Ключевые слова: эксперт, канал оценки, социально-потребительский канал, целевые покупатели, высокая ценность, высокий риск, продукт.

MARKETINGDA KOMMUNIKATSIYA

Annotatsiya: Biznes rejani tuzuvchilar oldida mavjud kommunikatsiya kanallarini tanlash vazifasi turadi. Ushbu maqolada yaxlit holda kommunikatsiya kanallari ikki ko'rinishdaxshsiy kommunikatsiya kanallari va shaxsiy bo'lmagan kommunikatsiya kanallari bo'lishi,shu kanallar orqali marketingni to'g'ri tashkillashtirish yoritib berilgan.

Kalit so'zlar: ekspert, baholash kanali, ijtimoiy-iste'molchi kanali, maqsadli xaridorlar, yuqori qiymatli, yuqori xavf, mahsulot.

Introduction. The main task of marketing is to identify the needs and wants of each market and select those among them that the company can provide a superior service to its competitors. This allows the company to produce high-quality products and, as a result, increase the company's overall profit by satisfying the needs of consumers.

The main directions of comprehensive market research based on marketing are:

- demand research;
- market structure determination;
- product research;
- competitive analysis;
- sales forms and methods analysis.

Business planners are faced with the task of selecting available communication channels. In general, communication channels come in two forms: personal communication channels and impersonal communication channels.

Personal communication channels involve two or more individuals who communicate directly with each other. Personal communication channels are effective because they allow participants to make personal appeals and establish feedback. Personal communication channels can be further divided into promotional, expert evaluation, and social channels.

The promotional channel involves the company's sales staff who communicate with customers in the target market.

The expert evaluation channel is formed by independent individuals with the necessary knowledge and skills. The main drivers of the social-consumer channel are neighbors, friends, family members, and colleagues who are in conversation with target buyers. This channel is known as a somewhat more active one in most product areas. Personal influence plays a significant role in making purchases in high-value and high-risk product categories. Buyers of cars and large household appliances do not limit themselves to referring to mass media sources, but also seek to know the opinions of people who know the industry. First of all, personal influence plays an important role in relation to products that are of interest to many. Non-personal communication channels are a means of transmitting (sending) information in the absence of personal contact (interaction) and feedback. Advertising is a form of promoting, on behalf of a certain sponsor, goods or services in the mass media for a certain fee.

Advertising is one of the largest industries in Uzbekistan industry. Uzbek companies spend much money on advertising their products. Since advertising is aimed at consumers and is intended to influence their decisions about their behavior in the consumer market, it is useful to get acquainted with the services provided by advertising and its organization. Advertising serves the interests of consumers and economists, because it informs consumers about prices and the latest news in the commodity market. Advertising often leads to a decrease in prices. Advertising creates a mass market, which allows manufacturers to reduce costs. This saving is used by consumers. Advertising stimulates competition, which benefits consumers and society as a whole. Through the advertising of one company, all other enterprises in the network strive for at least the same level of quality. Advertising revenue covers a large part of the costs of magazines and newspapers, the entire cost of commercial radio and TV. Advertising stimulates consumer demand and benefits the economy as a whole. The harm of advertising to society. Many people do not believe that advertising is beneficial to society; The following can be listed as disadvantages of advertising, namely, advertising often provides incorrect information and confuses buyers. Advertising requires large financial costs, which increases the cost of goods. It causes consumers to spend money on goods that they do not really need. The mass media become dependent on advertisers, which limits their freedom.

The most common types of advertising strategies are: appeals, appeals to reason, and appeals to emotion. This advertising often uses meaningless or completely meaningless rhetoric: "If you want to produce a printed product, contact "Sharq". "Sharq" is the leader of printers!" This statement can fool no one, "Sharq" is not a leader. But such appeals are based on the idea that if they are repeated many times, they will not fail to affect buyers.

Conclusion. Marketing is a process that involves planning and implementing the process of pricing, selling, and distributing ideas/products/services to meet and convert the goals of specific individuals or enterprises. The marketing plan involves assessing the enterprise's product sales markets and competitors and justifying the marketing strategy. The marketing plan is also necessary for the internal organization of the enterprise and is the basis for communication with partners and investors.

The marketing plan covers issues such as the distribution scheme of manufactured products, pricing methods, product policy, and product design.

When developing a marketing plan, it is necessary to ensure maximum adaptation of production to market requirements and active influence on the market and consumers using available tools

(product quality, advertising, service, etc.). It is necessary to demonstrate that the enterprise is able to deliver its products to the consumer. During the process of developing a business plan, a marketing plan requires addressing many questions that require detailed development.

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The attitude of the Soviet authorities towards the material and cultural monuments of Uzbekistan (1917–1990)**Sharipova Ozoda Qayumovna****1st year master's student, history major, Termez University of Economics and Service****Abstract**

The article analyzes the policies and practical measures taken in relation to monuments of material and cultural heritage in Uzbekistan during the Soviet period. In particular, attention will be paid to the destruction of religious monuments and historical architectural monuments, the change in their function, as well as the ideological purposes that the surviving parts of them served. The study is based on historical sources, archival documents and modern analysis.

Keywords Soviet power, cultural heritage, material monuments, religious monuments, preservation of monuments, historical policy

1. Introduction

Uzbekistan is known throughout the world for its rich historical and cultural heritage and ancient monuments. However, with the establishment of Soviet power after the October Revolution of 1917, the attitude towards these cultural values changed dramatically. Since Soviet ideology rejected national and religious values, many material monuments that reflected these values were destroyed, ignored or misused. In particular, examples of religious architecture (mosques, mausoleums, madrasah buildings) became the main objects of Soviet ideology.

2. Methodology

The study used historical-analytical and documentary-historical methods. Documents of the Central State Archive of the Republic of Uzbekistan, official documents and publications of the Soviet period, as well as scientific articles by modern historians (for example, A. Abdurakhmanov, M. Juraev, Sh. Rakhmanov) were analyzed. The situation in the territories where material and cultural monuments were located was also studied.

3. Results

Initial stage (1917–1930):

- A fierce struggle against religious monuments began.
- Mosques, madrasahs and shrines were closed, some were completely destroyed.
- Religious figures and custodians of monuments were subjected to repression.

Economic and ideological use (1930s–1950s):

- Many historical buildings were used as warehouses, theaters, clubs, schools, or hospitals.
- Monuments were reconstructed, changing their original appearance and function.
- Attention to Central Asian architectural examples was limited to tourist attractions or external decoration.

Relative stability and re-evaluation (1950s–1990s):

- Beginning in the 1950s, some monuments began to be taken under state protection.
- Monuments included in the UNESCO list (e.g. Registan, Shakhi-Zinda) were preserved, but their religious function was abolished.
- Towards the end of the Soviet era, a stage of careful attention to historical heritage began.

4. Discussion

The attitude of the Soviet authorities to material and cultural monuments was based mainly on ideological aspects. Monuments that were initially considered symbols of religious and national identity were rejected as symbols of the “old regime”. Later, as public discontent grew, some monuments were turned into instruments of tourism and propaganda. This approach reinforced the tendency to distort historical truth and “Sovietize” history.

For example, the Mir Arab Madrasah in Bukhara was closed in the 1940s and survived only as a model after 1956. The Ulugbek Observatory in Samarkand was positioned as a model of scientific achievement, but its religious and spiritual context was ignored.

5. Conclusion

During the Soviet era, the attitude towards material and cultural monuments in Uzbekistan was largely utilitarian, ideological and political. Many priceless monuments were lost, and some were diverted from their original purpose. In the years of independence, serious work is being done to correct this historical injustice. One of the pressing tasks of today is a comprehensive study of historical heritage, its preservation and correct transmission to future generations.

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Methodology for Developing the Psychological Preparation of Female Basketball Players

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Annotation: This article discusses the role and importance of psychological preparation in achieving high performance in the sports activities of female basketball players. The main components of psychological preparation—motivation, stress management, self-confidence, team spirit, and concentration—are analyzed. Psychological exercises, training, and modern methods to improve the level of preparation for competitions are discussed. It is also substantiated that psychological preparation has a positive impact on athletes' emotional stability, strategic thinking, and effective participation in team activities.

Keywords: Basketball, psychological preparation, sports psychology, motivation, stress management, self-confidence, team spirit, psychological training, athletes, competition preparation.

In modern sports, along with physical training, psychological preparation is also of great importance. Especially in team sports, and in particular basketball, mental stability, stress resistance, motivation, and self-confidence are considered among the key factors of an athlete's success. This article focuses on the methodology for developing the psychological preparation of female basketball players. The main components of psychological preparation are discussed. In order for female basketball players to achieve high-level sports results, their psychological state needs to be stable. From the perspective of sports psychology, psychological preparation is the inner potential necessary for an athlete to maintain an optimal psychological state during training and competition, manage stress situations, and ensure high performance. Below, the main components of psychological preparation for female basketball players are explained.

Motivation and goal setting: An athlete's ability to maintain consistent progress and work on self-improvement is primarily related to their internal and external motivations. Internal motivation (the desire for self-improvement and achieving results) has been proven in many scientific studies to have a longer-lasting and stronger impact than external motivation (rewards, recognition) (Deci & Ryan, 2000). When shaping and strengthening motivation in basketball players, it is recommended to set goals based on the SMART model. According to this model, goals should be Specific, Measurable, Achievable, Relevant, and Time-bound.

Stress management and emotional control. Basketball games often involve intense competition, rapidly changing situations, and team pressure. These conditions can lead to stress and emotional instability in athletes. In such situations, developing skills to manage stress and control emotions becomes crucial. Modern sports psychology widely applies techniques such as autogenic exercises, progressive muscle relaxation, diaphragmatic breathing, and cognitive reframing. Through these methods, athletes learn to control their physiological and emotional states.

Self-confidence. Self-confidence is a key psychological resource for athletes, enabling them to take initiative, remain steady under pressure, and make the right decisions in complex situations. A psychologically prepared basketball player believes in their strength, preparation, and abilities.

The following methods are effective in boosting self-confidence: maintaining a success journal, positive self-assessment, visualization techniques, and positive affirmations.

Team spirit and social adaptation. As basketball is a team sport, players' mutual trust, effective communication, and ability to maintain team spirit directly impact the results. Psychological adaptation refers to an athlete finding their place within the team, avoiding conflicts, and having the skills for social adaptation. To develop this, team-building exercises, group discussions, role-playing games, and sociometric analysis-based training are effective.

Attention and concentration development. Athletes need to fully focus on the game, eliminate distractions, and consciously participate in every action, which requires high levels of concentration. In basketball, this skill is especially important in making quick decisions and executing tactics correctly. Mental focusing, selective attention exercises, and visual tracking techniques are used to improve an athlete's attention span. Additionally, pre-game meditation and visualization exercises are used to strengthen concentration.

Competition preparation and visualization techniques. Athletes need to psychologically stabilize themselves before competitions. In this process, visualization techniques—where the athlete imagines performing successfully in the game—are an effective method. Through visualization, the brain practices movements, leading to automatic reactions in real actions. Moreover, within the scope of pre-competition psychological preparation, it is important to create mental scenarios, develop a psychological preparation plan, and apply individual emotional control strategies.

System of exercises to enhance psychological preparation. The importance of a specially designed psychological training program to strengthen athletes' mental state is significant. The training system built on the following elements is considered the most effective: • **Visualization Exercises** – the athlete imagines performing successful actions. • **Affirmations** – strengthening self-confidence through positive thoughts and words. • **Breathing Exercises to Reduce Stress** – calming down by regulating lung and heart rate. • **Team Analysis and Feedback Sessions** – enhancing social support through sharing thoughts and exchanging experiences. • **Individual Conversations with Coaches** – understanding the individual psychological state and identifying the necessary approach.

When these methods are implemented systematically and regularly, they improve the mental preparation level of athletes during competitions, allowing their technical and physical preparedness to fully manifest.

The success of athletes in competitions is not only directly related to their physical capabilities and technical skills but also their level of psychological preparation. This is especially important for young female basketball players, as during this period, psychological processes such as personal growth, emotional stability, and social adaptation are activated. Psychological preparation plays a crucial role in helping athletes withstand competitive pressure, maintain emotional stability after failures, and not lose their self-confidence.

Motivation. Motivation is the internal psychological driving force that ensures athletes actively participate in their sport. For female basketball players, developing intrinsic motivation, i.e., the desire for self-improvement, being beneficial to the team, and achieving personal goals, leads them to approach their sporting activities with awareness and consistency. Additionally, external motivation, such as medals, coaches' praise, or parents' attention, can be a short-term motivating factor; however, without intrinsic motivation, these results are unlikely to be sustained.

One of the negative factors affecting the mental state of athletes is pre-competition stress. To increase resilience against such stress, specific psychological techniques—such as breath control, visualization, progressive relaxation, and affirmations—are widely used. For example, through visualization, the athlete vividly imagines their successful actions, which strengthens their self-confidence. Furthermore, by managing stress, athletes learn to make strategic decisions without being influenced by emotions during competitions.

Self-confidence. Self-confidence is one of the core components of an athlete's psychological preparation. Especially in situations where the athlete faces their opponent directly, doubting oneself can slow down actions and prevent the athlete from fully demonstrating their potential. To build this confidence, the athlete must have a clear understanding of their abilities, their small achievements must be recognized, their performance should be consistently analyzed, and they should receive support through positive approaches.

Team cohesion. Team cohesion is a decisive factor in basketball. When each team member deeply understands their role and approaches their teammates with trust, this creates the foundation for the team's victory. For female athletes, particularly in younger age groups, it is essential to develop social adaptation and communication skills, ensure psychological closeness between athletes and coaches, and create a healthy competitive environment within the team instead of fostering negative rivalry. This strengthens the mental climate and has a positive impact on the psychological stability of athletes.

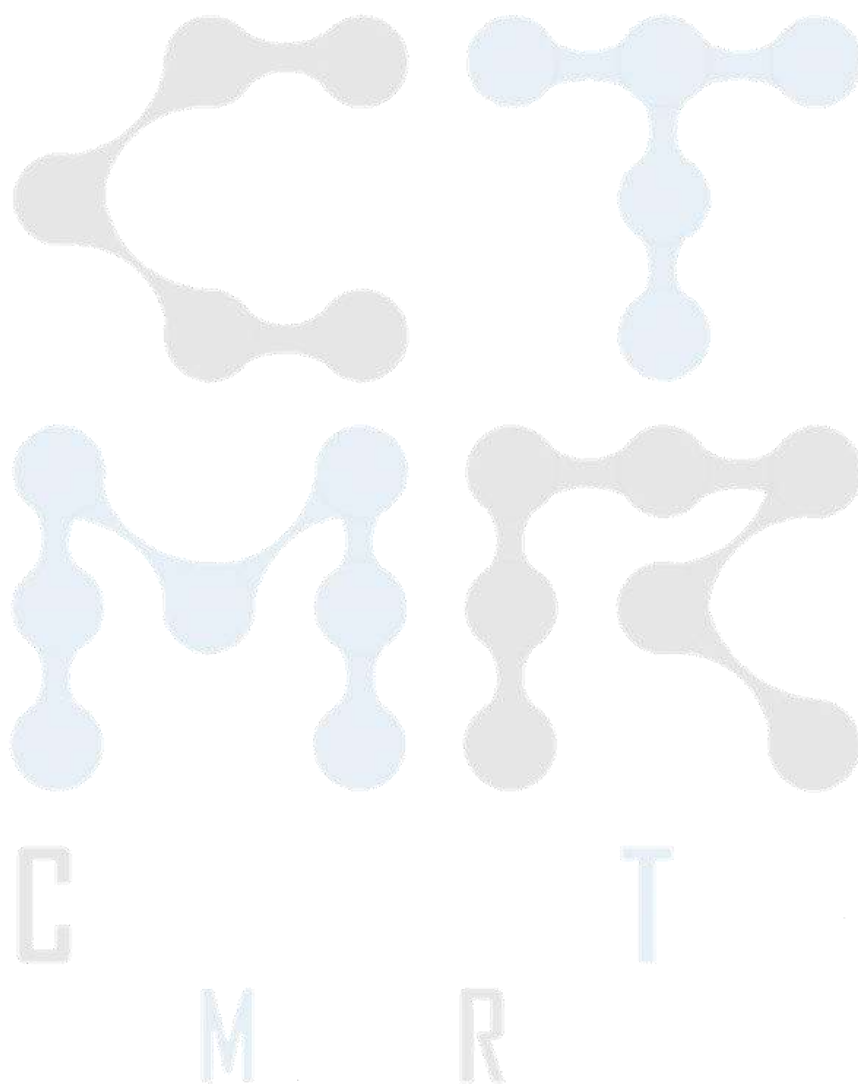
At the same time, developing psychological preparation through systematic and goal-oriented methods is one of the most relevant issues in modern sports psychology. Through individual conversations, group training, team discussions, role-playing games, and exercises focused on social adaptation, the individual characteristics of each athlete are taken into account. With the help of specialized psychological training, athletes learn to manage their emotions, strengthen their mental preparation before competitions, learn the right lessons from failures, and enhance their psychological resilience.

