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УДК 81'37:81-1:615.1

ОСОБЛИВОСТІ АДАПТАЦІЇ СИСТЕМИ ПРОФЕСІЙНОЇ ОСВІТИ В УМОВАХ КОНФЛІКТУ: ДОСВІД ІЗРАЇЛЮ

Анотація. Медсестринська освіта в умовах збройних конфліктів вимагає швидкої адаптації та впровадження інноваційних стратегій, що забезпечують безперервність навчального процесу та підвищують рівень підготовки медичних працівників. У статті розглядається досвід Ізраїлю в адаптації медсестринської освіти під час збройних конфліктів, де активно використовуються дистанційне навчання, симуляційні центри та мобільні класи. Ці стратегії не лише дають змогу зберігати теоретичну підготовку, але й уможливають розвиток практичних навичок у реальних бойових умовах. Ізраїль також активно співпрацює з міжнародними організаціями для удосконалення навчальних програм, надаючи особливу увагу психологічній підтримці медичних працівників у кризових ситуаціях.

Підкреслено важливість запозичення цих стратегій для України, зокрема за умов поточного збройного конфлікту. Упровадження інноваційних підходів, таких як дистанційне навчання та симуляційні центри, уможливають забезпечити безперервність медичної освіти навіть під час активних бойових дій, а також підвищити здатність медсестер діяти в умовах бойових та екстремальних ситуацій.

Окреслено напрями подальших досліджень, які можуть сприяти розвитку медсестринської освіти за умов війни. Це дослідження впливу новітніх технологій на навчальний процес, розробка ефективних психологічних стратегій підтримки медичних працівників, а також вивчення міжнародної співпраці в підготовці медсестер. Окрему увагу варто звернути на адаптацію навчальних програм після завершення конфліктів та підготовку медсестер до роботи за умов гібридних конфліктів.

Досвід Ізраїлю є важливим прикладом для України, оскільки може допомогти розвивати медсестринську освіту, адаптуючи її до вимог сучасних воєнних умов, і забезпечити стійкість медичної системи під час екстремальних ситуацій.

Ключові слова: медсестринська освіта, збройний конфлікт, інноваційні стратегії, дистанційне навчання, симуляційні центри, психологічна підтримка, міжнародна співпраця.

PECULIARITIES OF PROFESSIONAL EDUCATION SYSTEM ADAPTATION IN CONFLICT CONDITIONS: THE EXPERIENCE OF ISRAEL

Abstract. The article explores the adaptive strategies employed by Israel's nursing education system during armed conflicts and emergencies. Israel has a well-established tradition of maintaining high standards of medical education, even in times of war, owing to the country's long history of regional conflicts and security challenges. The research highlights how Israel ensures the continuity of nursing education during these crises through innovative methods, including distance learning, simulation centres, and mobile classrooms. The study emphasizes the integration of theoretical knowledge with practical skills, preparing nursing professionals to effectively work in extreme conditions such as combat zones and crisis situations.

The article outlines the historical development of nursing education in Israel, from its early stages under the British Mandate to the modern era characterized by technological advancements and flexible educational strategies. The analysis shows that Israel's nursing schools adapt their curricula to reflect the evolving needs of the healthcare system during times of war, ensuring that nurses are well-equipped to handle the challenges of combat care and emergency medical responses. The use of simulation technologies and mobile learning platforms has proven essential for maintaining educational continuity during periods of conflict, allowing students to continue their studies even when physical presence in educational institutions is not feasible due to security threats.

Additionally, the article discusses Israel's collaboration with international medical organizations to enhance the quality of nurse training, the importance of psychological support for nurses working in high-stress environments, and the rapid restoration of educational processes following conflicts. The study concludes by highlighting the need for similar adaptive strategies to be adopted in other countries facing conflict, including Ukraine. These strategies, such as the use of distance



learning and simulation technologies, could significantly improve the resilience of nursing education systems in crisis conditions. Further research is recommended to assess the integration of new technologies into nursing education, the development of psychological support strategies, and the evaluation of international cooperation in preparing healthcare professionals for wartime operations.

