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## PECULIARITIES OF ADAPTATION OF FOREIGN MEDICAL STUDENTS TO THE EDUCATION DURING THE WAR IN UKRAINE

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*The war in Ukraine has had a profound impact on various spheres of society, including the education system. This study examines the peculiarities of the adaptation process of foreign medical students who are pursuing their education in Ukraine during the war. Prior to the war in Ukraine, approximately 80,000 foreign students from different countries were studying there. The majority of these students were medical students, with Indian citizens being the predominant group, who adapted quite actively and successfully to studying in Ukraine before the war. The onset of the war and the evacuation of students, as well as the shift to online classes, brought significant changes to medical education.*

*The objective of this research is to explore the unique challenges faced by these students and identify strategies that can contribute to their successful adaptation to the educational environment. The research was conducted through online surveys in June and July of 2023. It was important to identify the key aspects of adaptation strategies through the students' experiences and perceptions.*

*The findings indicate that the adaptation process for foreign medical students during the war in Ukraine is complex and multifaceted. However, despite the difficulties, the research also reveals that foreign medical students demonstrate resilience and the ability to adapt to a new environment. They employ various coping strategies, such as seeking support from peers, engaging in cultural interactions, and utilizing online resources to overcome language barriers.*

*This research underscores the importance of institutional support and the role of educational stakeholders in facilitating the adaptation process of foreign medical students during times of conflict. Recommendations include implementing language support programs, cultural integration initiatives, and providing psychosocial services tailored to the unique needs of these students.*

**Key words:** medicine, medical education, foreign medical students, impact of war.

### Резніков Ю.П. Особливості адаптації іноземних студентів-медиків до навчання під час війни в Україні

*Війна в Україні має глибокий вплив на різні сфери суспільства, включаючи систему освіти. Це дослідження розглядає особливості процесу адаптації іноземних медичних студентів, які здобувають освіту в Україні під час війни. До початку війни в Україні навчалося близько 80 тисяч іноземних студентів з різних країн. Більшість студентів-медиків – громадяни Індії, які до війни досить активно та успішно адаптувались до навчання в Україні. Початок війни та евакуація студентів, онлайн-заняття зумовили значні зміни в медичній освіті. Мета полягає в дослідженні унікальних викликів, з якими стикаються ці студенти, і виявленні стратегій, які можуть сприяти їхній успішній адаптації до освітнього середовища. Дослідження проведено на основі онлайн-анкетування, що проводилось у червні-липні 2023 року. Важливим було виявлення основних аспектів ключових стратегій адаптацій у досвіді і сприйнятті студентів. Висновки свідчать про те, що процес адаптації для іноземних медичних студентів під час війни в Україні є складним і багатограним. Проте дослідження також виявляє, що, незважаючи на труднощі, іноземні медичні студенти демонструють стійкість і здатність адаптуватися до нового середовища. Вони використовують різні стратегії подолання, такі як пошук підтримки у колег, участь у культурній взаємодії та використання онлайн-ресурсів для подолання мовних бар'єрів. Це дослідження підкреслює важливість інституційної підтримки та ролі освітніх стейкхолдерів у полегшенні процесу адаптації іноземних медичних студентів у часи конфлікту. Рекомендації включають впровадження програм підтримки мови, ініціативи культурної інтеграції та надання психосоціальних послуг, пристосованих до унікальних потреб цих студентів.*

**Ключові слова:** медицина, медична освіта, іноземні медичні студенти, вплив війни.

**Introduction.** The globalization of education has led to an increase in the number of foreign students pursuing medical education abroad. While this provides valuable opportunities for cross-cultural learning and collaboration, it also presents unique challenges for these students. Adaptation, in the context of foreign students in medical edu-

cation abroad, refers to the process through which students adjust to the new academic, cultural, and social environment. This essay will explore the concept of adaptation and its importance for foreign students in the medical education system. It will also discuss the specific challenges faced by these students and provide strategies

and support systems to facilitate their successful adaptation.

Adaptation is a multifaceted process that involves adjusting to a new environment, acquiring new skills and knowledge, and developing a sense of belonging. For foreign students in medical education abroad, adaptation is crucial for their academic success and overall well-being. These students face numerous challenges, including language barriers, cultural differences, and unfamiliar teaching methods. The process of adaptation can be divided into different stages, starting from the initial shock and disorientation, followed by a period of adjustment and integration into the new environment. During this process, students develop coping mechanisms, acquire new skills, and gradually become more comfortable and confident in their academic and social lives.