Conclusion. In conclusion, the success of female basketball players in sports is directly related to their level of psychological preparation. This preparation is developed through a specialized psychological approach, modern methods, individualized work, and a supportive socio-psychological environment. In the future, specialists working with athletes, coaches, and psychologists will contribute to the holistic development of athletes through an integrative approach in this field.

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CHALLENGES AND MODERN APPROACHES IN TEACHING HUMAN ANATOMY IN MEDICAL HIGHER EDUCATION INSTITUTIONS

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Introduction

Human Anatomy is one of the fundamental subjects in medical education, serving as the foundation for understanding the structure of the human body. It is essential for the formation of clinical thinking and practical skills among medical students. However, there are several challenges and outdated practices in the current teaching of anatomy that negatively impact both the quality of education and students' preparedness for clinical practice.

Main Challenges

1. **Overemphasis on theory** – Practical sessions are often limited, and students rely too much on textbook knowledge.
2. **Limited access to cadavers** – Many institutions lack sufficient cadaveric materials for dissection-based learning.
3. **Insufficient use of digital tools** – Technologies like 3D modeling and virtual reality are not widely integrated.
4. **Low student engagement** – Traditional lecture methods often fail to actively involve students in the learning process.
5. **Outdated pedagogical approaches** – Some instructors still rely on Soviet-era teaching methods.
6. **Lack of interdisciplinary integration** – Anatomy is often taught in isolation, with minimal links to physiology or clinical subjects.

Modern Approaches

1. **Interactive technologies** – Use of 3D anatomical atlases and AR/VR platforms to visualize complex structures.
2. **Virtual laboratories** – Simulated environments allow students to explore anatomy without the need for cadavers.
3. **Problem-Based Learning (PBL)** – Case-based learning that ties anatomical knowledge to clinical scenarios.
4. **Interdisciplinary integration** – Coordination between anatomy, physiology, pathology, and clinical modules.
5. **Gamification and online assessments** – Use of game elements and interactive tests to boost motivation and feedback.
6. **3D printing** – Creating tangible anatomical models for hands-on learning experiences.

Conclusion

Introducing modern educational technologies and teaching methodologies into anatomy education can transform the learning process to be more effective, student-centered, and clinically relevant. By doing so, students gain not only theoretical knowledge but also essential practical skills. Thus, modernizing anatomy instruction strengthens its role in producing competent future healthcare professionals.

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ПОРЯДОК УХОДА ЗА БОЛЬНЫМИ ИНФЕКЦИОННЫМИ ЗАБОЛЕВАНИЯМИ

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Введение.

Инфекционные заболевания остаются одной из главных причин заболеваемости и смертности в мире. Эффективный уход за больными инфекционными заболеваниями является важной составляющей стратегии борьбы с инфекциями, направленной на ограничение распространения возбудителя, облегчение симптомов болезни и улучшение качества жизни пациентов. Этот уход включает в себя не только медикаментозное лечение, но и комплекс мероприятий, направленных на создание оптимальных условий для выздоровления, соблюдение мер предосторожности и предотвращение вторичных инфекций.

Цель исследования Целью данной работы является анализ и систематизация основных принципов ухода за пациентами с инфекционными заболеваниями, а также разработка рекомендаций по снижению риска распространения инфекции и улучшению качества медицинской помощи.

Принципы ухода за больными инфекционными заболеваниями.

Уход за больными инфекционными заболеваниями должен основываться на следующих принципах.

Предотвращение распространения инфекции: Это достигается строгим соблюдением правил личной гигиены, использованием средств индивидуальной защиты (СИЗ), правильной обработкой медицинских отходов и дезинфекцией помещений.

Облегчение симптомов и поддержание комфорта: Уход должен быть направлен на облегчение боли, лихорадки, кашля и других симптомов, характерных для конкретного инфекционного заболевания. Важно обеспечивать пациенту комфортное положение, достаточный отдых и сон.

Поддержание оптимального питания и гидратации: Инфекционные заболевания часто сопровождаются потерей аппетита и обезвоживанием. Необходимо обеспечить пациенту достаточное потребление жидкости и легкоусвояемой пищи, богатой питательными веществами.

Мониторинг состояния и своевременное выявление осложнений: Важно регулярно измерять температуру, пульс, артериальное давление, оценивать дыхание и общее состояние пациента. При появлении признаков осложнений необходимо немедленно сообщить врачу.

Психологическая поддержка: Инфекционные заболевания могут вызывать тревогу, страх и чувство изоляции у пациентов. Важно оказывать им психологическую поддержку, обеспечивать общение с близкими и предоставлять достоверную информацию о заболевании и лечении.

Обсуждение

Важным аспектом ухода за больными инфекционными заболеваниями является организация окружающей среды. Необходимо обеспечить хорошую вентиляцию помещения, регулярную влажную уборку с использованием дезинфицирующих средств и минимизировать количество предметов, которые могут стать источником инфекции.

Важно также создать комфортную и спокойную обстановку, способствующую отдыху и выздоровлению пациента.

Особое внимание следует уделять уходу за кожей и слизистыми оболочками. Регулярное обмывание, обработка антисептиками и увлажняющими средствами помогают предотвратить развитие вторичных инфекций и поддерживать целостность кожного покрова. При наличии пролежней или других повреждений кожи необходимо проводить их своевременную обработку и профилактику осложнений. Неотъемлемой частью ухода является мониторинг эффективности лечения и своевременное выявление побочных эффектов лекарственных препаратов. Необходимо регулярно оценивать состояние пациента, измерять жизненно важные показатели и обращать внимание на любые изменения в его самочувствии. При появлении признаков нежелательных реакций на лекарства необходимо немедленно сообщить врачу.

Инфекционные заболевания часто сопровождаются потерей аппетита и нарушением пищеварения, поэтому необходимо предлагать легкоусвояемую и питательную пищу. Важно учитывать предпочтения пациента, но при этом следить за достаточным потреблением белков, витаминов и минералов, необходимых для восстановления организма.

Психологическая поддержка играет значительную роль в процессе выздоровления. Инфекционные заболевания могут вызывать тревогу, страх и чувство изоляции. Важно проявлять эмпатию, оказывать поддержку и создавать атмосферу доверия. Разговоры, чтение книг или прослушивание музыки могут помочь отвлечься от болезни и улучшить настроение пациента.

Необходимо обучать пациента и его родственников правилам личной гигиены и профилактики распространения инфекции. Важно объяснить, как правильно мыть руки, использовать антисептики и утилизировать использованные материалы. Понимание этих правил помогает предотвратить заражение других людей и способствует более быстрому выздоровлению пациента.

Соблюдение всех вышеперечисленных принципов ухода за больными инфекционными заболеваниями позволяет обеспечить максимальный комфорт, ускорить процесс выздоровления и предотвратить распространение инфекции.

Заключение

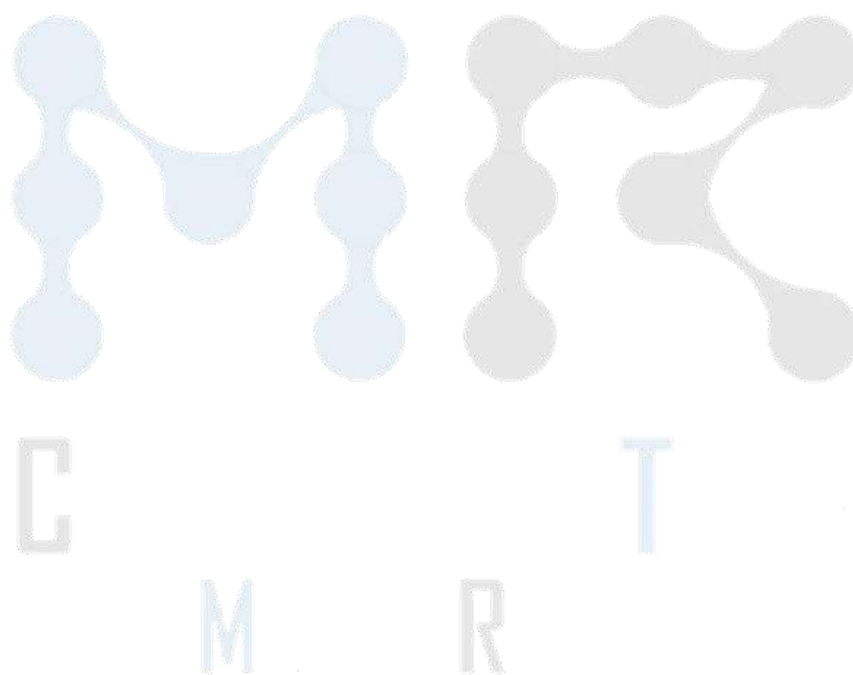
Уход за больными инфекционными заболеваниями является сложной и ответственной задачей, требующей от медицинских работников высокого профессионализма, знаний и навыков. Правильный уход, основанный на принципах предотвращения распространения инфекции, облегчения симптомов, поддержания оптимального питания и психологической поддержки, играет ключевую роль в улучшении исходов лечения и снижении заболеваемости и смертности от инфекционных заболеваний. Современные подходы к уходу, учитывающие индивидуальные потребности пациентов и использующие новые технологии, позволяют повысить эффективность и качество ухода и улучшить жизнь пациентов с инфекционными заболеваниями.

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IMPORTANCE AND BASIC PRINCIPLES OF FIRST AID IN EMERGENCY SITUATIONS

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Abstract: The thesis outlines the basic principles, general procedures, and practical recommendations for providing first aid in emergency situations. It emphasizes the critical role of timely and effective intervention, highlighting key stages for proper assistance.

Keywords: emergency aid, first aid, urgent situation, rapid response, vital signs.

Providing quick and effective first aid in emergency situations plays a vital role in saving lives and restoring health. In conditions that threaten human health and life, every second counts.

First aid involves the following stages:

1. Rapid Assessment of the Situation:
 - Identifying potential hazards at the scene and creating a safe environment.
 - Initial evaluation of the victim's overall condition.
2. Checking and Securing Vital Signs:
 - Ensuring airway patency.
 - Checking breathing and circulation, performing cardiopulmonary resuscitation (CPR) if necessary.
3. Calling for Emergency Medical Assistance:
 - Contacting professional emergency services.
 - Providing accurate details about the victim's condition and location.
4. Primary Aid Measures:
 - Stopping bleeding by applying sterile bandages or pressure dressings.
 - Immobilizing fractures or dislocations.
 - Treating burns with cold water and covering with sterile materials.

Practical Recommendations:

- Every individual should learn basic first aid techniques.
- Regularly updating medical knowledge is crucial.
- Essential equipment and supplies should be readily available for emergency situations.

In conclusion, rapid and effective first aid in emergency situations is critical in saving lives, and acquiring these essential skills is important for everyone.

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Termiz davlat universiteti talabasi

ANNOTATSIYA

Ushbu maqolada moliyaviy tizimning zamonaviy holati, uning iqtisodiyotni rivojlantirishdagi oʻrni hamda bank sohasida amalga oshirilayotgan islohotlarning mazmun-mohiyati tahlil qilinadi. Bank tizimini liberallashtirish, raqobat muhitini kengaytirish, moliyaviy barqarorlikni taʼminlash boʻyicha olib borilayotgan chora-tadbirlar yoritilgan. Shuningdek, bank xizmatlari sifati va qamrovini oshirish, xalqaro standartlarga moslashish yoʻnalishidagi islohotlarning samaradorligi koʻrib chiqiladi. Maqola yakunida Oʻzbekistonda moliyaviy tizimni yanada takomillashtirish boʻyicha taklif va tavsiyalar berilgan.

ANNOTATION

This article analyzes the current state of the financial system, its role in economic development, and the essence of reforms being carried out in the banking sector. It highlights the measures taken to liberalize the banking system, expand competition, and ensure financial stability. The article also examines the effectiveness of reforms aimed at improving the quality and coverage of banking services and aligning with international standards. In conclusion, the article provides proposals and recommendations for further improvement of the financial system in Uzbekistan.

Kalit soʻzlar: moliya, subsidiya, subvensiya, dotatsiya, rentabellik, likvidlik, sanatsiya, moliyaviy sanksiya, pul-kredit siyosati, preferensiyalar, inflyatsiya, moliya tizimi, aktivlar, bank-moliya tizimi.

Keywords: finance, subsidy, subvention, grant, profitability, liquidity, sanitation (financial recovery), financial sanction, monetary policy, preferences, inflation, financial system, assets, banking-financial system.

Davlat moliya tizimi, uning tarkibi va tuzilishi

Moliya tizimi — iqtisodiyot pul sektorining bir qismi, moliya amaliyoti. Moliya tizimi faqat moliya munosabatlarini emas, balki moliyaga taalluqli siyosiy, tashkiliy munosabatlarni ham qamrab oladi. Bu tizim tarkibiga quyidagilar kiradi: a) moliya obyektini hosil etuvchi pul fondlari yoki moliya resurslari; b) korxonalar, xonadonlar, davlat idoralari va nodavlat tashkilotlaridan iborat moliya munosabatlarining subyektlari — ishtirokchilari; v) moliya mexanizmi, yaʼni moliya munosabatlarida qoʻllaniladigan va pul bilan bogʻliq vositalar (foyda, zarar, rentabellik, likvidlik, byudjet, byudjetdan tashkari fondlar, subsidiya, subvensiya, dotatsiya, sanatsiya, moliya normativlari, moliyaviy sanksiya va boshqalar); g) moliya institutlari va davlatning moliya idoralari (moliya kompaniyalari, moliya jamgʻarmalari, moliya vazirligi, uning mahalliy boʻlinmalari, soliq idoralari, gʻaznachilik xizmati, soliq politsiyasi va boshqalar); d) moliya bozori — fond bozori, sugʻurta xizmati bozori, valyuta bozori; e) moliya siyosati — iqtisodiyot subyektlarining moliyaga oid yoʻl-yoʻriqlari va xatti-harakati.

Moliya siyosati, byudjet siyosati — davlat umumiy iqtisodiy siyosatining muhim tarkibiy qismi; davlat faoliyatini taʼminlash, mamlakat farovonligini oshirish maqsadlarida moliya tizimini tashkil etish, moliyaviy resurslarni safarbar etish va ulardan foydalanish, davlat oldida turgan ichki va tashqi siyosat vazifalarini bajarish buyicha amalga oshiriladigan barcha davlat tabirlarini oʻz ichiga oladi.

Moliya siyosati ta'sir ko'rsatadigan asosiy ob'ektlar — aholining turli katamlari, davlat institutlari (tashkilotlari), sanoat va xo'jalikning b. sohalari, mintakalar va mamlakatlarning umumiy hududi. Moliya siyosatining asosiy quroli va tarkibiy qismi — davlat byudjeti daromadlari va harajatlari, zayomlari, soliq imtiyozlaridir. Davlat tomonidan tanlagan iqtisodiy siyosatga va maqsadlarga qarab ayrim bandlar bo'yicha xarajatlarni ko'paytirish yoki kamaytirish orqali mamlakat hayotining u yoki bu tomonlariga, davlat institutlariga, iqtisodiyot tarmoqlariga, mas, harbiy harajatlarni yoki ilmiy texnik taraqqiyot uchun xarajatlarni ko'paytirib yoki kamaytirib, faol ta'sir etish mumkin. Davlat daromadlar, ularning miqdori, soliklar tizimi orqali iqtisodiy o'sish sur'atiga, aholi farovonligiga ta'sir ko'rsatishi, inflyasiya jarayonlarini va hokazoni boshqarishi mumkin.