Keywords: Nursing education, armed conflict, innovative strategies, distance learning, simulation centres, psychological support, international cooperation.

INTRODUCTION

The problem formulation. Israel has a long and profound history of maintaining high standards of medical education, including nursing, even during the most difficult times of war and armed conflicts. In the context of constant threats from regional conflicts and terrorist attacks, Israel continues to demonstrate the resilience and adaptability of its medical system. This not only ensures the preservation of high-quality medical services during crisis moments but also supports the education of new generations of healthcare workers, who later treat the wounded in armed conflicts.

Israeli medical institutions, including nursing schools, have a well-established system that allows them to maintain a stable level of staff training, even in emergency conditions. Nursing and medical training in Israel is based on the integration of theoretical knowledge and practical skills, which is crucial for effective work in real combat conditions. Moreover, the country's medical institutions actively adapt their educational programs, particularly in nursing, to the specifics of military operations to prepare specialists who can act under extreme stress and high risk.

Given the constant challenges faced by the country, these measures are an important component of the national strategy for ensuring medical security and resilience. Israel, with its experience, is one of the leaders in developing adaptive medical education strategies that guarantee high levels of training, even in times of war or crisis situations. In this context, it is important to highlight the close cooperation between medical institutions, the government, and international organizations to develop new approaches to the training of healthcare workers, which meet the demands of modern conditions and society's needs.

Analysis of recent research and publications. Research on the development of education in Israel covers various aspects of the country's educational system. O. A. Durmazoglu analyses the main components, achievements, and experience of Israel in organizing the school educational process during wartime (Durmazoglu O. A., 2022). O. V. Martynchuk examines the professional activities of special education teachers in inclusive educational institutions in Israel (Martynchuk O. V., 2018), while O. V. Kompaniets O. V., 2017). H. Y. Mykhailyshyn and L. O. Mandro study the development of "soft skills" in the Israeli education system, emphasizing creativity, motivation, and leadership in the learning process (Mykhailyshyn H. Yo., 2021). A. V. Fastivets explores the training of physiotherapy and occupational therapy specialists in Israel (Fastivets A. V., 2021). However, despite the considerable amount of research on higher education, nursing education in Israel remains underexplored and requires further academic development.

AIM AND TASKS RESEARCH

The aim of this article is to analyse the adaptive strategies of nursing education in Israel in the context of armed conflicts and emergencies, as well as to identify the main measures that ensure the continuity of the educational process and the maintenance of high standards of medical staff training, including nurses, during war. The objectives of the article are as follows: 1) to study the main measures Israel applies to ensure a stable level of nursing education during conflicts and crisis situations; 2) to analyse the role of distance learning, simulation centres, and mobile classrooms in adapting nursing education during wartime; 3) to assess the impact of war and armed conflicts on the structure and content of nursing programs in Israel; 4) to examine mechanisms for restoring the educational process after conflicts and adjusting training programs to account for combat experience. These objectives will provide a comprehensive overview of key aspects of nursing education in Israel in the context of conflict and war and help understand how the country adapts its education systems to extreme conditions.

RESEARCH METHODS

A range of different methods have been used to analyse the adaptive strategies of nursing education in Israel, allowing a detailed examination of how the country adapts its educational system to the conditions of armed conflicts. The main methods include: 1) document and literature analysis (the article examines various sources that describe the specifics of nursing education in Israel, its adaptation to wartime and crisis conditions, as well as practical aspects such as the use of simulation centres and mobile classrooms. This allows for a comprehensive picture of the adaptation of medical training programs in conflict situations); 2) comparative analysis (the article compares Israel's experience with international practices in medical education during armed conflicts, particularly in terms of cooperation with international organizations and other countries. This allows for an assessment of the innovative approaches applied in Israel and their integration into the international context); 3) qualitative approach (studying the impact of stressful situations on medical workers and the importance of psychological support during wartime is a key aspect of the article. This approach assesses not only the technical aspects of nursing education but also the emotional and psychological factors that affect the effectiveness of nurses' work during armed conflicts). The use of these methods provides a comprehensive evaluation of the adaptability and resilience of Israel's nursing education system during wartime, armed conflicts, and emergency situations, offering a broad view of the measures aimed at supporting the continuity of the educational process.