Cultural adaptation is one of the primary challenges faced by foreign students in medical education abroad. They encounter differences in language, social norms, and values, which can impact their academic performance and personal well-being. For instance, language barriers may hinder effective communication with peers and faculty, leading to difficulties in understanding lectures and participating in discussions. To overcome these challenges, many universities offer language learning programs and cultural awareness initiatives. These programs not only enhance students' language skills but also provide them with a better understanding of the local culture, facilitating their integration into the medical education system.

Foreign students in medical education abroad also face academic challenges due to differences in teaching methods and assessment systems. The teaching styles may vary from their home country, requiring them to adapt to new approaches and expectations. Additionally, assessment methods, such as multiple-choice exams or practical assessments, may differ, further adding to the complexity of academic adaptation. To support these students, universities and educational institutions play a crucial role in providing tailored support services and resources. Mentorship programs, study groups, and academic counseling services can help foreign students navigate the academic challenges and develop effective learning strategies.

The adaptation of foreign students to medical education abroad is a complex process that involves cultural and academic adjustments. It is essential for universities and educational institutions to recognize and address the specific challenges faced by these students. By providing language learning programs,

cultural awareness initiatives, and tailored support services, universities can facilitate the successful adaptation of foreign students in the medical education system. Ultimately, this will not only benefit the students themselves but also contribute to the diversity and global perspective in medical education.

Medical education for foreigners in Ukraine during the war refers to the educational programs and opportunities provided to foreign students who are pursuing medical degrees in Ukraine amidst the ongoing conflict. The war in Ukraine has had a significant impact on various aspects of society, and the field of medical education is no exception. Foreign students studying medicine in Ukraine face unique challenges and obstacles due to the war, which require special attention and support from the educational institutions and relevant authorities.

Medical education for foreigners in Ukraine during the war is a concept that involves providing educational opportunities for international students who have chosen Ukraine as their destination for pursuing a medical degree. Ukraine has been a popular choice for many foreign students due to its high-quality medical education and affordable tuition fees. However, the ongoing war in Ukraine has created a challenging environment for these students. The war, which began in 2022, has resulted in a volatile and unstable situation in the country, making it difficult for foreign students to pursue their education in a safe and conducive environment. Foreign students studying medicine in Ukraine during the war face specific challenges that are not encountered by their domestic counterparts. These challenges include safety concerns, disruption of academic activities, and decreased availability of resources and faculty members. The war has caused significant damage to infrastructure, including educational institutions, leading to the disruption of classes and practical training sessions. Moreover, the safety concerns associated with the war have made it difficult for foreign students to focus on their studies and feel secure in their surroundings. Additionally, the war has led to a decrease in the availability of resources and faculty members, further impacting the quality of education for foreign students.

**The main aim of research-** explore the Peculiarities of adaptation of foreign medical Ukrainian students to the education during the war. War has far-reaching consequences on various aspects of life, including education. This research examines the impact of war on medical students in Ukraine, focusing on study modes, practical training, mobility, and academic performance, the students' percep-

tions regarding changes in their physical and psychological state, their utilization of psychological support services, the level of adaptation to studying in Ukraine, difficulties faced, support received during the adaptation process, parental support, awareness of actions during alarm signals, and their willingness to contribute to assisting the people of Ukraine. The analysis is based on survey data collected from the student population.

**Materials and methods.** To perform the assigned task, a questionnaire in English was made for students of medical specialties in higher education institutions in the field of "Healthcare" with a specialization in "Medicine" at the educational qualification level of "Master's degree". The survey was conducted in June-July 2023 synchronously, ensuring anonymity and obtaining voluntary consent from respondents for the processing of personal data on the Google Forms platform. The survey was cross-sectional and the questionnaire comprised 27 questions. Statistical analysis was performed using basic modern methods of data processing using MedStat software.