Doimiy daromadlardan olinadigan moliyaviy resurslar yetishmagan hollarda qarzlar qo'llanadi, ularning hajmi va ularga xizmat ko'rsatish tartibi ham iqtisodiyot holatiga ta'sir ko'rsatadi. Soliq imtiyozlari Moliya siyosatining muhim usullaridan biri hisoblanadi, ularning yordami bilan davlat iqtisodiyotning muhim tarmoqlari taraqqiyotini tezlashtirishi, aholining ayrim qatlamlari yoki toifalarining daromadiga bilvosita ta'sir etishi mumkin. Imtiyozlar va soliq solish bo'yicha preferensiyalar keyingi o'n yilliklarda taraqqiy etgan mamlakatlar iqtisodiyotida ayniqsa keng rivojlanmoqda. Moliya siyosati pul-kredit siyosati bilan qo'shib ketadi va o'z tadbirlarini o'tkazishda uning usullaridan foydalanadi. Moliya siyosatining muhim tomoni shundaki, bu siyosat odatda hukumat va uning qarorlarini tasdiqlaydigan davlat organlarining bevosita tasarrufida va boshqaruvida bo'ladi, pul-kredit tadbirlari bilan pul hukmdorlari — Markaziy bank tipidagi korxonlar shug'ullanadi. Makrodarajada Moliya siyosati davlat siyosati, mikrodarajada korxona, tashkilotlar va xonadonlar Moliya siyosatidan iborat. Moliya siyosatining tarkibiy qismi — byudjet siyosatining maqsadi davlat harajatlarini muqim ravishda pul bilan ta'minlashdir. Buning uchun byudjetning daromad qismi ta'minlanadi, byudjet daromadi va harajatlari balanslashtiriladi, byudjet taqchilligini me'yorida (YAIMga nisbatan 3%) bo'lishga erishiladi.

Firmaning Moliya siyosati — bu firmaning o'z moliya resurslarini hosil qilish va ularni samarali ishlatishga qaratilgan chora tadbirlaridir. Bundan maqsad firmaning rentabel bo'lishi, likvidligini ta'minlash va o'z-o'zini moliyalashtirishga erishishdir. Firma Moliya siyosati uning pul fondlaridan oqilona foydalanishiga, uning qarzдорligining me'yorida bo'lishiga, pul mablaglarining o'z vaqtida aylanib turishiga, moliyaviy majburiyatlarning vaqtida bajarilishiga qaratiladi. Firma Moliya siyosatini uning egalari ishlab chiqadi, amalga oshirilishini esa moliya menejeri ta'minlaydi. Xonadon Moliya siyosati — uning daromadlari va harajatlarini balanslashtirish, ya'ni daromad manbalarini topish, daromadlarni oqilona ishlatish va farovonlikni oshirishni ko'zlaydi.



Moliya siyosatining natijasi uning asoslangan bo'lishi, real imkoniyatlardan kelib chiqishi va uni izchil amalga oshirilishiga bog'liq.

Moliya tizimidagi zaifliklar va xatarlarni baholash bo'yicha o'tkazilgan so'rovnoma natijalariga ko'ra, tashqi geosiyosiy vaziyatning yomonlashuvi eng asosiy xatar deb topildi. Shuningdek, so'rovnoma ishtirokchilari valuta kursining keskin o'zgarishi, aholi qarz yukining ortishi, inflatsiyaning oshishi va kiberhujumlarni moliya tizimiga ta'sir qiluvchi asosiy xatarlar deb hisoblaydi.

Moliyaviy barqarorlik ko'rsatkichlarining so'nggi yarim yillikdagi o'zgarishlari bo'yicha so'rovnoma natijalariga ko'ra, respondentlarning 57 foizi kreditga bo'lgan talab oshganini ta'kidlagan. Shuningdek, respondentlarning 46 foizi qisqa muddatli moliyalashtirish manbai oshganini qayd etgan. O'z navbatida, respondentlarning 37 foizi uzoq muddatli moliyalashtirishning mavjudligi hamda banklararo likvidlik holati ko'rsatkichlari o'zgarmagan deya baholagan.

Avvalroq, Xalqaro valuta jamg'armasi missiyasi O'zbekiston iqtisodiyoti uchun ehtimoliy xatarlarni ma'lum qilgandi. Ekspertlar xulosasiga ko'ra, Ukrainadagi urushning avj olishi, tovarlar narxlarining o'zgaruvchanligi va jahon iqtisodiyotidagi stagnatsiya ehtimollari O'zbekiston iqtisodiyoti uchun tashqi xatarlarni tashkil etadi. Ichki xatarlar qatorida esa davlat xarajatlarini qisqartirish kechikishi, davlat-xususiy sheriklik bilan bog'liq majburiyatlar yuzaga kelishi va boshqalar keltirib o'tilgan.

Bank tizimini isloh qilish strategiyalari

Ta'kidlash lozimki, respublikamiz bank-moliya tizimini isloh qilish va mustahkamlash bo'yicha ko'rilayotgan chora-tadbirlar banklarning kapitallashuv darajasini oshirish, iqtisodiyotni kreditlash ko'lamini kengaytirish, ko'rsatilayotgan bank xizmatlari spektrlarini ko'paytirish, shuningdek, mamlakat iqtisodiyotini rivojlantirishda bank tizimining rolini oshirish imkonini berdi.

Bank tizimini isloh qilishning 5 yillik strategiyasi tasdiqlandi

Prezident Shavkat Mirziyoyev 12 may kuni «2020–2025 yillarga mo'ljallangan O'zbekiston Respublikasining bank tizimini isloh qilish strategiyasi to'g'risida»gi farmonga imzo chekdi.

Farmon bilan tegishli strategiya va uni amalga oshirish bo'yicha yo'l xaritasi tasdiqlandi.

Hujjat asosida kelgusi 5 yil davomida bank sohasini o'zgartirishning konseptual asoslari, tamoyillari va yo'nalishlari belgilandi.

Unga ko'ra, bank sohasida o'rta muddatli islohotlarning asosiy yo'nalishlari quyidagilar:

- sektorni qayta qurish – banklarni o'zgartirish va xususiylashtirish;
- bank nazorati bo'yicha Bazel qo'mitasi standartlarini, moliyaviy hisobotlarning xalqaro standartlarini va boshqalarni joriy etgan holda qonunchilik bazasini takomillashtirish;
- mijozlarga yo'naltirilgan xizmatlar, kreditlash mexanizmlari va biznes jarayonlarini avtomatlashtirish orqali xizmat ko'rsatish sifatini yaxshilash va kengaytirish;
- kadrlar malakasini oshirish.

2025 yilga borib quyidagi maqsadlarga erishish ko'zda tutilgan:

- bank tizimi aktivlarining jami hajmida davlat ulushi bo'lmagan banklar aktivlari hissasini joriy 15 foizdan 2025 yilga kelib 60 foizgacha oshirish;
- banklar majburiyatlarining umumiy hajmida xususiy sektor oldidagi majburiyatlar hissasini joriy 28 foizdan 2025 yil yakuniga 70 foizgacha oshirish;
- 2025 yilga kelib davlat ulushi mavjud kamida uchta bank kapitaliga zarur tajriba, bilim va nufuzga ega kamida uchta strategik xorijiy investorlarni jalb qilish;
- umumiy kreditlash hajmida nobank kredit tashkilotlari ulushini joriy 0,35 foizdan 2025 yilga kelib 4 foizgacha oshirish.

Strategiya Jahon banki ekspertlari yordamida Moliya vazirligi va Markaziy bank mutaxassislari tomonidan ishlab chiqilgan. Bunda xalqaro amaliyot va yondashuvlar, jumladan, MDH va Sharqiy Yevropa tajribasi hisobga olingan.

Moliyaviy sektorni izchil isloh qilish davomida qator chora-tadbirlar amalga oshirildi va natijada ilg'or bank biznesini yuritish hamda ushbu sektorda raqobat muhitini kuchaytirish uchun zarur huquqiy shart-sharoitlar yaratildi.

Xususan, xalqaro standartlarga muvofiq keladigan va moliyaviy sohaga xorijiy investitsiyalar kiritish uchun jozibador huquqiy muhitni yaratadigan O'zbekiston Respublikasining "O'zbekiston Respublikasining Markaziy banki to'g'risida"gi, "Banklar va bank faoliyati to'g'risida"gi, "Valyutani tartibga solish to'g'risida"gi hamda "To'lovlar va to'lov tizimlari to'g'risida"gi yangilangan qonunlari qabul qilindi.

Shu bilan birga, bank sohasidagi hozirgi holat tahlili bank sektorida davlatning yuqori darajadagi aralashuvi, davlat ishtirokidagi banklarda menejment va tavakkalchiliklarni boshqarish sifatining yetarli emasligi, iqtisodiyotda moliyaviy vositachilikning past darajasi kabi bank sektorini iqtisodiy yangilanishlar va jamiyat ehtiyojlariga mos ravishda rivojlantirishga to'sqinlik qilayotgan qator tizimli muammolar mavjudligini ko'rsatmoqda.

Moliyaviy xizmatlarning ommabopligini oshirish, banklarning hududlarga kirib borishini kengaytirish va barcha aholi punktlarida bir xil turdagi xizmatlar ko'rsatilishini ta'minlash bo'yicha qo'shimcha choralar ko'rilishi lozim.

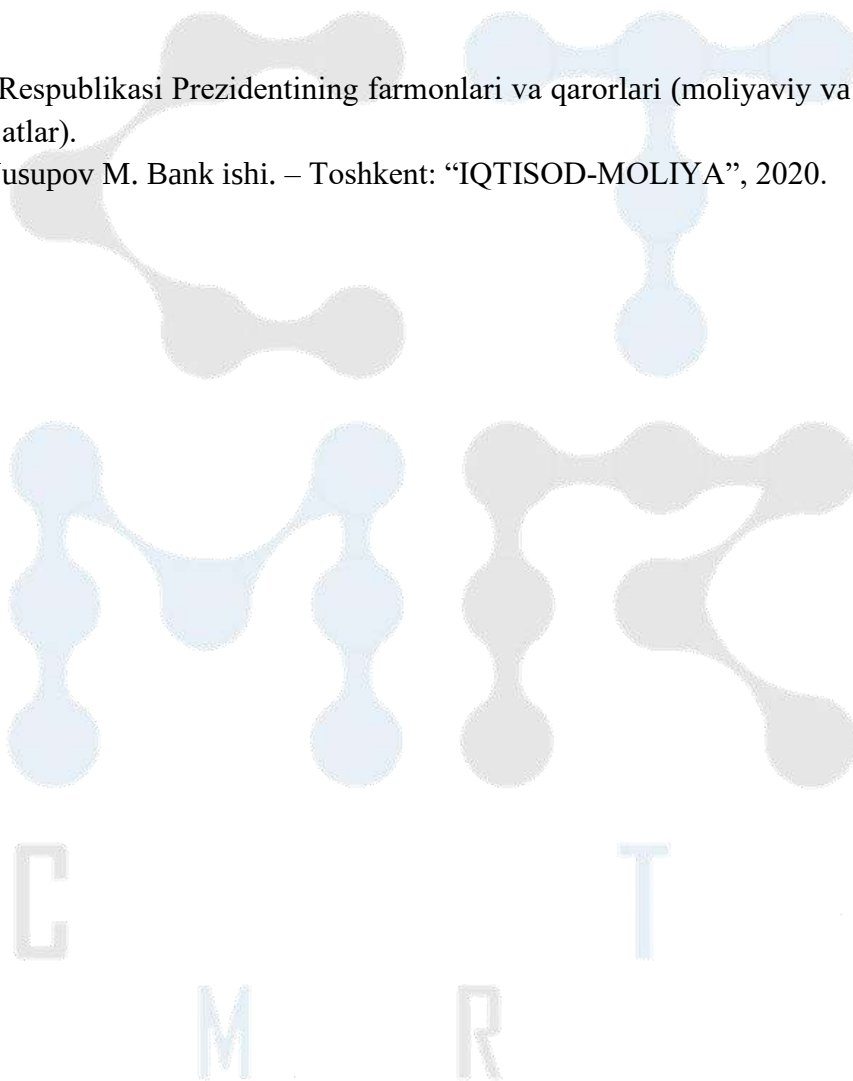
Bank tizimiga zamonaviy servis yechimlari asosida axborot texnologiyalarini, moliyaviy texnologiyalarni keng joriy etish, axborot xavfsizligini lozim darajada ta'minlash, shuningdek, moliyaviy xizmatlar ko'rsatishda inson omili ta'sirini kamaytirish bo'yicha tezkor chora-tadbirlar ko'rish talab etilmoqda.

Xulosa qilib aytganda, moliyaviy tizim va bank sohasi har qanday mamlakat iqtisodiyotining tayanch ustunlaridan biri hisoblanadi. So'nggi yillarda O'zbekistonda ushbu sohada olib borilayotgan islohotlar iqtisodiy o'sishni rag'batlantirish, investitsiya muhitini yaxshilash hamda aholining moliyaviy xizmatlarga bo'lgan ehtiyojini to'liq qondirishga xizmat qilmoqda. Bank

tizimini liberallashtirish, moliyaviy barqarorlikni ta'minlash va xalqaro standartlarga mos tizimni shakllantirish bo'yicha qo'yilgan maqsadlar bosqichma-bosqich amalga oshirilmoqda. Kelgusida bu islohotlarning izchil davom ettirilishi mamlakatning iqtisodiy mustahkamligini yanada oshiradi hamda global moliyaviy bozorlar bilan integratsiyalashuviga zamin yaratadi.

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YANGI UZBEKISTONDA UCHINCHI RENESSANS POYDEVORINI BARPO ETISHNING TARIXIY ZARURATI VA ISTIQBOLLARI (2020 -2030 YILLAR MISOLIDA)**Mengniyazova Nazira**

Termiz iqtisodiyot va servis universiteti 1-bosqich tarix mutaxassisligi magistranti

Anotatsiya: Uchinchi Renessans O'zbekistonning tarixida yangi davrni boshlashni anglatadi. 2020-2030 yillar oralig'ida amalga oshiriladigan islohotlar va innovatsiyalar, mamlakatni jahon miqyosida raqobatbardosh qilishga qaratilgan. Ushbu tezisda, Yangi O'zbekistonda uchinchi renessansni barpo etishning tarixiy zarurati va istiqbollari, iqtisodiy, siyosiy, madaniy va ijtimoiy sohalarda amalga oshiriladigan inqilobiy o'zgarishlar tahlil qilinadi. 2020-2030 yillarga mo'ljallangan strategiyalar, O'zbekistonda innovatsion iqtisodiyot yaratish, madaniy merosni saqlash, ta'lim tizimini isloh qilish va ekologik barqarorlikni ta'minlashga qaratilgan. Ushbu davrda mamlakatning ichki va tashqi siyosatidagi islohotlar O'zbekistonni yangi bosqichga olib chiqadi va global miqyosda o'z o'rnini mustahkamlashga yordam beradi.

Kalit so'zlar: Uchinchi Renessans, Yangi O'zbekiston, Innovatsion iqtisodiyot, Madaniy meros, Ta'lim islohotlari

Yangi O'zbekistonning Tarixiy Konteksti: O'zbekistonning mustaqillikka erishishi va mustaqil rivojlanish yo'lini boshlashi, o'z tarixida yangi bosqichga kirganini ko'rsatadi. Mustaqillikning dastlabki yillarida iqtisodiy va siyosiy erkinlikni ta'minlashga qaratilgan qadamlar atroflicha amalga oshirilgan bo'lsa-da, jamiyatda haligacha mavjud bo'lgan ayrim muammolarni bartaraf etish zarurati paydo bo'ldi. Shu bois, 2020 yildan boshlab O'zbekistonda Uchinchi Renessansni barpo etish uchun yangi strategiyalar va loyihalar ishlab chiqilmoqda. **Uchinchi Renessans: Konsept va Maqsadlar:** Uchinchi Renessans – bu faqat iqtisodiy o'sish va siyosiy erkinlikni anglatmaydi. U hamda madaniyat, ta'lim, fan, san'at, ijtimoiy adolat va ekologiya kabi sohalarda ham inqilobiy o'zgarishlarni anglatadi. Uchinchi Renessansni barpo etishning asosiy maqsadlari quyidagilardan iborat:

- Innovatsion iqtisodiyotni rivojlantirish;
- Madaniy va ilmiy merosni saqlash va rivojlantirish;
- Ta'lim tizimida islohotlar amalga oshirish;
- Sog'liqni saqlash tizimini takomillashtirish;
- Tashqi siyosatda O'zbekistonning dunyodagi o'rnini mustahkamlash.