RESULTS OF THE RESEARCH

The historical development of nursing education in Israel is an essential part of the overall evolution of the country's medical education, as training qualified nurses is fundamental to providing effective healthcare. Understanding how nursing education in Israel has adapted to the changes within the country helps assess its current achievements and identify best practices that could be applied in other countries, particularly in conflict situations. The historical context allows us to observe how the demands on nursing education have evolved over time, what approaches were introduced, and how significant challenges, including wars and crises, have influenced its development. Therefore, let us consider the stages of nursing education development in Israel:

1. First stage (Pre-1948). The first attempts to organize nursing education in Israel occurred during the British Mandate over Palestine. Nursing training was primarily concentrated in medical schools opened by Jewish organizations, such as Histadrut. During this time, nurses received basic training, including patient care, wound treatment, and hygiene basics.

2. Second stage (1948-1970). After the establishment of the State of Israel in 1948, nursing education expanded significantly and became more professionalized. New nursing schools were established, and curricula were adapted to include modern methods of care and treatment, healthcare management, and preparation for working in wartime conditions. The development of nursing schools occurred in large cities such as Jerusalem and Tel Aviv, where innovative teaching approaches, including first aid and emergency care, were actively introduced (Bentwich J. S., 1998).

3. Third stage (1970-2000). This period was marked by significant advancement in nursing education in Israel. In addition to theoretical knowledge, nurses began to receive deeper practical training, particularly in specialized fields such as intensive care, paediatrics, and emergency medical care. New programs were introduced to prepare nurses for working in challenging environments, including combat zones. Furthermore, master's degree programs for nurses began to develop, allowing them to deepen their knowledge and professional skills.

4. Fourth stage (Post-2000). The current stage of nursing education development in Israel is characterized by the integration of cutting-edge technologies into the educational process. Simulation trainers, online platforms for distance learning, and other innovative methods are actively used, allowing nurses to be trained even in the most challenging conditions. Training programs have become more flexible, considering the challenges associated with emergencies and armed conflicts. Greater attention is given to interdisciplinary training, especially in collaboration with international organizations and other countries, which ensures that Israeli nurses are prepared for any conditions and situations (Arar Kh., 2016).

These stages reflect the continuous development of nursing education in Israel, which adapts to changing conditions and needs, as well as to the modern challenges facing the healthcare system, particularly in the context of war and crisis situations.

One of the most significant measures for ensuring the continuity of nursing education in Israel is the implementation of adaptive teaching strategies, which allow the educational process to continue even during periods of crisis. In the case of military conflicts, missile attacks, or natural disasters, Israel does not halt the education of nurses but applies innovative approaches to ensure both theoretical and practical training of future medical professionals. One such approach is distance learning, which is actively used during crises. Thanks to a well-developed online education infrastructure, Israeli medical institutions have created platforms for online classes that allow students to continue studying theoretical subjects, even when physical presence in educational institutions is impossible due to security threats. Students have access to lectures, seminars, and training sessions through online platforms, while instructors use video conferencing and digital materials to ensure high-quality education even in the most challenging conditions, such as missile strikes or evacuations. This enables the education process to be maintained and ensures the continuity of learning regardless of external circumstances.

Another important element is simulation centres, which play a key role in the practical training of nurses during combat and other crisis situations. These centres are set up in military hospitals and medical institutions, and their activities are indispensable in wartime. They offer opportunities for practical exercises where students can practice skills such as providing first aid, performing surgical procedures, or applying medical techniques in conditions that closely resemble real combat operations. Simulation centres use modern technologies such as mannequins with various clinical scenarios, video training, and virtual reality to provide a realistic experience. During military conflicts, these centres intensify their activities, engaging more students and offering them intensive training in extreme conditions. This allows nurses to gain valuable experience working in field conditions, which they later use to provide assistance to casualties during actual combat situations (Medical Education and Training in Israel, 2024).