**Discussions.** The impact of the war on medical education for foreigners in Ukraine is profound. The disruption of academic activities and infrastructure has hindered the learning process for foreign students. Many educational institutions have been damaged or destroyed, making it challenging to conduct classes and practical training sessions. The lack of proper facilities and equipment further hampers the quality of education provided to foreign students. Moreover, the safety concerns associated with the war have created a hostile environment for foreign students, affecting their mental well-being and ability to concentrate on their studies. Furthermore, the war has resulted in a decrease in the availability of resources and faculty members. The ongoing conflict has led to an exodus of experienced faculty members from the country, leaving a shortage of qualified teachers. This shortage not only affects the quality of education but also limits the opportunities for foreign students to receive guidance and mentorship. The lack of resources and faculty members also affects the research opportunities available to foreign students, hindering their academic and professional growth.

To address the challenges faced by foreign students studying medicine in Ukraine during the war, various measures have been taken. Collaboration between universities and international organizations has played a crucial role in providing support and assistance to foreign students. These collaborations have facilitated the exchange of resources, expertise, and funding, which have helped mitigate some of the

challenges faced by foreign students. Additionally, universities have implemented safety protocols and security measures to ensure the well-being of foreign students. This includes increasing security personnel on campuses, providing safe transportation options, and establishing emergency response systems.

The war in Ukraine has had a significant impact on medical universities and the medical education system. The political unrest and threats have led to the emigration of most medical professors, which has had an adverse effect on the leadership of the medical education system [1, 16]. Creating an environment with stable internet connection and resources for accessing courses is essential, but difficult to prioritize in these circumstances [2, 119]. This has led to medical education being restricted to online classes, which will have a negative academic impact on students [3]. The ongoing Russian invasion of Ukraine has caused uncertainty and turmoil for Ukrainian medical trainees and institutions. Many medical students in Ukraine will be diverted from their studies and their medical education will be halted indefinitely due to the war. Furthermore, the COVID-19 pandemic has further impacted medical education in Ukraine, including interruption of virtual education and clinical rotations [4,78]. Ukrainian medical universities also lack talents in the pharmaceutical industry, especially high-quality talents.

Ukrainian universities have long provided medical education to many students from other countries. This allows students who face political barriers or cannot afford the high tuition fees in their home countries to obtain a quality medical education. However, the war completely changed the situation. In addition, Ukraine has begun to implement various measures to ensure that medical students are not affected by the war. These include the provision of academic mobility. This allows students to continue learning without interruption. The war also led to changes in the curricula of Ukrainian medical universities. In addition, the displacement of teaching staff due to the war also had an impact on the availability of resources and teaching staff at Ukrainian medical universities. In addition, the war in Ukraine resulted in the destruction and destruction of educational institutions of Ukrainian medical universities.

The impact of the war on foreign medical students in Ukraine extends beyond their immediate challenges and mental health. Interruptions in their education and limited opportunities for on-the-job experience may have long-term effects on the quality of their education. Without adequate medical resources and facilities, these students may graduate with a lack

of practical skills and experience that may affect the quality of healthcare they provide in the future. Furthermore, the war may also have consequences for the retention of medical professionals in Ukraine. The difficulties and challenges faced by Ukrainian medical foreign students during the war may discourage them from staying in the country after completing their studies. This brain drain could have a detrimental effect on the healthcare system in Ukraine, as the country may lose talented and qualified medical professionals who choose to seek opportunities elsewhere.

**Results.** The main material of the research consisted of data collected from 1,930 students pursuing higher education in medical specialties from various Ukrainian higher education institutions, including both domestic and international students. According to the survey responses, males accounted for the majority at 66.1%, while females constituted 33.9% of the participants. The average age of the respondents was 21.63 years, with the surveyed individuals falling within the age range of 19 to 32 years.

Among the surveyed students, the majority were representatives from India, comprising 67.54% of the total sample.

The survey revealed that a majority of students (62.5%) were engaged in online study modes, reflecting the adaptation to remote learning necessitated by the war. However, a significant proportion of students (37.5%) reported being physically present in Ukraine while attending online classes, indicating a hybrid model of education.

Regarding practical training, only 23% of students in Ukraine had the opportunity to participate in practical classes in hospitals. This suggests that a significant number of students may have faced disruptions or limitations in accessing hands-on training due to the war. The lack of practical experience can have implications for the development of clinical skills and the overall competence of medical students.