Tarixiy Zarurat: Uchinchi Renessansning zarurati ko'p jihatdan O'zbekistonning o'tgan 30 yillik mustaqillik yo'lida amalga oshirilgan islohotlar va davlat rahbarining yangi tashabbuslari bilan bog'liq. Bular:

Xalqaro iqtisodiy aloqalarning rivojlanishi va yangi hamkorliklar o'rnatilishi;

Yangi davrning ijtimoiy va madaniy ehtiyojlariga javob beradigan tizimlar yaratish zarurati;

Ta'lim va ilm-fan sohasidagi inqilobiy o'zgarishlar;

Jahon miqyosida O'zbekistonning siyosiy mustaqillik va stabiliteti uchun talablar.

Yangi O'zbekistonda Uchinchi Renessansni barpo etishning tarixi va istiqbollari, avvalo, mamlakatning mustaqillikka erishganidan keyingi davrda amalga oshirilgan islohotlar asosida shakllangan. 1991-yilda mustaqillikka erishgan O'zbekiston, ilk yillarda iqtisodiy va siyosiy erkinlikni ta'minlashga qaratilgan qadamlar qo'ydi. Ammo bu jarayonning dastlabki yillarida iqtisodiy qiyinchiliklar va ijtimoiy muammolar yuzaga keldi. Bu muammolarni hal qilish uchun O'zbekistonning yangi rahbariyati, ayniqsa, 2016-yildan keyin amalga oshirilgan islohotlar va tashabbuslar orqali mamlakatni yangi rivojlanish bosqichiga olib chiqishga intildi. 2020-yilda prezident Shavkat Mirziyoyev tomonidan ilgari surilgan Uchinchi Renessans strategiyasi, aynan shu davrda iqtisodiy o'sishning innovatsion modellari va madaniy inqiloblarni o'z ichiga olgan yangi davrni boshlab berdi.

Uchinchi Renessansning asosiy maqsadi — faqat iqtisodiy rivojlanishni ta'minlashdan iborat emas. Bu, shuningdek, jamiyatdagi barcha sohalarida zamonaviy g'oyalarni rivojlantirishni, xalqaro miqyosda raqobatbardosh bo'lishni, madaniy va ilmiy merosni saqlashni, shuningdek, barqaror va ekologik toza iqtisodiy tizimlarni yaratishni anglatadi. Bu jarayonning muhim jihati – jamiyatda mavjud bo'lgan tengsizlik va adolatsizlikni bartaraf etish, ta'lim tizimini isloh qilish, ijtimoiy xizmatlarni yanada samarali tashkil etishdir.

Bundan tashqari, O'zbekistonning Yangi Renessans davri, tarixiy merosning o'ziga xosligini saqlash bilan birga, ilm-fan va texnologiyalarni rivojlantirishga katta e'tibor qaratadi. 2020-yildan boshlab amalga oshirilgan ilmiy tadqiqotlar va texnologik yangilanishlar, yangi ish o'rinlari yaratishga, yoshlar uchun innovatsion imkoniyatlar ochishga xizmat qilmoqda. Bu borada, O'zbekistonning ta'lim tizimiga yangi metodlar va texnologiyalarni qo'llash, raqamli iqtisodiyotning rivojlanishiga olib keladi. Shu bilan birga, O'zbekistonda turizm, madaniyat, san'at va sport sohalarida ham katta o'zgarishlar ro'y bermoqda.

2020-2030 yillarda O'zbekistonning iqtisodiy modeli, raqamli transformatsiya va sanoatni modernizatsiya qilishga qaratilgan tashabbuslar orqali yangi bosqichga o'tadi. Ayniqsa, yuqori texnologiyalarni ishlab chiqarish va ilm-fan sohasidagi yangi innovatsiyalar, O'zbekistonni global iqtisodiyotda mustahkam o'rin egallashga yordam beradi. Bu davrda ekologik toza va barqaror rivojlanishning asosiy yo'nalishlaridan biri sifatida yashil iqtisodiyot, qayta tiklanuvchi energiya manbalarini rivojlantirish, suv resurslarini boshqarish va atrof-muhitni muhofaza qilishning yangi usullari joriy etiladi.

Bundan tashqari, mamlakatning tashqi siyosatida ham yangi yondashuvlar ko'rinadi. O'zbekistonning xalqaro aloqalari kuchaytiriladi, yangi iqtisodiy va siyosiy ittifoqlar quriladi. Jahon bozorida O'zbekistonning o'рни mustahkamlash, investitsiyalarni jalb qilish va eksport salohiyatini oshirish maqsadida, O'zbekistonning tashqi siyosatida faollik kuchayadi. Shuningdek, iqtisodiy barqarorlikni ta'minlash, ijtimoiy adolatni o'rnatish va yoshlar bilan ishlashga alohida e'tibor qaratiladi.

Shu bilan birga, 2020-2030 yillarda O'zbekistonning ijtimoiy tizimida ham islohotlar amalga oshiriladi. Ijtimoiy xizmatlar, sog'liqni saqlash tizimi, ta'lim, madaniyat va sportni rivojlantirishga qaratilgan yangi dasturlar ishlab chiqiladi. Jamiyatda tenglikni ta'minlash, ayollarni qo'llab-quvvatlash, qashshoqlikni kamaytirish va ijtimoiy yordam tizimlarini takomillashtirish zarurati tug'iladi.

Shunday qilib, Yangi O'zbekistonda Uchinchi Renessansni barpo etish, faqat iqtisodiy rivojlanish bilan cheklanmay, balki madaniyat, ilm-fan, ijtimoiy adolat va ekologiya kabi sohalarda ham tub o'zgarishlarni amalga oshirishni ko'zda tutadi. 2020-2030 yillar uchun belgilangan istiqbollar, O'zbekistonni global miqyosda raqobatbardosh va rivojlangan mamlakatga aylantirishga xizmat qiladi. Bu davr, mamlakatning yangi tarixini yaratishga va jahon miqyosida mustahkam o'rin egallashga imkon beradi.

Xulosa: Uchinchi Renessansning poydevorini barpo etishning tarixi, iqtisodiy, siyosiy va ijtimoiy kontekstga asoslanadi. 2020-2030 yillarga qadar bu jarayon, O'zbekistonni yanada rivojlangan, innovatsion iqtisodiyotga asoslangan, adolatli va barqaror jamiyatga aylantirishga imkon beradi. Ushbu davrda amalga oshiriladigan islohotlar mamlakatni yangi muvaffaqiyatlarga olib keladi va uning jahon miqyosidagi o'rnini mustahkamlaydi.

**O'ZBEKISTON RESPUBLIKASINING XITOIY XALQ RESPUBLIKASI BILAN
IJTIMOIY-IQTISODIY VA MADANIY XAMRORLIGI (1995-2025-YILLAR)****Xudayarova Nigora Yuldashevna**

Termiz iqtisodiyot va servis universiteti 1-bosqich tarix mutaxassisligi magistranti

Yormatov Faxriddin Joylovovich, Tarix fanlari nomzodi, dotsent

Anotatsiya O'zbekiston Respublikasi mustaqillikka erishganidan keyin tashqi siyosatida ko'p vektorli yondashuvni yo'lga qo'ygan holda, strategik hamkorlikni shakllantirishda Osiyo davlatlari, ayniqsa, Xitoy Xalq Respublikasi bilan aloqalarni rivojlantirishga alohida e'tibor qaratdi. Ushbu tezisda 1995–2025-yillar oralig'ida ikki tomonlama munosabatlarning ijtimoiy, iqtisodiy va madaniy jihatlari chuqur tahlil qilinib, ularning bugungi kundagi ahamiyati, rivojlanish bosqichlari va istiqbollari ilmiy asoslangan holda yoritilgan.

Kalit so'zlar: O'zbekiston, Xitoy, tashqi siyosat, iqtisodiy hamkorlik, madaniy almashinuv, "Bir kamar – bir yo'l", strategik sheriklik, investitsiyalar, infratuzilma, tarixiy aloqalar.

Kirish So'nggi 30 yillik tarixiy davr O'zbekiston va Xitoy o'rtasidagi munosabatlarda tub burilish davri bo'ldi. Mustaqillikning ilk yillarida O'zbekiston tashqi siyosatda ko'p qirrali yondashuvni tanlagan bo'lib, bu borada Xitoy Xalq Respublikasi bilan mustahkam aloqalar o'rnatildi. Xususan, 1992-yil 2-yanvarda diplomatik aloqalar yo'lga qo'yilgan bo'lsa, 1995-yildan boshlab bu munosabatlar ijtimoiy-iqtisodiy va madaniy sohalarga ham kengayib bordi. 2012-yilda strategik sheriklik, 2016-yildan esa har tomonlama strategik hamkorlik darajasiga ko'tarildi. Xitoyning "Bir kamar – bir yo'l" tashabbusi doirasida O'zbekiston Markaziy Osiyoda muhim tranzit va iqtisodiy sherikka aylandi. Ushbu maqolada aynan 1995–2025-yillarda ikki mamlakat o'rtasidagi munosabatlarning rivojlanish dinamikasi, asosiy yo'nalishlari va istiqbollari o'rganiladi.

Tadqiqotda tarixiy-solishtirma, tahliliy, statistik va mantiqiy yondashuv uslublaridan foydalanildi. O'zbekiston Respublikasi Tashqi ishlar vazirligi, Davlat statistika qo'mitasi, Xitoyning rasmiy statistik byurolari va nufuzli xalqaro tashkilotlar (Jahon banki, BMT, SCO) ma'lumotlari asos qilib olindi. Diplomatik hujjatlar, hukumatlararo bitimlar, rasmiy tashriflar tafsilotlari, investitsion loyihalar statistikasi asosida chuqur tahlil amalga oshirildi.

Natijalar

Ikki davlat o'rtasidagi hamkorlik 1995–2025-yillar oralig'ida uch bosqichda shakllandi:

Birinchi bosqich (1995–2005): Xitoy O'zbekistonni Markaziy Osiyoda muhim sherik sifatida tan olib, iqtisodiy, texnik va gumanitar yo'nalishlarda dastlabki bitimlar imzolandi. Xususan, Toshkentda Xitoy elchixonasi faoliyatini kengaytirgan, madaniy delegatsiyalar almashinuvi boshlangan.

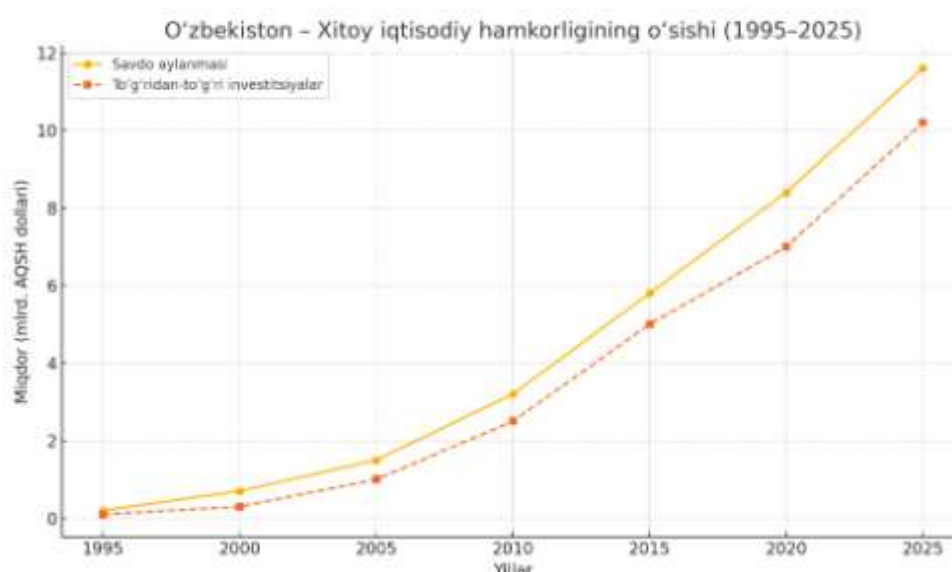
Ikkinchi bosqich (2006–2015): "Bir kamar – bir yo'l" tashabbusi doirasida infratuzilma va energetika sohalarida katta loyihalar boshlandi. Angren–Pop temir yo'li, Qamchiq dovonidagi tunnellar, "G'uzor–Buxoro–Beyneu" gaz quvuri qurilishi Xitoy kreditlari asosida moliyalashtirildi. Shu bilan birga, Confucius institutlari ochilib, ta'lim va madaniyat sohalarida hamkorlik mustahkamlandi.

Uchinchi bosqich (2016–2025): Prezident Shavkat Mirziyoyev tashabbusi bilan Xitoy bilan hamkorlik yangi bosqichga chiqdi. 2022-yilda Xitoyga rasmiy tashrifi davomida 15 milliard dollarlik bitimlar imzolandi. Samarqandda SCO sammiti doirasida ikki davlat rahbarlari o'rtasida strategik kelishuvlarga erishildi. Shu bilan birga, O'zbekistonda Xitoy texnologiyalari

ishtirokidagi sanoat zonalari, avtomobil va energetika sohalarida qo'shma korxonalar faoliyat yurita boshladi.

Ijtimoiy va madaniy yo'nalishlar: 2020-yilga kelib, har yili yuzlab O'zbek talabalar Xitoy oliygohlarida tahsil olmoqda. Shuningdek, Konfutsiy markazlari orqali xitoy tili va madaniyati ommalashmoqda. Badiiy delegatsiyalar almashinuvi, OAV sohasida hamkorlik, qo'shma film va media loyihalar madaniyatlararo aloqalarni mustahkamladi. Turizm sohasida ham o'sish kuzatilib, 2023-yilda 50 mingdan ortiq xitoylik sayyoh O'zbekistonga tashrif buyurgan.

Iqtisodiy hamkorlik: 2023-yil holatiga ko'ra, Xitoy O'zbekistonning eng yirik savdo sheriklaridan biri bo'lib, o'zaro tovar aylanmasi 11,6 milliard AQSH dollariga yetdi. 2024-yilda bu ko'rsatkich 13 milliard dollardan oshdi. Xitoyning to'g'ridan-to'g'ri investitsiyalari 10 milliard dollardan oshib, ayniqsa, energetika, qurilish, qishloq xo'jaligi va raqamli texnologiyalar sohalarini qamrab oldi.



O'zbekiston va Xitoy o'rtasidagi savdo aylanmasi hamda Xitoy investitsiyalarining O'zbekistonga kirib kelishi 1995-yildan 2025-yilgacha ko'rsatilgan. Bu raqamlar ikki davlat o'rtasidagi ijtimoiy-iqtisodiy hamkorlikning yildan-yilga kuchayib borayotganini aniq aks ettiradi.

Munozara Xitoy va O'zbekiston o'rtasidagi hamkorlikning kuchayishiga bir necha omillar sabab bo'lmoqda: geografik yaqinlik, umumiy iqtisodiy manfaatlar, "g'arbdan mustaqil" tashqi siyosiy yondashuv va infratuzilmaviy integratsiya imkoniyatlari. Xususan, O'zbekiston uchun Xitoy bozoriga chiqish, texnologiyalar transferi, sarmoyalar oqimi juda muhim. Xitoy uchun esa O'zbekiston Markaziy Osiyoda barqarorlik va tranzit uchun asosiy kalit davlatdir. Shu bilan birga, bu hamkorlikda muvozanat saqlanishi, milliy manfaatlarning to'la hisobga olinishi zarur. Madaniy sohada esa bir-birini chuqurroq anglash, tarjima va ommaviy axborot almashinuvini kengaytirish zarurati mavjud.

Xulosa 1995–2025-yillar oralig'ida O'zbekiston va Xitoy o'rtasidagi ijtimoiy-iqtisodiy va madaniy hamkorlik bosqichma-bosqich rivojlanib, bugungi kunda har tomonlama strategik sheriklik bosqichiga yetdi. Ikki davlat o'rtasidagi aloqalar nafaqat ikki tomonlama foydali, balki butun mintaqa barqarorligi, taraqqiyoti va xalqaro iqtisodiy integratsiya uchun muhim

ahamiyatga ega. 2025-yildan keyingi davr uchun esa raqamli transformatsiya, yashil energetika, ta'lim va texnologik innovatsiyalar sohasida hamkorlikning kengayishi kutilmoqda. Shu bois, Xitoy bilan o'zaro munosabatlar O'zbekistonning barqaror taraqqiyot strategiyasining ajralmas qismiga aylanmoqda.