In cases where traditional education becomes impossible due to security threats on campus, mobile classrooms are actively used in Israel. These specially equipped vehicles or mobile shelters allow the educational process to be relocated to safer areas. Mobile classrooms are equipped with necessary technology, learning materials, and internet connectivity, enabling classes to be conducted even in field conditions or in areas unaffected by the conflict. This allows education to continue in situations of limited access to traditional educational institutions, ensuring the continuity of nursing education despite external challenges.

One of the important features of medical education in Israel is the development of a system of resilience for educational institutions. Many universities and medical centres have shelters and specially protected zones where education and medical practice can continue even during active combat operations. For example, hospitals in Tel Aviv and Haifa have underground facilities, where not only medical work is carried out, but the educational process also continues, ensuring the safety of students and staff. These shelters prevent interruptions in education and ensure that learning activities continue in crisis situations.



Israel also has significant experience in mobilizing medical personnel during military conflicts, which is a key element of the national security strategy. Nurses and other medical professionals play a critical role in treating the wounded, both military and civilian. During major military conflicts, such as the War of Independence (1948) and the Six-Day War (1967), Israeli nurses were mobilized to treat the wounded in both civilian hospitals and military bases. Nursing schools and hospitals adapted their curricula, including courses in first aid, field treatment of the wounded, and tactical medicine. This approach allows nurses to acquire important skills that are then used not only during wartime but also in everyday medical practice during peacetime (Medical Education and Training in Israel, 2024).

Israel is also actively cooperating with international organizations and medical institutions for the exchange of experience and improvement of nurse training during conflicts. Partnerships with international medical associations and educational institutions enable the use of advanced innovations in medical education. Exchange programs and training help Israeli nurses implement the latest technologies, methodologies, and standards in training, ensuring their high professional preparedness in any conditions (Swirski S., 2002).

No less important is the issue of psychological support for medical workers. During conflicts, nurses face significant emotional strain, as working in combat conditions is not only physically demanding but also emotionally exhausting. Israeli nurses undergo special stress management training and have access to psychological support. This helps them better cope with the emotional and psychological burdens that arise when providing assistance in wartime or disaster conditions (Medical Education and Training in Israel, 2024).

After conflicts, Israel actively works on restoring normal educational processes. Universities and medical institutions quickly adjust curricula, incorporating new experiences and knowledge gained during the crisis situation. Additionally, extra support is provided to students who may have missed part of their studies due to the conflict, allowing them to catch up on lost material and complete their education.

CONCLUSIONS AND PROSPECTS OF FURTHER RESEARCH

Nursing education in Israel during armed conflicts demonstrates a high level of adaptation thanks to innovative teaching strategies. The use of distance learning, simulation centres, and mobile classrooms ensures the continuity of education even in crisis conditions. Israel also actively collaborates with international organizations to exchange experiences and improve programs, and places emphasis on psychological support for medical personnel. After conflicts end, the educational process is quickly restored, integrating new experiences gained during the war.

For Ukraine, it is important to consider these strategies to ensure the continuity of medical education and enhance the ability of nurses to effectively operate in combat conditions. Distance learning, simulation centres, and mobile classrooms can be effective tools for training even during active hostilities.

Further research should focus on the following areas: 1) assessment of the impact of new technologies on nursing education, specifically the integration of distance learning and simulation centres in Ukraine; 2) development of effective psychological support strategies for medical workers during combat operations; 3) study of international cooperation for the exchange of experience in preparing nurses in crisis situations; 4) evaluation of the adaptation of curricula after conflicts end; 5) preparing nurses for work in hybrid conflicts. These studies will contribute to the development of adaptive strategies, the improvement of nursing education in crisis conditions, and the resilience of the medical system, particularly in Ukraine.

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Received

21.09.2024

Accepted

09.10.2024