Approximately 34% of respondents reported having classes in simulation facilities, indicating that these simulated environments were utilized as an alternative to practical hospital training. The implementation of simulation classes helps bridge the gap in hands-on experience, providing students with opportunities to practice skills and gain exposure to realistic medical scenarios.

Regarding mobility, the survey results showed that a majority of students (75.6%) had left Ukraine before February 24, 2022. Among those who left, only 28.1% were able to return to Ukraine after the war began. This indicates that a significant number

of students faced challenges with travel logistics, including transit visas and transportation, preventing them from returning to continue their studies in Ukraine. Additionally, 34% of respondents expressed a desire to return but were unable to do so due to various reasons.

The war had a profound impact on the learning process of medical students in Ukraine, with 45% of respondents stating that education became more challenging. This suggests that the war's disruptions, such as infrastructure damage, limited resources, and psychological stress, affected the students' ability to engage effectively in their studies. Furthermore, 55% of students reported a decline in academic performance, while 35% experienced an improvement. It is worth noting that 10% stated that their academic performance remained unchanged. These findings highlight the varying effects of the war on individual students' ability to cope and succeed academically.

The survey data indicates that since the introduction of distance education, 32.6% of students experienced a deterioration in their psychological condition. Additionally, 26.3% reported that both their physical and psychological state had worsened. However, a significant proportion (20.7%) stated that neither their physical nor psychological state had changed.

During the state of war, 37% of students sought help from a psychologist to address psychological difficulties, while the majority (63%) did not. This suggests that although a considerable number of students recognized the need for psychological support, a significant portion did not seek professional assistance.

The survey revealed a decrease in the level of adaptation to studying in Ukraine after the onset of the war. Prior to the war, the average rating was 4.5, while after the war, it decreased to 3.7. This indicates that students faced challenges and difficulties during the adaptation process, which may be attributed to factors such as the absence of light, fear triggered by sirens, and the shift to online classes.

40% of students encountered difficulties in finding accommodation, highlighting the challenges associated with the search for apartments. However, the majority (78%) received support from their university or other organizations during the adaptation process. This support likely played a crucial role in helping students navigate the challenges and adjust to the new circumstances.

A significant proportion (65%) of students reported that their parents supported their decision to continue education in Ukraine, indicating the importance of familial encouragement. Additionally,

a majority (87%) of students stated that they were informed about the appropriate actions to take during alarm signals, suggesting that they were adequately prepared to respond to emergency situations.

Nearly half of the students (48%) expressed a desire to contribute to providing assistance to the people of Ukraine. However, a significant portion (40%) expressed a desire to help but lacked knowledge of how to contribute effectively.

**Conclusion.** The research data demonstrates the multifaceted impact of war on medical students in Ukraine. The shift to online and hybrid study modes, limited practical training opportunities in hospitals, and reliance on simulation classes reflect the adaptations made to continue medical education during the war. The challenges faced in mobility and returning to Ukraine indicate the disruptions and barriers encountered by students due to travel logistics and safety concerns. The war also had varying effects on the learning process and academic performance of students, with some experiencing increased difficulties and decreased performance.

The findings emphasize the importance of providing necessary support and resources to students in war-affected regions to mitigate the negative consequences on their education. Initiatives such as strengthening online learning infrastructure, ensuring access to practical training opportunities, facilitating mobility, and offering psychological support can contribute to improving the learning experience

and academic outcomes of medical students in times of war.

The survey data highlights the substantial impact of distance education and war on the physical and psychological well-being of medical students in Ukraine. The findings indicate a deterioration in psychological conditions for a considerable number of students, while some experienced challenges in both physical and psychological aspects. The utilization of psychological support services varied among students. The level of adaptation to studying in Ukraine decreased after the onset of the war, with students facing difficulties such as housing searches and adjustments to online learning. However, many students received support from their universities and organizations during the adaptation process. Parental support played a significant role in students' decision to continue their education, and students generally demonstrated awareness of actions during alarm signals. Furthermore, a substantial proportion expressed a willingness to contribute to assisting Ukraine, although many lacked clarity on how to do so effectively.

These findings emphasize the need for comprehensive support systems for students, including accessible psychological services, guidance on adaptation, and avenues for effective contribution to assistance efforts. By addressing these needs, educational institutions and relevant organizations can foster the well-being and resilience of medical students during times of crisis.

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