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Результаты исследования химического состава кормового зерна после термомеханического воздействия

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Аннотация. Современные технологии обработки пищевого сырья играют важную роль в обеспечении его качества, безопасности и длительного хранения. Одним из перспективных направлений в данной области является использование сверхвысокочастотной (СВЧ) обработки. В данной работе рассматривается применение СВЧ-обработки к озюка донлар (плодовым ягодам) с целью улучшения их потребительских свойств, увеличения срока хранения и минимизации потерь питательных веществ.

СВЧ-обработка основывается на использовании электромагнитного излучения частотного диапазона от 300 МГц до 300 ГГц, при котором молекулы воды внутри продукта начинают колебаться и нагреваться. Такой тип нагрева является объемным и равномерным, что позволяет достичь быстрой и эффективной обработки без разрушения текстуры продукта. В работе анализируются основные параметры СВЧ-обработки: мощность, длительность, температура и их влияние на органолептические, физико-химические и микробиологические свойства ягод. Показано, что при оптимальных режимах можно значительно сократить время сушки или пастеризации, сохраняя при этом яркий цвет, аромат и содержание витаминов. Также рассматриваются преимущества СВЧ-метода по сравнению с традиционными методами термической обработки, такими как конвективная сушка или варка.

Ключевые слова: СВЧ-обработка, пищевые ягоды, электромагнитное излучение сушка, пастеризация, качество продукции, срок хранения, пищевая промышленность.

Одной из функций СВЧ-энтолайтера является уменьшение микробиологического распространения и уничтожение живых вредителей зерна. Известен метод обеззараживания зерна СВЧ-полем. В приготовленном СВЧ энтолейторе зерновой корм подвергается воздействию СВЧЭМ, в результате чего уменьшается или уничтожается микробиологическое распространение сырья. Также происходит подавление живых вредителей в результате многократного удара о стенку рабочей камеры и втулку белковой клетки. В качестве сырья использовались ячмень, пшеница и бобовые.

Таблица 1

Органолептическая оценка зерна ячменя, пшеницы, ржи (опытные и контрольные образцы)

№ t/r	Показатель качества	Описание образца	
		контроль	опыт
1	Состояние	здоровый	здоровый и тёплый выпуклый с разорванной оболочкой
2	Цвет	жёлтый	желтый, характерный для нормального зерна,

3	Запах	характерный для здорового зерна, без постороннего запаха	характерный для здорового зерна, без запаха, жареный, орехового цвета
4	Заражение вредителями	нет, заражение клещами II степень	нет
5	Минерал- примеси	0,9%	0,9%
6	Грязная примесь	1,0%	1,0%
7	Зерновая смесь	нет	нет

Таблица 2

Физико-химические показатели кормового ячменя.

№ т/г	Показатели	Контроль	Опытный
Физико-химические показатели по ГОСТ Р 53900-2010			
1	Содержание сухого вещества, %	90,14	89,50
2	Содержание сырого протеина, %	29,75	28,88
3	Содержание сырой клетчатки, %	4,51	4,09
4	Содержание сырой золы, %	2,78	2,86
5	Количество энергии обмена, МДж/кг	11,50	11,64

Из результатов исследования следует, что органолептические, физико-химические показатели опытных образцов лучше, чем у контрольных и удовлетворяют нормативным показателям.

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**TOPINAMBUR (HELIANTHUS TUBEROSUS) NING O'SISHI VA RIVOJLANISHI
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Oxirgi yillarda dunyo miqyosida ekologik toza va foydali qishloq xo'jaligi mahsulotlariga talab ortib bormoqda. Shulardan biri – topinambur (*Helianthus tuberosus*) o'simligidir. Uning asosiy qiymati – inulin moddasiga boy bo'lgan tuganaklarida mujassam. Inulin diabet kasalligida shakar o'rmini bosuvchi tabiiy polisaxarid bo'lib, topinamburni nafaqat oziq-ovqat sanoatida, balki dori-darmonlar ishlab chiqarishda ham muhim xomashyo sifatida qadrlanishiga sabab bo'lmoqda.

O'sish va rivojlanish bosqichlari

Topinambur o'sishi 4 asosiy bosqichda kechadi:

1. Nihollanish davri

Tuganaklar Termiz shahrida bahor oyida, tuproq 11–12 °C ga yetganda, 10–12 sm chuqurlikda ekildi. Nihollar 12 kundan so'ng ko'rindi. Tuproq namligi o'rtacha 65–70% atrofida bo'ldi. Janubiy iqlim tufayli nihollanish tez kechdi.

2. Vegetatsiya davri

30-kunida o'simlik balandligi o'rtacha 45 sm ni tashkil etdi. 60-kunida esa o'sish keskin tezlashib, o'simliklar 120–140 sm balandlikka yetdi. Fotosintez jarayoni kuchaygan sari barglar soni va hajmi ham ortdi. Har 10 kunda o'rtacha 20–25 sm ga o'sish kuzatildi. Termizning quyoshli va issiq iqlimi o'sishga ijobiy ta'sir ko'rsatdi.

3. Gullash va tuganak hosil qilish

Avgust oyining oxirida gullash boshlandi. Tuganak hosil qilish avgust o'rtalaridan kuzatildi. Tuganaklar soni bir o'simlikda o'rtacha 15–20 tani, og'irligi esa 1 tupdan 1,2–1,5 kg ni tashkil etdi. Tuproq unumdorligi yaxshi bo'lgani uchun tuganaklar yirik va to'liq shakllandi.

4. Hosil yig'ish davri

Oktyabr oyida hosil yig'ildi. Kuzda yog'ingarchilik kam bo'ldi, bu yig'im-terim uchun qulay sharoit yaratdi. Olingan hosildorlik 1 so'm yerda o'rtacha 20–25 tonnani tashkil etdi. Tuganaklar silliq, yirik va sog'lom chiqdi

Agrotexnik tadbirlar

Tajriba davomida har 15 kunda begona o'tlar tozalandi, 2 marta mineral o'g'itlar (azot va kaliy) solindi. O'rtacha 3 marta sug'orish amalga oshirildi. Yerni erta bahorda 25–30 sm chuqurlikda haydab, chirindi qo'shildi. Termizdagi qumloq va sho'rga moyil bo'lgan tuproqlarda ham o'simlik yaxshi o'sadi.

XULOSA

Tajriba asosida aniqlanishicha, topinambur Termiz shahrining iqlim va tuproq sharoitiga yaxshi moslashadi. O'zining oddiy parvarish talablariga qaramay, yuqori hosildorlikka ega. Bu o'simlikni qishloq xo'jaligi mahsuloti sifatida kengroq yetishtirish, sog'lom ovqatlanishni targ'ib qilish, tuproqni saqlash va biofaollikni oshirish uchun juda foydalidir.

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Современные критерии диагностики хронического эндометрита: роль иммуногистохимии и молекулярных методов в повышении точности выявления патологии

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Актуальность. Хронический эндометрит — нередко недооцениваемое заболевание, которое может быть причиной бесплодия, привычного невынашивания беременности и неудач программ ЭКО. Его скрытое течение и неспецифическая симптоматика затрудняют своевременную диагностику. Стандартные гистологические методы не всегда позволяют достоверно выявить характерные изменения эндометрия. В связи с этим растёт интерес к внедрению более чувствительных и специфичных методов, таких как иммуногистохимическое окрашивание и молекулярно-биологическая диагностика, что обуславливает научную и клиническую значимость настоящего исследования.

Цель исследования. Оценить диагностическую эффективность иммуногистохимических и молекулярных методов в выявлении хронического эндометрита у женщин с нарушениями репродуктивной функции.

Материалы и методы. Обследовано 60 пациенток репродуктивного возраста с клиническими признаками бесплодия и неудач имплантации в программах вспомогательных репродуктивных технологий (ВРТ). Всем пациенткам проведена пайпель-биопсия эндометрия в лютеиновую фазу цикла. Морфологическая оценка осуществлялась стандартным методом окрашивания гематоксилин-эозином. Дополнительно выполнялось иммуногистохимическое окрашивание с применением антител к CD138 для верификации плазматических клеток. Также у части пациенток проведён ПЦР-анализ на наличие бактериальной.

Результаты. При стандартной гистологии признаки хронический эндометрит были обнаружены у 18 (30%) пациенток, тогда как применение иммуногистохимии позволило выявить характерные изменения у 34 (57%) женщин. Использование полимеразная цепная реакция (ПЦР) -диагностики дополнительно выявило скрытые инфекции у 22 (36,7%) пациенток с подтверждённым хронический эндометрит, что позволило скорректировать тактику терапии. Совокупное применение методов повысило точность диагностики до 73,3%, в сравнении с 30% при использовании только морфологических критериев.

Выводы. Иммуногистохимическая диагностика с применением маркера CD138 в сочетании с молекулярно-биологическими методами значительно повышает чувствительность и специфичность выявления хронического эндометрита. Комплексный подход к диагностике позволяет своевременно определить причину репродуктивных нарушений и индивидуализировать терапию, улучшая прогноз у пациенток с бесплодием и неудачами ВРТ.

MURAKKAB ALLERGENLARGA SEZUVCHAN BEMORLARDA ALLERGIK KASALLIKLARNING OG'IR SHAKLLARI: KLINIK VA IMMUNOLOGIK TAHLIL**Ollanazarova Shahnoza San'atbek qizi***Toshkent tibbiyot akademiyasi Urganch filiali O'zbekiston, Xorazm viloyati, Urganch shahri, Al-Xorazmiy ko'chasi 28-uy Tel: +998 (62) 224-84-84**E-mail: info@urgfiltma.uz***Annotatsiya**

Ushbu maqolada murakkab (polikomponent) allergenlarga sezuvchan bemorlar orasida uchraydigan allergik kasalliklarning og'ir shakllari o'rganildi. Tadqiqot davomida bemorlarning klinik simptomlari, ularning kechish darajasi va immunologik holati tahlil qilindi. Polimikstallergenlarga sezuvchanlik, kasallikning og'irroq va surunkali kechishiga olib kelishi aniqlanib, immunoglobulin E (IgE), IL-4, IL-5 kabi yallig'lanish markerlarining ortishi bilan bevosita bog'liqligi qayd etildi. Shuningdek, molekulyar darajada Th2 yo'nalishidagi immun javob ustunligi va sitokinlar ekspressiyasining o'zgarishi kuzatildi. Ushbu ma'lumotlar polikomponent allergenlarga javoban yuzaga keladigan klinik holatlarni chuqur tahlil qilish, erta tashxis qo'yish va individual terapiya yondashuvlarini ishlab chiqishda muhim ahamiyatga ega.

Kalit so'zlar: polimikstallergenlar, allergik kasalliklar, og'ir shakllar, klinik kechish, immunologik tahlil, IgE, sitokinlar, Th2 immun javobi.

Kirish. So'nggi o'n yilliklarda allergik kasalliklar butun dunyo bo'ylab barqaror o'sish tendensiyasini namoyon qilmoqda. Xususan, bir vaqtning o'zida bir nechta turdagi allergenlarga — ya'ni polimikstallergenlarga sezuvchanlik holatlari ko'payib, klinik jihatdan murakkab kechadigan allergik sindromlar soni ortib bormoqda [1]. Bunday bemorlarda allergik rinit, bronxial astma, atopik dermatit kabi kasalliklar birgalikda yoki og'irlashtirilgan shaklda namoyon bo'lishi mumkin.

Murakkab allergenlarga (chang, gulchang, hayvon epiteliyasi, oziq-ovqat va boshqalar) sezuvchanlik immun tizimining tizimli disbalansiga olib keladi. Bu esa yallig'lanish sitokinlarining (IL-4, IL-5, IL-13) ortiqcha ishlab chiqarilishi, IgE darajasining oshishi, eozinofillar faolligining kuchayishi va Th2 tipdagi immun javob ustunligiga olib keladi. Ushbu jarayonlar kasallikning og'irroq, qaytalanishga moyil va surunkali kechishini shakllantiradi [2]. Shu munosabat bilan, polikomponent allergenlarga sezuvchanlik fonida rivojlangan allergik kasalliklarning klinik va immunologik jihatdan chuqur tahlili, ularning molekulyar asoslarini o'rganish va differensial tashxis mezonlarini aniqlashtirish bugungi kunda muhim ilmiy-amaliy vazifalardan biridir. Ushbu maqola aynan shunday bemorlarda kasallikning og'ir shakllarini aniqlash va baholashga qaratilgan.

Allergik kasalliklarning kechishiga polimikstallergenlarga bo'lgan yuqori sezuvchanlik sezilarli ta'sir ko'rsatadi. Klinik kuzatuvlarga ko'ra, bunday bemorlarda kasalliklar erta boshlanishi, tez-tez qaytalanishi, davolanishga sust javob berishi va ko'p hollarda polimorf simptomatika bilan kechishi mumkin. Ayniqsa, bolalar va yoshlar orasida bu holatlarning tarqalishi salomatlikka bo'lgan uzoq muddatli xavfni oshiradi [2].

Immunologik jihatdan polikomponent allergenlarga sezuvchanlik Th2 tipdagi immun javobning faollashuvi bilan birga boradi. Bu esa IgE sinfidagi immunoglobulinlar darajasining ortishi, eozinofillar faolligining kuchayishi, va yallig'lanish mediatorlari ajralishining keskin oshishiga

olib keladi. Shu bilan birga, zamonaviy molekulyar tahlillar shuni ko'rsatadiki, bu bemorlarda IL-4, IL-5, IL-13 kabi sitokinlar genlarining ekspressiyasi yuqori bo'ladi, STAT6 va GATA-3 signal yo'llari faollashgan bo'ladi, bu esa immun disbalansni kuchaytiradi [3].

Shunga ko'ra, polimikstallergenlarga bo'lgan sezuvchanlikni erta aniqlash, bemorlarning immun holatini baholash hamda molekulyar darajadagi o'zgarishlarni aniqlash orqali og'ir shakldagi allergik kasalliklarni erta tashxislash va shaxsiylashtirilgan terapiyani rejalashtirish imkoniyatlari kengayadi.

Tadqiqot maqsadi. Ushbu tadqiqotning asosiy maqsadi — polikomponent (murakkab) allergenlarga sezuvchan bemorlarda allergik kasalliklarning og'ir shakllarini aniqlash, ularning klinik kechishini baholash, immunologik ko'rsatkichlar (IgE, sitokinlar) va molekulyar markerlar (sitokin genlari ekspressiyasi, immun javob yo'llari) bilan o'zaro bog'liqligini o'rganishdan iborat. Tadqiqot shuningdek, ushbu bemorlar guruhida kasallikning surunkali kechishi va qaytalanish xavfini aniqlovchi omillarni aniqlash orqali erta tashxis va shaxsiylashtirilgan terapiya uchun ilmiy asos yaratishni ko'zlaydi

Dolzarbligi. Allergik kasalliklar global miqyosda salomatlikni tahdid qiluvchi muammolardan biri hisoblanadi, ularning tarqalishi tobora ortib bormoqda. Ayniqsa, polikomponent allergenlarga sezuvchanlik, kasalliklarning kompleks shakllarini keltirib chiqarishi va davolashda qiyinchiliklarga olib kelishi mumkin. Bunday bemorlarda allergik rinit, bronxial astma, atopik dermatit kabi kasalliklarning birgalikda rivojlanishi, ularda kechadigan klinik holatlarning og'irligini oshiradi va qaytalanish xavfini kuchaytiradi.

Polimikstallergenlarga sezuvchanlikni o'rganishning dolzarbligi shundaki, bu kasalliklar faqat umumiy simptomatik davolash bilan boshqarib bo'lmaydi, balki kasallikning molekulyar mexanizmlarini tushunish zarur. Immunologik va molekulyar jihatlar tahlil qilinmagan taqdirda, kasallikning faqat klinik jihatlarini aniqlash yetarli bo'lmaydi. Yangi yondashuvlar va diagnostik metodlar orqali polimikstallergenlarga sezuvchan bemorlarning immunologik profilini aniqroq belgilash, shuningdek, shaxsiylashtirilgan davolash strategiyalarini ishlab chiqish imkoniyatlarini yaratadi [4].

Bu tadqiqotning dolzarbligi shundaki, allergik kasalliklarning patogenezi molekulyar darajada o'rganish va polikomponent allergenlarga sezuvchanlikni aniq aniqlash orqali, erta tashxis qo'yish va optimal davolash usullarini takomillashtirish imkoniyatlari paydo bo'ladi. Bunday yondashuv nafaqat klinik amaliyotda, balki ilmiy tadqiqotlarda ham yangi yo'nalishlarni ochishi mumkin.

Tadqiqotning ilmiy yangiligi. Ushbu tadqiqotning ilmiy yangiligi polikomponent allergenlarga sezuvchan bemorlarda allergik kasalliklarning og'ir shakllarini klinik va immunologik jihatdan chuqur tahlil qilishdan iboratdir. Tadqiqotda birinchi marta murakkab allergenlarga sezuvchanlik bilan bog'liq immunologik va molekulyar mexanizmlar mukammal tarzda o'rganilib, kasalliklarning rivojlanishidagi yangi biomarkerlar aniqlangan. Tadqiqotda immunoglobulin E (IgE) darajasi, Th2 tipdagi immun javobning faollashuvi, shuningdek, IL-4, IL-5, va IL-13 sitokinlarining ekspressiyasi va STAT6 signal yo'llarining roli tahlil qilingan [5].

Bundan tashqari, polikomponent allergenlarga sezuvchanlikda kasalliklarning surunkali kechishiga olib keluvchi molekulyar mexanizmlar kashf etilgan va ular klinik jihatdan qayta ishlangan. Ushbu yondashuv, nafaqat allergik kasalliklarni erta tashxislashda, balki individual terapiya yondashuvlarini ishlab chiqishda ham yangi imkoniyatlar yaratadi [6]. Tadqiqotda topilgan ilmiy yangiliklar polikomponent allergenlarga sezuvchan bemorlar uchun davolashning samaradorligini oshirishga va kasalliklarning qaytalanishini kamaytirishga xizmat qiladi.

Materiallar va uslublar. Tadqiqotda polikomponent allergenlarga sezuvchan bemorlar o'rtasida allergik kasalliklarning og'ir shakllarini aniqlash va immunologik tahlil o'tkazish maqsadida 100 nafar bemor ishtirok etdi. Bemorlar 18-60 yosh oralig'ida bo'lib, ularning 60% i ayollar, 40% i esa erkaklardir. Tadqiqotda ishtirok etgan bemorlar allergik rinit, bronxial astma, atopik dermatit kabi kasalliklar bilan kasallangan, shuningdek, polimikstallergenlarga sezuvchanlik tasdiqlangan bemorlardan iborat edi.

Bemorlarning klinik holati tekshirilgan, simptomlar va kasallikning kechishi baholangan. Kasalliklarning og'irligi va simptomatikasi maxsus klinik skala bo'yicha o'lchangan. Kasalliklar tarixi, laboratoriya natijalari va fizik tekshiruvlar asosida bemorlarning umumiy holati tahlil qilindi.

Tadqiqot natijalari statistik jihatdan SPSS 22.0 dasturi yordamida tahlil qilindi. Guruhlar orasidagi farqlar t-test yordamida tekshirilgan. P-qiymati 0.05 dan kam bo'lsa, natijalar statistik jihatdan ahamiyatli deb hisoblangan.

Tadqiqot natijalari. Tadqiqot davomida polikomponent allergenlarga sezuvchan bemorlar orasida allergik kasalliklarning og'ir shakllari va ularning immunologik parametrlariga bo'lgan ta'sir o'rganildi. Tadqiqotning asosiy natijalari quyidagicha:

1. Bemorlarning klinik holati: Ishtirokchilar orasida allergik kasalliklarning og'ir shakllari, jumladan, surunkali bronxial astma (40%), atopik dermatit (30%) va allergik rinit (30%) qayd etildi. Bemorlarning 65% i kasalliklarning qaytalanishi va surunkali kechishini boshdan kechirdi. Kasalliklar tarixi, simptomlar va klinik tekshiruvlar asosida bemorlarning ko'pchiligida polimikstallergenlarga sezuvchanlik mavjudligi tasdiqlandi.
2. Immunologik tahlil: Immunoglobulin E (IgE) darajasi bemorlarda sezilarli darajada oshganligi aniqlandi. IgE darajasi yuqori bo'lgan bemorlarda allergik kasalliklarning og'ir shakllari va tez-tez qaytalanishi kuzatildi. IL-4, IL-5 va IL-13 sitokinlarining qon plazmasidagi darajalari ham yuqori bo'lib, bu allergik javobning Th2 yo'li orqali faollashishini ko'rsatdi. IL-4 darajasi 78% bemorlarda ortgan, IL-5 darajasi esa 63% bemorlarda yuqori bo'lgan.
3. Eozinofillar faolligi: Eozinofillar faolligi polikomponent allergenlarga sezuvchan bemorlarda sezilarli darajada ortgan. 72% bemorlarda eozinofillar faolligi yuqori bo'lib, bu yallig'lanish jarayonining kuchayishini va kasallikning og'ir kechishini tasdiqladi.
4. Molekulyar tahlil: PCR tahlillari yordamida IL-4, IL-5, IL-13 va STAT6 genlarining ekspressiyasi aniqlangan. IL-4 va IL-5 genlari ekspressiyasi 85% bemorlarda yuqori bo'lgan, STAT6 ekspressiyasi esa 70% bemorlarda faollashgan. Bu natijalar polikomponent allergenlarga sezuvchanlik va kasallikning og'ir shakllari o'rtasidagi molekulyar bog'liqlikni ko'rsatdi.
5. Statistika: Tadqiqot natijalari statistik tahlil yordamida qayd etildi. Bemorlar orasida immunologik ko'rsatkichlar va klinik kechish o'rtasida o'zaro kuchli bog'liqlik aniqlangan ($p < 0.05$). IL-4 va IgE darajalari kasallikning surunkali kechishi va qaytalanishi bilan bevosita bog'liqligi tasdiqlandi.

Xulosa. Yuqorida keltirilgan tadqiqot natijalari polikomponent allergenlarga sezuvchan bemorlarda allergik kasalliklarning og'ir shakllarining rivojlanishiga ta'sir qiluvchi immunologik va molekulyar mexanizmlarni chuqurroq tushunishga imkon berdi. Tadqiqotning asosiy xulosalari quyidagilardan iborat:

Polikomponent allergenlarga sezuvchanlik bemorlarda allergik kasalliklarning og'ir shakllarini keltirib chiqaradi. Bemorlarning klinik holatidagi og'irlik va qaytalanishning yuqori darajasi, polimikstallergenlarga sezuvchanlik bilan bevosita bog'liq ekanligi aniqlandi.

Immunologik ko'rsatkichlar (IgE darajasi, IL-4, IL-5, IL-13) yuqori bo'lgan bemorlarda kasalliklarning og'ir shakllari va surunkali kechishi kuzatildi. Th2 tipidagi immun javobning faollashuvi, eozinofillar va boshqa yallig'lanish omillarining faolligi allergik kasalliklarning rivojlanishini kuchaytiradi.

Molekulyar mexanizmlar (IL-4, IL-5, IL-13 va STAT6 genlarining ekspressiyasi) polikomponent allergenlarga sezuvchanlik bilan bog'liq bo'lib, kasallikning og'ir shakllarining rivojlanishida muhim rol o'ynaydi. Bu natijalar yangi biomarkerlarga asoslangan erta tashxis va shaxsiylashtirilgan davolash strategiyalarini ishlab chiqish imkonini beradi.

Immunologik va molekulyar tahlillar allergik kasalliklarning differensial tashxisini takomillashtirishga yordam beradi. Shaxsiylashtirilgan davolash usullarini joriy qilish, kasalliklarning qaytalanishini kamaytirish va bemorlarning hayot sifatini yaxshilashga xizmat qiladi.

Tadqiqotda olingan natijalar, polikomponent allergenlarga sezuvchan bemorlarda kasalliklarning og'ir shakllarini erta aniqlash, kasallik rivojlanishining molekulyar mexanizmlarini tushunish va shaxsiylashtirilgan davolash yondashuvlarini yaratishda yangi ilmiy asoslarni taqdim etadi. Bunda immunologik va molekulyar tahlillarning ahamiyati katta bo'lib, allergik kasalliklarning ilg'or diagnostikasi va davolashining samaradorligini oshiradi.

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ТРЕБОВАНИЯ ПОДГОТОВКИ К ПРОВЕДЕНИЮ СДЕЦИИ ЗАКИСЬЮ АЗОТА И КИСЛОРОДОМ В ДЕТСКОЙ СТОМАТОЛОГИИ

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REQUIREMENTS FOR PREPARATION FOR CARRYING OUT NITROUS OXIDE AND OXYGEN DENTISTRY IN PEDIATRIC DENTISTRY

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Цель. Процедурная седация и анальгезия могут использоваться при предоставлении стоматологического лечения. Процедурная седация и анальгезия определяется как использование седативных, анальгетических и диссоциативных препаратов для обеспечения анксиолитического, анальгетического, седативного и контроля движений во время болезненных или неприятных диагностических и терапевтических процедур. ЗАКС позволяет уменьшить боль и тревожность у пациента, находящегося в сознании, при этом неся с собой минимальный риск.

Материалы и методы. Функции безопасности специализированного стоматологического ингаляционного седативного аппарата ЗАКС соответствуют высоким стандартам безопасности. Проведение процедуры ЗАКС у детей требует тщательной подготовки и планирования, где каждая сторона имеет свои роли и обязанности.

Пациент:

- a. Рекомендуется организовать предварительное посещение для оценки состояния пациента, обсуждения процесса ЗАКС и получения согласия.
- b. Пациентам необходимо предоставить письменную информацию, в которой объясняются преимущества ЗАКС, альтернативные варианты лечения, инструкции перед процедурой, меры предосторожности после нее и действия в случае осложнений.
- c. Для процедуры ЗАКС не требуется голодание, как указано в некоторых руководствах.
- d. В день седации следует повторно оценить медицинское состояние пациента и подтвердить план лечения и согласие.
- e. Пациенты могут быть выписаны только после завершения лечения, если они признаны готовыми к восстановлению. Сопровождающее лицо должно быть в состоянии заботиться о них.

Стоматологическая команда:

- a. Все специалисты, работающие с ЗАКС, должны пройти соответствующее теоретическое и клиническое обучение и продемонстрировать необходимый уровень компетентности.
- b. Все члены команды, включая стоматологических медсестер и ассистентов, должны уметь оказывать базовую реанимацию.
- c. Рекомендуется обучение педиатрической расширенной реанимации, особенно при умеренной или глубокой седации.
- d. Должен быть установлен клинический протокол, который четко определяет обязанности каждого члена команды. Например, наблюдение за пациентом в период седации и

восстановления должно осуществляться членом команды, способным распознавать любые нежелательные явления.

е. Клиническое наблюдение за пациентом во время седации должно включать визуальный мониторинг глубины седации, проходимости дыхательных путей, цвета кожи и дыхания. Использование инструментального мониторинга, такого как пульсоксиметры и неинвазивный мониторинг артериального давления, считается хорошей практикой.

Оборудование и помещения:

а. Все оборудование должно соответствовать установленным стандартам охраны здоровья и безопасности и обслуживаться в соответствии с графиком, предписанным производителями.

б. Перед первым использованием системы ингаляционной седации в день процедуры необходимо проверить компоненты и провести тестирование на отказоустойчивость.

с. Назальные капюшоны должны быть разных размеров для обеспечения хорошей посадки, а система откачки должна быть подключена к вакуумному насосу с производительностью 45 литров в минуту, чтобы избежать ненужного воздействия закиси азота. Хроническое воздействие закиси азота в течение нескольких часов в неделю связано с негативными последствиями для здоровья.

д. Должны быть разработаны аварийные протоколы, чтобы обеспечить эффективные действия в экстренных ситуациях. Клинические условия должны обеспечить легкий доступ для экстренных служб к пациентам.

Документация:

а. Необходимо получить информированное согласие.

б. Клинические записи должны содержать подробности о седации, включая время начала, продолжительность, уровень седации и любые возникшие осложнения.

Выводы. Ингаляционная седация с закисью азота и кислородом широко принята как безопасный и эффективный метод управления тревожными стоматологическими пациентами. Закись азота можно эффективно использовать для процедурной седации у детей при различных процедурах, включая те, которые могут вызывать легкую или умеренную интенсивность боли

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ПОКАЗАНИЯ И ПРОТИВОПОКАЗАНИЯ К СЕДАЦИИ АЗОТ ОКСИДОМ В
ДЕТСКОЙ СТОМАТОЛОГИИ

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INDICATIONS AND CONTRAINDICATIONS FOR NITROGEN OXIDE SEDATION IN
PEDIATRIC DENTISTRY

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Цель. Седативные средства, такие как N₂O, классифицируются по пути их введения или по их воздействию на сознание пациентов. Соответственно, N₂O-O₂ представляет собой ингаляционную сознательную седацию. Тем не менее, в Руководстве для стоматологов по использованию общей анестезии 2007 года, опубликованном Американской стоматологической ассоциацией, рекомендуется более конкретная классификация, квалифицирующая сознательную седацию как минимальную, умеренную или глубокую, и для этой цели N₂O-O₂ классифицируется как умеренная.

Материал и методы. Отбор пациента осуществляется на основе тщательного клинического обследования и хорошо документированного медицинского и стоматологического обследования. Как специалист, так и команда, ответственная за лечение пациента, должны быть обучены, как описано выше, и быть знакомы с соответствующими методами, которые можно использовать в любой чрезвычайной ситуации

Показания к применению являются:

- (a) Пациенты, демонстрирующие слабое или умеренное тревожное поведение, способные понимать и следовать простым инструкциям;
- (b) Пациенты в возрасте от четырех лет и старше, хотя есть основания полагать, что минимальный возраст составляет шесть или восемь, в зависимости от того, как хорошо ребенок сотрудничает с основными поведенческими приемами;
- (c) Пациенты с сильным рвотным рефлексом, который делает стоматологическое лечение в противном случае невозможно;
- (d) Особые пациенты, у которых наблюдаются физические или психические расстройства;
- (e) Пациенты, которым требуется больше времени сидеть из-за сложных или множественных процедур;
- (e) Инвазивная медицинская диагностика и не большие хирургические вмешательства.

Противопоказания к применению являются:

- (a) Не сотрудничающие пациенты, которые демонстрируют крайне тревожный и настороженный профиль ;
- (b) Истеричные, упрямые или непокорные пациенты, которые отказываются носить маску из-за возраста, зрелости, поведения или расстройства личности;
- (c) Психотические или наркозависимые пациенты из-за влияния тяжелого эмоционального расстройства;

(d) Пациенты с сильной болью, инфекцией верхних дыхательных путей, хронической обструктивной болезнью легких (ХОБЛ), острым отитом, синуситом или недавней (менее двух недель) операцией на ухе, носу или горле, проходящие химиотерапию блеомицином или страдающие порфирией.

Обсуждение. Хотя ЗАКС считается безопасным методом седации, он не лишен рисков. Тщательная подготовка необходима для управления любыми предсказуемыми чрезвычайными ситуациями. Использование закиси азота для минимальной седации определяется как введение закиси азота <50% без использования других седативных, опиоидных или других депрессантных препаратов до или одновременно с введением закиси азота у здорового пациента ASA I или II (51). В этой упомянутой ситуации команда седации должна выполнить подготовку и требования к управлению минимальной седацией. Если в применении произойдут изменения, т. е. когда процент введенной закиси азота превысит 50%, вероятность умеренной или глубокой седации увеличивается. Таким образом, меняются принципы управления (10, 52).

Комфортное, расслабленное состояние; приятное настроение; мягкие, раскованные, заторможенные движения тела; отсутствие сопротивления; углубленное дыхание; снижение двигательной активности глаз, легко фиксируемый взгляд; сниженное восприятие звука — все это симптомы седации. Пациент может быть дезориентирован и легко поддаваться внушению.

Выводы. Применение ЗАКС существенно облегчает процесс прохождения лечения, как ребенку, так и врачу-стоматологу. У детей формируется позитивное отношение к стоматологическому приему, что прививает им культуру стоматологического здоровья. Перед детским стоматологом открываются новые перспективы проведения более качественного, объемного, спокойно протекающего лечения

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“Tarjimonlik san’atida Shayxzoda izlari: G‘arb va Sharq adabiyoti orasidagi ko‘prik

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Annotatsiya: Ushbu maqolada Maqsud Shayxzodaning tarjimonlik san’atidagi faoliyati hamda uning G‘arb va Sharq adabiyoti o‘rtasida ma’naviy ko‘prik vazifasini bajargan ibratli xizmatlari tahlil qilinadi. Shayxzoda jahon va sharq adabiyotining eng yuksak namunalarini o‘zbek tiliga mohirlik bilan tarjima qilib, nafaqat adabiy, balki madaniy-ma’naviy aloqalarni mustahkamlashga katta hissa qo‘shgan. U asliyatga sadoqat, badiiylik va milliy ruh uyg‘unligini tarjima jarayonida muvozanatli tarzda saqlagan tarjimon sifatida yuksak e’tirofga loyiqdir. Mazkur maqolada uning tarjima uslubi, adabiy didi va estetik qarashlari atroflicha tahlil qilinadi.

Abstract: This article analyzes the work of Maqsud Shaikhzoda in the art of translation and his exemplary services as a spiritual bridge between Western and Eastern literature. Shaikhzoda skillfully translated the highest examples of world and Eastern literature into the Uzbek language, making a great contribution to strengthening not only literary, but also cultural and spiritual ties. He deserves high recognition as a translator who balanced loyalty to the original, artistry and harmony of the national spirit in the translation process. This article analyzes his translation style, literary taste and aesthetic views in detail.

Kalit so‘zlar: Maqsud Shayxzoda, G‘arb va Sharq o‘rtasida ma’naviy ko‘prik, ma’no va ohang, uyg‘unlikning yorqin namunasi.

Keywords: Maqsud Shaikhzadeh, a spiritual bridge between the West and the East, a shining example of meaning and melody, harmony.

Kirish

O‘zbek adabiyotining zabardast vakillaridan biri Maqsud Shayxzoda nafaqat shoir, dramaturg va olim, balki yuksak didli tarjimon sifatida ham yurtimiz madaniyatiga beqiyos hissa qo‘shgan. U o‘zbek o‘quvchisiga dunyo adabiyotining buyuk namoyandalarini tanishtirish, ularning asarlarini ona tiliga o‘girish orqali madaniyatlararo muloqotni chuqurlashtirgan. Shayxzodaning tarjimonlik faoliyati ikki adabiy maktab – G‘arb va Sharq o‘rtasida ma’naviy ko‘prik vazifasini bajargan.

Shayxzoda va Sharq adabiyoti

Maqsud Shayxzoda o‘z tarjimonlik faoliyatini avvalo Sharq adabiyotining mumtoz namunalari bilan boshlab, fors-tojik va arab adabiyoti durdonalarini o‘zbek tiliga olib kirdi. U Rudakiy, Umar Xayyom, Sa’diy, Firdavsiy kabi buyuk mutafakkirlarning asarlarini tarjima qilish orqali ularning falsafiy, axloqiy va estetik qarashlarini o‘zbek kitobxoni ongiga yaqinlashtirdi.

Shayxzodaning bu yo‘nalishdagi yondashuvi asliyatga sadoqat va badiiy tildan foydalanish borasida nihoyatda nozik edi. U har bir misraga, har bir iboraga ma’no va ohang bilan yondashdi. Ayniqsa, Umar Xayyom ruboiylarini o‘zbek tilida she’riy shaklda yetkazib berishi uning tarjima mahoratining yorqin namunasidir.

Shayxzoda va G‘arb adabiyoti

Maqsud Shayxzoda G‘arb adabiyotidan ham bir qator mashhur yozuvchi va shoirlarning asarlarini o‘zbek tiliga tarjima qilgan. Jumladan, Shekspirning “Otello”, “Hamlet”, “Romeo va Julietta” kabi dramatik asarlari, Pushkin va Lermontovning she’riyati Shayxzoda tarjimasida yangi hayot kasb etgan.

Shayxzoda G'arb adiblarining badiiy uslubi, xarakter yaratish san'ati va falsafiy qatlamlarini chuqur anglab, ularni o'zbek tilida tabiiy, jozibador shaklda ifodalay oldi. U asliytdagi dramatik zo'riqish, obrazlar murakkabligi va ichki dinamikaning barchasini o'zbek o'quvchisiga begonalashtirmasdan yetkazdi.

Tarjima uslubi va badiiy qarashlari

Shayxzoda tarjimada quyidagi tamoyillarga sodiq bo'lgan:

1. **Asliyatga sadoqat** – matn mazmuni va ruhini buzmaslik;
2. **Badiiy ifoda** – tarjimada she'riylik, ohangdorlik va obrazlilikni saqlash;
3. **O'zbek tilining boy imkoniyatlaridan foydalanish** – milliy ohang va tuyg'ularni uyg'unlashtirish;
4. **Estetik yondashuv** – o'quvchiga zavq bag'ishlaydigan badiiy uslubni yaratish.

Uning tarjimalarini o'qigan kitobxon asl asarni o'qiyotgandek taassurot oladi. Bu Shayxzodaning chuqur til bilimi, keng adabiy tafakkuri va madaniy sezgirligidan dalolat beradi.

Xulosa

Maqsud Shayxzoda o'z tarjimonlik faoliyati bilan G'arb va Sharq adabiy merosini o'zbek kitobxoni tafakkuriga yaqinlashtirgan ma'rifatparvar siymodir. U nafaqat asarlarni tarjima qilgan, balki ularni badiiy jihatdan o'zbek adabiy muhitiga moslashtirib, yangi estetik dunyo yaratgan. Shayxzodaning tarjima maktabi bugungi tarjimonlar uchun ibrat va namunadir. Uning mehnati orqali G'arb va Sharq adabiyoti orasida ko'prik qurilib, madaniy uyg'unlikning yorqin namunasi yaratilgan.

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Annotatsiya: Ushbu maqolada Maqsud Shayxzoda she'riyatining asosiy g'oyaviy yo'nalishlari — zamon ruhi, inson vijdoni va or-nomus masalalari tahlil qilinadi. Shayxzoda she'rlarida hayot haqiqatlari, insoniy fazilatlar va jamiyat oldidagi mas'uliyat o'ziga xos badiiy mahorat bilan aks ettirilgan. Maqola Shayxzoda she'riyatidagi zamon bilan uyg'unlik, ma'naviy poklik, ijtimoiy ong va shaxsiy vijdon to'g'risidagi teran mulohazalarni yoritadi hamda uning o'zbek she'riyatiga qo'shgan ma'naviy hissasini tahlil qiladi.

Аннотация: В статье анализируются основные идейные направления поэзии Максуда Шайхзаде - дух времени, человеческая совесть, вопросы чести. Стихи Шайхзаде с уникальным художественным мастерством отражают реалии жизни, человеческие качества и ответственность перед обществом. В статье освещаются глубокие размышления о гармонии со временем, духовной чистоте, общественном сознании и личной совести в поэзии Шейхзаде, анализируется его духовный вклад в узбекскую поэзию.

Abstract: This article analyzes the main ideological directions of Maqsud Shaikhzoda's poetry - the spirit of the times, human conscience and issues of honor. Shaikhzoda's poems reflect the realities of life, human qualities and responsibility to society with unique artistic skill. The article highlights the deep reflections on harmony with the times, spiritual purity, social consciousness and personal conscience in Shaikhzoda's poetry and analyzes his spiritual contribution to Uzbek poetry.

Kalit so'zlar: Maqsud Shayxzoda siymosi, uyg'unlik, hayotga chuqur e'tibor va insoniyatning ma'naviy kamoloti, zamon ruhi, Or-nomus va milliy g'urur, Chuqur falsafiy o'y-mulohazalar.

Ключевые слова: Фигура Максуда Шайхзаде, гармония, глубокое внимание к жизни и духовному совершенствованию человечества, дух времени, Честь и национальная гордость, Глубокие философские размышления.

Keywords: The figure of Maqsud Shaikhzadeh, harmony, deep attention to life and the spiritual perfection of humanity, the spirit of the times, Honor and national pride, Deep philosophical reflections.

Kirish

O'zbek adabiyotida Maqsud Shayxzoda siymosi faqat dramaturgiya yoki tarjima sohasidagi xizmatlari bilan emas, balki o'ziga xos she'riyati bilan ham yuksak o'rinni egallaydi. Uning she'rlari o'z zamonining ruhini, insoniy vijdon va or-nomus tushunchalarini teran aks ettirgan asarlar sifatida qadrlanadi. Shayxzoda she'riyatida zamon bilan uyg'unlik, hayotga chuqur e'tibor va insoniyatning ma'naviy kamolotiga chaqiruv asosiy o'rin tutadi.

Zamon ruhi va ijtimoiy ong

Maqsud Shayxzoda hayot kechirgan davr murakkab ijtimoiy-siyosiy o'zgarishlar bilan yo'g'rilgan edi. U o'z she'rlarida zamon ruhini sezgirlik bilan ilg'ab, zamon talablariga javob bera oladigan g'oyalarni ilgari surdi. Shayxzodaning she'riyati zamonning chaqiriqlariga befarq emas edi — u xalqni ma'rifatga, haqiqatga, fidoyilikka undadi.

Uning she'rlarida milliy uyg'onish, ozodlik, haqiqat va inson huquqlari uchun kurash motivlari yetakchi o'rinni egallaydi. Zamon talablari, xalq ehtiyojlari va shaxsiy burch hissi Shayxzoda she'rlarining ruhini belgiladi.

Vijdon va axloqiy poklik

Shayxzodaning she'riy qarashlarida **vijdon** markaziy tushuncha sifatida namoyon bo'ladi. U uchun insonning haqiqiy qadri — uning vijdonida, haqiqat va adolat oldidagi mas'uliyat hissida mujassam edi. Shayxzoda she'rlarida vijdon insonni zulm va jaholatga qarshi kurashishga undovchi ichki kuch sifatida talqin etiladi.

She'rlarida Shayxzoda shaxsiy va ijtimoiy vijdon birligini ulug'laydi: inson o'zining ichki tozaligi va haqiqatga sadoqati bilan jamiyatni ham poklaydi, unga ma'naviy kuch bag'ishlaydi.

Or-nomus va milliy g'urur

Shayxzodaning she'riyatida **or-nomus** — insoniy kamolotning asosiy mezoni sifatida ko'rsatiladi. U she'rlarida xalqning or-nomusini himoya qilish, milliy sha'n va g'ururni asrash zarurligini urg'ulaydi.

Maqsud Shayxzoda uchun or-nomus shaxsiy g'urur emas, balki xalq, millat sha'ni bilan bog'liq yuksak tushuncha edi. Aynan shu or-nomus tuyg'usi uning ko'plab she'rlarida ozodlik va adolat uchun kurash motivlari bilan uyg'unlashadi.

Masalan, uning vatanparvarlik ruhida she'rlari milliy o'zlikni anglash va or-nomusni asrash g'oyalariga yo'g'rilgan.

She'riy uslub va badiiy ifoda vositalari

Shayxzoda she'riyatida:

- **Tashbehlarga boy obrazlilik,**
- **Chuqur falsafiy o'y-mulohazalar,**
- **Lirik tuyg'ular va dramatik ohanglar** sintez qilingan.

U she'riy so'z orqali zamon ruhini, vijdon sadosini va or-nomusning ma'naviy qudratini ifodalashga erishgan. Shayxzoda uchun she'r — bu hayotni tushunish, zamonni talqin qilish va inson qalbiga nur sochish vositasi edi.

Xulosa

Maqsud Shayxzoda she'riyati o'z zamonining ma'naviy va ijtimoiy ehtiyojlariga javob bergan, inson vijdoni va or-nomusi haqida teran falsafiy mulohazalarni ifoda etgan adabiy hodisa bo'lib qoldi. Uning she'rlari bugun ham o'z ahamiyatini yo'qotmagan: ular o'quvchini ma'naviy poklik, vijdonli yashash va or-nomusni asrash sari chorlaydi. Shayxzoda she'riyati — bu insoniy qadriyatlar madhiyasi va mangu haqiqatlar talqinidir.

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Kalit so'zlar: Surxon vohasi, Amudaryo, Sheroboddaryo, To'polondaryo, okrug, Sangardak daryosi.

Surxondaryo voxasi O'zbekistonning eng janubida joylashgan. U o'z ichiga Surxon-Sherobod vodiysi va uning atrofini o'rab turgan tog'larni oladi. Surxondaryo sharqdan va shimoli sharqdan Bobotog' va Hisor tog'lari orqali Tojikiston bilan, shimoli g'arbda Qashqadaryo bilan chegaralanadi, chegara Chaqchar va Boysun tog'lari orqali o'tadi. G'arbda Turkmaniston bilan bo'lgan chegara Ko'hitang tog'ining suvayirg'ich qismidan o'tadi. Janubda chegara Afg'oniston bilan Amudaryo orqali o'tgan davlat chegarasiga to'g'ri keladi. Surxondaryoni shimol tomonidan Hisor tizmasi o'rab turadi. Bu tizmaning balandligi 4500-4600 metrga etadi. O'zbekistondagi eng baland cho'qqi — Hazrat Sulton (4643 m) ham shu tog'da joylashgan. Chaqchar tog'ining eng baland cho'qqisi Xuroson hisoblanib, 3749 metrga etadi. Boysuntog' ancha baland bo'lib, ayrim cho'qqilari shimoli sharqida 3700 metrga etadi. Boysuntog'ning janubi g'arbida Ko'hitang tog'i joylashgan. Ko'hitang janubi g'arbiga 50 km cho'zilgan va balandligi 3137 metrga etadi. Boysuntog'ning sharqida unga yonma-yan holda Surxontog' joylashgan, u qisqa, lekin ancha baland (3882 m) tog'dir. Bu tog'ning janubida Sherobod-Sariqamish past tog'lari (1126 m) joylashgan. Sherobod-Sariqamish past tog'ining janubi g'arbida Kelif-Sherobod past tog'i joylashgan. Surxondaryo tabiiy geografik okrugining sharqida Bobotog' joylashgan. Bu tog' ancha emirilib, pasayib qolgan bo'lib, eng baland Zarkosa cho'qqisi 2289 metrga etadi. Bobotog' g'arbiga, Surxondaryo vodiysiga va janubga qarab asta-sekin pasayib ketadi. Okrugda, yuqorida qayd qilingan tog'lar orasida botiqlar joylashib, neogen va antropogen davri yotqiziqlari bilan to'lgan. Surxondaryo vodiysi shimoli sharqdan janubi g'arbiga taxminan 170 km cho'zilgan bo'lib, shu yo'nalishda pasayib boradi. Shakliga ko'ra vodiylar uchburchakka o'xshash. Uning janubi-g'arbiy qismi keng bo'lib, 110-115 km ga, shimoli sharqi tor bo'lib, 15-20 km ga teng. Okrugda qazilma boyliklardan neft va gaz, ko'mir, polimetall, alumin rudasi, girs, tuz, har xil qurilish material konlari mavjud. Neft va gaz, asosan, Lalmikor, Ko'kaydi, Xovdog'dan, toshko'mir Sharg'undan qazib olinadi. Sariosiyoda polimetall rudasi, alumin rudasi, girs, ohak konlari bor. O'zbekistondagi eng katta Xo'jaikon tuz koni shu okrugda joylashgan. Surxondaryo janubida tarkibida har xil erigan moddalar saqllovchi bir necha mineral suvlar topilgan. Ularning eng muhimi Jayronxona mineral suvi hisoblanadi. Surxondaryo-(daryo nomi) rasmiy nom. 1941-yil 6-martda oblast nomiga aylangan. Voha sharqdan g'arbiga 150-170 km, gacha, shimoldan janubga 220-250 km gacha cho'zilgan bo'lib, uning umumiy hududi 20,1 ming km² ni tashkil etib, bu butun O'zbekiston hududining 4,6 foiziga tengdir.

Surxondaryo voxasining iqlimi quruq subtropik. Lekin atrofidagi tog'larga ko'tarilgan sari iqlim o'zgaradi. Okrugning tekislik qismida yoz serquyosh, issiq va quruq, tog'ga tomon harorat pasayib boradi. Qish qisqa va iliq, lekin atrofidagi tog'larda sovuqroq bo'ladi.

Yozda Surxondaryoning tekislik qismi juda isib ketadi. Qish vohaning tekislik qismida iliq bo'ladi. Ba'zan qishda sovuq havo massalari tog'lardan o'tib, tekislik qismi haroratini pasaytirib

yuboradi. Shunday kezlarda havo harorati -20 -25°C gacha pasayadi. Amudaryo, Surxondaryo va Sherobod daryosining qayir va kuzena qayirlari antropogen davrining qum va shag'allaridan tashkil topgan bo'lib, ularning ustini ancha qalin qumloq loysimon, jinslar qoplab olgan.

Surxondaryo okrugi shimoli-sharqdan janubi-g'arbga taxminan 170 km cho'zilgan. Okrugning shakli uchburchakka o'xshaydi, janubi-g'arbiy qismida esa kengayadi va 110—115 km ga etadi, shimoli-sharqiy qismida esa kengligi atigi 15—20 km dir. Okrugda balandligi 270—550 m keladigan **qiya** tekisliklar ko'p. Lekin toglardan oqib tushadigan ko'pdan-ko'p daryolar, soylar tekislikni parchalab, o'nqir-cho'nqir jarlar hosil qilgan. Surxondaryoning o'ng qirg'og'ida Eski Termiz, Uchqizil (414 m), Zang, Xovdog (557 m), Oqqo'rg'on va chap qirg'og'ida Jayronxona, Kakaydi, Lalmikor (500 m), Oqtog' (750 m) kabi manzaralar bor. Xovdor manzarasi shimolga qarab davom etadi va Qiziriqdara cho'liga tutashib ketadi. Bu cho'l lyosli jinslardan iborat bo'lib, mutloq balandligi 400—500 m ga etadi. Qiziriqdara cho'li va Xovdog' manzarasi Surxondaryo voxasini Sherobod voxasidan ajratib turadi. Sherobod voxasi Sherobod daryosining juda katta yoyilma konusida joylashgan bo'lib, markaziy qismida botqoq bosgan pasroq erlar ham bor. Bu yoyilma konuslar qum va shag'allardan tashkil topgan. Okrugning eng past erlari Amudaryo qayirlarida joylashgandir. Bu qayir va ko'xna qayirlar ustida qumoq, qumlar va shag'allardan iborat bulgan allyuvial yotqiziqlar joylashgan.

Okrugning janubiy qismida qumliklar bor. Bulardan eng muhimi Xovdor va Uchqizil manzaralarining sharqidagi Kattaqumdir. Okrugda taqir, sho'rxoklar, Amudaryo soxillarida esa botqoq bosgan erlar uchraydi. Okrugning o'rta qismidan Surxondaryo oqib o'tib, bir necha qayir va ko'xna qayirlarni hosil qilgan. Bu kuzena qayirlarning nisbiy balandliklari 3—12 m ga etadi va ba'zi erlarda tikka kutarilib ketadi. Ular ustini esa qalin (30—90 m) qumoq va loysimon jinslar qoplab olgan. Bu yumshoq jinslar oqar va vaqtli suvlarning ishi tufayli yuvilib, jarlar hosil qilgan. O'zbekistonning Amudaryo va Sirdaryodan tashqari daryolari unchalik loyqa emas. Faqat Surxondaryo va Sherobodda tog'lardan chiqayotganda suv 1 kub metriga 3 kg osilgan moddani olib o'tadi. O'zbekistonning Amudaryo va Sirdaryodan tashqari daryolari unchalik loyqa emas. Faqat Surxondaryo va Sherobodda toglardan chiqayotganda suv 1 kub metriga 3 kg osilgan moddani olib o'tadi.

Xarorati $+5^{\circ}\text{C}$ dan yuqori bo'lgan kunlarning soni bir yilda 290-320ga teng bo'ladi. Vegetatsiya davri xaroratlar yig'indisi 5500-5960 $^{\circ}\text{C}$ bo'ladi. Surxondaryo okrugida baxorgi oxirgi sovuq tushishning o'rtacha muddati 2-15 martlarga, kuzgi birinchi sovuq tushishning o'rtacha muddati esa 20-25 oktyabrlarga to'g'ri kelib sovuq bo'lmaydigan kunlar miqdori 227-266 ga teng.

Surxondaryo okrugi xarorati 0 gradusdan pastga tushmaydigan davr nolgacha teng vegetatsiyali qish 94-100% ni tashkil qiladi. Bu ko'rsatkich Qashqadaryo okrugida 51-66% ni Quyi Zarafshon okrugida 41-55% Toshkent Mirzacho'l okrugida 33-46% Quyi Amudaryo okrugida 0-4% ni tashkil qiladi. Surxondaryo okrugida bunday qulay iqlimiy sharoit subtropik o'simliklarni o'stirish, ingichka tolali paxta shakarqamish kabi issiqsevar o'simliklarni ekishga imkon beradi.

Vohada asosiy dehqonchilik kichik daryo o'zanlarida amalga oshirilgan. Shunday daryolardan biri Sherobod daryosi tog'liklardan vohaga o'tganda, ayniqsa Amudaryoga quyilish erlariga yaqinlashganda o'nlab o'zanlarga ajralib ketganligini uning quruq o'zanlari tasdiqlaydi. Aynan mana shu o'zanlar bo'ylarida bronza davri yodgorliklari joylashgan. Sherobod vohasi tabiiy sharoitining yana bir xarakterli tomoni shundaki, quyosh o'z nurlarini eng avval Ko'hitang tog'iga taratadi. Bahor, yoz fasllari va kuzning dastlabki oylarida quyosh issig'idan tashqari Ko'hitang tog'idan ham issiq havo oqimi – tafti vohaga ufurib turadi. Tun yarmigacha havoning

tafti qaytmaydi. Bu holat dehqonchilik ekinlarining yaxshi rivojlanishi va serhosil bo'lishiga imkoniyat yaratadi.

Okrug tog'lar orasidagi berk botiqda joylashganligidan yog'in kam (133-360 mm). yog'in miqdori xudud relefining tuzulishiga bog'liq janubiy g'arbdan shimoli-sharqqa tomon ko'payib boradi. Okrugning janubi-g'arbiy tekislik qismida (Termizda) bir yilda 133 mm yog'in tushsa, shimoli sharqiy qismida (Denov tumanida) 360 mm ga etadi. Yog'inning asosiy qismi baxor va qishda (88%) yog'adi, yozda esa yog'in juda kam (2%) tushadi. Yog'inning bir qismi qor holida ham tushadi, lekin u uzoq saqlanmaydi. Qor okrugda ba'zi yillari umuman yog'maydi, ba'zi yillari 15-kundan 23-kungacha qor yog'ib qalinligi 1-2-smga etib 7 kun erimay turishi mumkin. Okrugda g'arbiy janubi-g'arbiy va shimoli-sharqiy qismida shamollar eng ko'p esadi. Shamollarning tezligi bir-xil emas o'rtacha tezligi sekundiga 2.6m. Ammo ba'zan tezligi sekundiga 15 m dan oshadigan kuchli shamollar ham bo'lib turadi. Okrug janubi-sharqiy qismining iqlimiga janubi-g'arbdan esuvchi quruq chang, to'zonli "afg'on" shamoli salbiy ta'sir ko'rsatadi. Ba'zan bu shamol soatlab xatto sutkalab esib qishloq xo'jaligi ekinlariga katta zarar etkazadi.

Surxondaryo vohasida yog'inlar notekis taqsimlangan. Vohaning janubidagi tekisliklarga eng kam yog'in (yiliga 133-230 mm) tushadi. Surxondaryo tabiiy geografik okrugida uzunligi 20 km dan ortiq bo'lgan 35 ta daryo mavjud. Bu daryolar ichida eng kattalari Surxondaryo va Sheroboddaryo hisoblanadi.

Surxondaryo havzasiga kiradigan asosiy daryolar To'polondaryo, Qoratog', Sangardak, Xo'jaipok daryolaridir.

Surxondaryo To'polondaryo bilan Qoratog' daryolarining qo'shilishidan vujudga keladi. Surxondaryo Amudaryoning o'ng irmog'i, chapdan Qoratog'daryo, Qorasuv, o'ngdan To'polondaryo Tentaksoy qo'shilgandan so'ng Surxon deb ataladi. Tojikcha surx-qizil, qizg'ish rang, + on-ob-suv, daryo. Surxob-qizil suv, qizg'ish tuproqli suv, "Surxi" qabilasi nomi bilan ham "surxiyon"-surxonlar daryosi deb ham izohlashadi. O'rta asr manbarida u "Chag'onrud" deyilgan. Surxondaryoning To'polondaryo va Qoratog'daryo qo'shilgan eridan Amudaryogacha bo'lgan qismida 60 ga yaqin soylarga qo'shiladi. Bu soylarning eng muhimlari Toshko'priksoy, Oqqopsoy, Sho'rchisoy, Quruqsoy, Lalmikorsoy, va Lovlovsoylardir. Bundan tashqari uning Sangardaksoy va Xo'jaipok kabi katta irmoqlari bor. Surxondaryo To'polon bilan Qoratog' daryolarining qo'shilgan eridan Amudaryogacha 196 km. Akademik Yaxyo G'ulomov "Xorazmning sug'orilish tarixi" kitobida "Amudaryoga Surxon kelib qo'shilgan joyning quyidan boshlab u hech qanday irmoqsiz jazirama sahrolar ichidan oqa boshlaydi va shu erdan uning hayotbaxsh faoliyati boshlanadi" deb so'z yuritgan. Shu masofada o'ng tomondan Sangardak va Xo'jaipok irmoqlarini qo'shib oladi. Surxondaryo, asosan, qor-muzlarning erishidan to'planib, o'rtacha ko'p yillik suv sarfi Qorovultepa qishlog'i yonida sekundiga 70,2 m.kub ni tashkil etadi, eng katta suv sarfi sekundiga 600 m.kub, eng kami sekundiga 0,1 m.kub. Akademik Yaxyo G'ulomov "Xorazmning sug'orilish tarixi" kitobida "Amudaryoga Surxon kelib qo'shilgan joyning quyidan boshlab u hech qanday irmoqsiz jazirama sahrolar ichidan oqa boshlaydi va shu erdan uning hayotbaxsh faoliyati boshlanadi" deb so'z yuritgan. Geograf Qorievning yozishicha Amudaryoga o'ng tomondan Kofirnihon, Surxondaryo va Sheroboddaryo qo'shiladi. Amudaryoning shu eridan to Orol dengizga quyilguncha qariyb 1500 km uzunlikdagi sahroga unga bitta ham irmoq qo'shilmaydi. Bu qismida uning suvi bug'lanib, erga shimishib, sug'orishga sarf bo'lib, tobora kamayib boradi.

To'polondaryo Surxondaryoning eng katta va eng sersuv irmog'i, Hisor tog'idagi "Xazrati Sulton" (4643 m) cho'qqisi yaqinidan "Qorasuv" nomi bilan boshlanib, so'ngra "Tamshush" nomini oladi va "G'ova" irmog'ini qo'shib olgach To'polondaryo nomini oladi. So'ngra unga "Shatrut" va "Dashnabod" irmoqlari qo'shiladi. To'polondaryoning uzunligi 112 km, havzasining maydoni 2200 km². Daryo qor-muz suvidan to'yinib, o'rtacha yillik suv sarfi sekundiga 51.9 m³. O'shani 60.8 % mart-iyun oyida, 28.6 iyul-sentyabr oyida, 10.6% oktyabr-fevral oyida oqib o'tadi.

Qoratog' daryosi Hisor tog'ining 4200 m balandlikdagi janubiy yonbag'ridan shu nom bilan boshlanadi. Uning uzunligi 95 km. Xavzasining maydoni 682 km². Daryo qor-muz suvidan to'yinib o'rtacha yillik suv sarfi sekundiga 56.3 m³. O'shani 56.5 % mart-iyun oyida, 32.2 iyul-sentyabr oyida, 11.3% oktyabr-fevral oyida o'tkazadi. Daryoning asosiy irmoqlari Sherkent va Oqjarsoy hisoblanadi.

Sangardak daryosi Hisor tog'idan "Tegiqonor" nomi bilan boshlanib, Qizilsoy irmog'ini qo'shib olgach "Qizilsuv", so'ngra Sangardak nomini oladi. Daryoning uzunligi 114 km, xavzasining maydoni 948 km² bo'lib qor va yomg'ir suvlaridan to'yinadi. O'rtacha yillik suv sarfi sekundiga 17.1 m³. O'shani 68 % mart-iyun oyida, 19.2 iyul-sentyabr oyida, 12.8% oktyabr-fevral oyida oqib o'tadi. Asosiy o'ng irmoqlari-Qizilsoy, Sho'rchisoy, Molyang'ur; chap irmoqlari -Xondiza, Nilu hisoblanadi.

Xo'jaipok-Xo'jabo'zborak tog'idan boshlanib, uzunligi 97 km, xavzasining maydoni 765 km², o'rtacha yillik suv sarfi sekundiga 8.17 m³. O'shaning 79.4 mart-iyun oyida oqib o'tadi. Asosiy irmoqlari Shotut va Cho'ldara.

Sheroboddaryo-Amudaryoning o'ng irmog'i bo'lib, uzunligi 186 km, Boysun tizmasining shimoli g'arbidagi "Belao'ta" tog'idan boshlanadi. Daryoga o'ng tomondan Qizilsoy, O'rikli soy, Sariqiya, Sho'rob, Sayrob, Laylayxonsoy, Maydon, chapdan esa Ko'kamir, Chaqmoq, Jugun, Sharshar kabi irmoqlar qo'shiladi. Daryoning o'rtacha yillik suv sarfi sekundiga 7.53 m³. Daryo suvi bahor va yoz oylarida ko'payadi. Yillik suv sarfining 62 % shu davrga to'g'ri keladi. Bu daryolar tog'larda chuqur, tor vodiylarda ostona hamda sharsharalar hosil qilib oqadi. Tekislikka chiqqandan so'ng sekinlashib, sug'orishga sarflanadi. Yerosti suvlari har xil davr yotqiziqlari orasida uchraydi. Paleogen va neogen davri yotqiziqlari orasidagi 140—150 m chuqurlikdan chuchuk suv chiqadi. Bo'r davri yotqiziqlari orasidagi 1000 —2000 m chuqurlikdan chiquvchi mineral shifobaxsh suv harorati +60 +70°C ga etadi. Surxondaryo tabiiy geografik o'lkasida suv ta'minotini yaxshilash maqsadida Janubiy Surxon (suv sig'imi 800 mln m.kub), Uchqizil (suv sig'imi 16 mln m.kub) suv omborlari qurilgan.

Okrugning ikkinchi muhim daryosi Sheroboddaryodir. U Amudaryoning o'ng oxirgi irmog'i hisoblanib Irgali va Qizilsoydaryolarning qo'shilishidan hosil bo'ladi. Daryoning umumiy uzunligi 186 km O'rtacha ko'p yillik suv sarfi tog'dan oqib chiqqach 7.5 m³ sek teng bo'ladi. Voha suv bilan ta'minlanishiga ko'ra 2 zonaga (shimoliy va janubiy) ajratish mumkin. Shimoliy zonadagi daryolar sersuv ularga asosan To'palang, Sangardak, Xo'jaipok va boshqalar kiradi. Bu daryolar Xisor tog'ining sharqiy yonbag'irlaridagi qor va muzliklardan qisman yomg'ir va buloq suvlaridan to'yinadi. Vohaning janubiy qismi daryolarida suv kam xududda Sheroboddardan tashqari doimiy oqadigan daryolar yo'q. Buning asosiy sababi viloyatning janubiy-g'arbiy qismida qor va muzliklar bilan qoplangan baland tog'larning yo'qligi, mavjud tog'larning esa nisbatan pastligi yog'in sochin keltiradigan xavo massalarini to'sish imkoniyati kamligidir. Curxon-Sherobod voxasi dexqonchiligida sug'oriladigan erlar obi (suniy) va lalmi (tabiiy yog'inlar)ga bo'linib, vohaning tabiiy geografik sharoiti qishloq xo'jaligi yo'nalishida

mintaqaga bo'linadi: ya'ni to'la sug'oriladigan (daryo vodiysi) shartli sug'oriladigan (tog'oldi) lalmikor (tog' zonalar).

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